

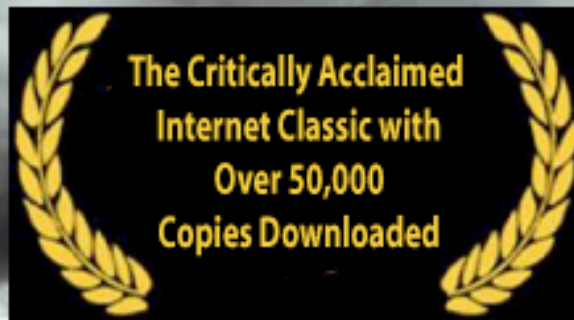
# *The Dark Side of Wheat*

A Critical Appraisal of the Role of Wheat in Human Disease

by Sayer Ji, founder of GreenMedInfo.com

**Foreword by Dr. Ron Hoggan, author of *Dangerous Grains***

"Here is my promise to you, dear reader: There is a whole new world revealed through Sayer Ji's work." ~ Dr. Ron Hoggan



**Part I: New Perspectives on Celiac Disease & Wheat Intolerance**  
**Part II: The Critical Role of Wheat Lectin in Human Disease**  
**Part III: 173-Page NCBI Reference Guide to the Research on the National Library of Medicine Linking Wheat to Over 200 Diseases**



# THE DARK SIDE OF WHEAT

~ A Critical Appraisal of the Role of Wheat in Human Disease ~

**Foreword by Dr. Ron Hoggan, author of *Dangerous Grains***

Having studied gluten grains and their impact on human health for almost 20 years now, the surprises caused by new insights are more and more rare. Nonetheless, when I read about Sayer Ji's startling perception of wheat germ agglutinin (WGA), and the several pathways by which it can impact our mental and physical health, partly due to its ability to cross protective barriers of the gut and the brain, I was, at first, very skeptical. Further investigation revealed that he really was onto something new. And the implications of this new understanding are, to say the least, dramatic. His work raises legitimate questions about one facet of gluten grains that has largely been ignored by the gastrointestinal research community. It opens windows of understanding. And it provides a different vantage point on these perplexing problems. Here is my promise to you, dear reader: There is a whole new world revealed through Sayer Ji's work. Read on. Enjoy. Puzzle it out. And by the end of your reading, you will wonder how your prior view could have been so simplistic and, perhaps, misguided.

Sir Isaac Newton's famous metaphor (perhaps quoting others) said something to the effect that we see further, not because of any special endowment of our own, but because we are standing on the shoulders of giants. After reading Sayer's work on WGA, I felt as if I had just been boosted to a higher plane from which I could see and understand much, much more. Sayer's insights continue to shape and inform much of my effort to understand the various impacts of grains on human health.

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## Part I: New Perspectives On Celiac Disease & Wheat Intolerance

By Sayer Ji, founder of

The globe-spanning presence of wheat and its exalted status among secular and sacred institutions alike differentiates this food from all others presently enjoyed by humans. Yet, the unparalleled rise of wheat as the very catalyst for the emergence of ancient civilization, has not occurred without a great price. While wheat was the engine of civilization's expansion and was glorified as a "necessary food," both in the physical (staff of life) and spiritual sense (the body of Christ), those suffering from celiac disease are living testimony to the lesser known dark side of wheat. A study of celiac disease (CD) may help unlock the mystery of why modern man, who dines daily at the table of wheat, is the sickest animal yet to have arisen on this strange planet of ours.

## THE CELIAC ICEBERG

CD was once considered an extremely rare affliction, limited to individuals of European descent. Today, however, a growing number of studies indicate that CD is found throughout the world at a rate of up to one in every 100 persons, which is several orders of magnitude higher than previously estimated.

These findings have led researchers to visualize CD as an iceberg. The tip of the iceberg represents the relatively small number of the world's population whose gross presentation of clinical symptoms often leads to the diagnosis of CD. This is the classical case of CD characterized by gastrointestinal symptoms, malabsorption and malnourishment. It is confirmed with the "gold standard" of an intestinal biopsy. The submerged middle portion of the iceberg is largely invisible to classical clinical diagnosis, but not to modern serological screening methods in the form of antibody testing. This middle portion is composed of asymptomatic and latent celiac disease, as well as 'out of the intestine' varieties of wheat intolerance. Finally, at the base of this massive iceberg, sits approximately 20-30% of the world's population – those who have been found to carry the HLA-DQ locus of genetic susceptibility to celiac disease on chromosome 6.

The "Celiac Iceberg" may not simply illustrate the problems and issues associated with diagnosis and disease prevalence, but may represent the need for a paradigm shift in how we view both CD and wheat consumption among non-CD populations.

First, let us address the traditional view of CD as a rare, but clinically distinct species of genetically-determined disease, which I believe is now running itself aground upon the emerging, post-genomic perspective, whose implications for understanding and treating disease are Titanic in proportion.

## IT IS NOT THE GENES, BUT WHAT WE EXPOSE THEM TO

Despite common misconceptions, monogenic diseases, or diseases that result from errors in the nucleotide sequence of a single gene are exceedingly rare. Perhaps only 1% of all diseases fall within this category, and CS is not one of them. In fact, following the completion of the Human Genome Project (HGP) in 2003, it is no longer accurate to say that our genes alone "cause" disease, any more than it is accurate to say that DNA is alone sufficient to account for all the proteins in our body. Despite initial expectations, the HGP revealed that there are only 20,000-23,000 genes in human DNA (genome), rather than the 100,000+ believed necessary to encode the 100,000+ proteins found in the human body (proteome).

The "blueprint" model of genetics: one gene > one protein > one cellular behavior, which was once the holy grail of biology, has now been supplanted by a model of the cell where *epigenetic* factors (literally: "above the control of the gene") are primary in determining how DNA will be interpreted, translated and expressed. A single gene can be used by the cell to express a multitude of proteins and it is not the DNA itself that determines how or what genes will be expressed. Rather, we must look to the epigenetic factors to understand what makes a liver cell different from a skin cell or brain cell. All of these cells share the exact same three billion base

pairs that make up our DNA code, but it is the epigenetic factors, e.g. regulatory proteins such as miRNA and post-translational modifications, that make the determination as to which genes to turn on and which to silence, resulting in each cell's unique phenotype. Moreover, epigenetic factors are directly and indirectly influenced by the presence or absence of key nutrients in the diet, as well as exposures to chemicals, pathogens and other environmental influences. In a nutshell, what we eat and what we are exposed to in our environment directly affect our DNA and its expression.

Within the scope of this new perspective, even classical monogenic diseases like cystic fibrosis (CF) can be viewed in a new, more promising light. In CF, many of the adverse changes that result from the defective expression of the Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) gene may be preventable or reversible, owing to the fact that the misfolding of the CFTR gene product has been shown to undergo partial or full correction (in the rodent model) when exposed to phytochemicals found in turmeric (curcumin), cayenne (capsaicin), and soybean (genistein). Moreover, nutritional deficiencies of selenium, zinc, riboflavin, vitamin E, etc. in the womb or early in life, may "trigger" the faulty expression or folding patterns of the CFTR gene in CF which might otherwise have avoided epigenetic activation. This would explain why it is possible to live into one's late seventies with this condition, as was the case for Katherine Shores (1925-2004). The implications of these findings are rather extraordinary: epigenetic and not genetic factors are primary in determining disease outcome. Even if we exclude the possibility of reversing certain monogenic diseases, the basic lesson from the post-Genomic era is that we can't blame our DNA for causing disease. Rather, it may have more to do with what we choose to expose our DNA to.

## CELIAC DISEASE REVISITED

What all of this means for CD is that the genetic susceptibility locus, HLA DQ, does not determine the exact clinical outcome of the disease. Instead of being the cause, the HLA genes may be activated *as consequence* of the disease process. Thus, we may need to shift our epidemiological focus from viewing this as a classical "disease" involving a passive subject controlled by aberrant genes, to viewing it as an expression of a natural, protective response to the ingestion of something that the human body was not designed to consume.

**If we view CD not as an unhealthy response to a healthy food, but as a healthy response to an unhealthy food**, classical CD symptoms like diarrhea may make more sense. Diarrhea can be the body's way of reducing the duration of toxic or pathogenic exposure, and villous atrophy the body's way of preventing the absorption. Therefore, these symptoms might be considered the systemic effects of chronic exposure to wheat.

I believe we would be better served by viewing the symptoms of CD as expressions of bodily intelligence rather than deviance. We must shift the focus back to the disease trigger, which is wheat itself.

People with CD may actually have an advantage over the apparently unafflicted. Those who are "non-symptomatic" and whose wheat intolerance goes undiagnosed or misdiagnosed because they lack the classical symptoms may suffer in ways that are equally or more damaging, but expressed more subtly, or in distant organs. Given the nature of these more "mysterious" atypical symptoms, a situation may be created that sends the person suffering along a potentially frustrating path to reach a solid diagnosis. Within this view, CD would be redefined as a protective (healthy?) response to exposure to an inappropriate substance, whereas "asymptomatic" ingestion of the grain with its concomitant "out of the intestine" and mostly silent symptoms, would be considered the unhealthy response insofar as it does not signal, in an obvious and acute manner, that there is a problem with consuming wheat.

It is possible that CD represents both an extreme reaction to a global, human species-specific intolerance to wheat that we all share in to varying degrees. CD symptoms may reflect the body's innate intelligence when faced with the consumption of a substance that is inherently toxic. Let me illustrate this point using the lectin wheat germ agglutinin (WGA) as an example.

WGA is classified as a lectin and is known to play a key role in kidney pathologies, such as IgA nephropathy. In the article: "*Do dietary lectins cause disease?*" the allergist David L. J. Freed points out that WGA binds to "glomerular capillary walls, mesangial cells and tubules of human kidney and (in rodents) binds IgA and induces IgA mesangial deposits," indicating that wheat consumption may lead to kidney damage in susceptible individuals. This is not the only study linking wheat to kidney disease. For instance, a study from the Mario Negri Institute for Pharmacological Research in Milan, Italy, published in 2007 in the *International Journal of Cancer*, looked at bread consumption and the risk of kidney cancer. They found that those who consumed the most bread had a 94% higher risk of developing kidney cancer compared to those who consumed the least bread.

Given the inherently toxic effect that WGA may have on kidney function, it is possible that in certain genetically predisposed individuals (e.g. HLA-DQ2/DQ8), the body – in its innate intelligence – makes an executive decision: either continue to allow damage to the kidneys (or possibly to other organs) until kidney failure and rapid death result, or launch an autoimmune attack on the villi to prevent the absorption of the offending substance which results in a prolonged though relatively malnourished life. This is the explanation typically given for the body's reflexive formation of mucous following exposure to certain highly allergenic or potentially toxic foods, e.g. dairy products, sugar, etc.? The mucous coats the offending substance, preventing its absorption and facilitating safe elimination via the gastrointestinal tract. From this perspective, the HLA-DQ locus of disease susceptibility in the celiac is not simply activated, but *utilized* as a defensive adaptation to continual exposure to a harmful substance. In those who do not have the HLA-DQ locus, an autoimmune destruction of the villi will not occur as rapidly, and exposure to the universally toxic effects of WGA will likely go unabated until silent damage to distant organs leads to the diagnosis of a disease that is apparently unrelated to wheat consumption.

Loss of kidney function, therefore, may only be the "tip of the iceberg" when it comes to the possible adverse effects that wheat proteins and wheat lectin can generate in the body. If kidney cancer is a likely possibility, then other cancers may eventually be linked to wheat consumption as well. This correlation would fly in the face of globally sanctioned and reified assumptions about the inherent benefits of wheat consumption. It would require that we suspend cultural, socio-economic, political and even religious assumptions about its inherent benefits. In many ways, the reassessment of the value of wheat as a food requires a William Burroughs-like moment of shocking clarity when we perceive "in a frozen moment...what is on the end of every fork." Let's take a closer look at what is on the end of our forks.

## OUR BIOLOGICALLY INAPPROPRIATE DIET

In a previous article, I discussed the role that wheat plays as an industrial adhesive (e.g. paints, paper mache', and book binding glue) in order to illustrate the point that it may not be such a good thing for us to eat. The problem is implicit in the word gluten, which literally means "glue" in Latin and in words like pastry and pasta, which derives from wheat*paste*, the original concoction of wheat flour and water which made such good plaster in ancient times. What gives gluten its adhesive and difficult-to-digest qualities are the high levels of disulfide bonds it contains. These same sulfur-to-sulfur bonds are found in hair and vulcanized rubber products, which we all know are difficult to decompose and are responsible for the sulfurous odor they give off when burned.

Each year approximately 700 million metric tons of wheat are produced around the arable surface of the globe, making it the primary cereal of temperate regions and third most prolific cereal grass on the planet. This global dominance of wheat is signified by the Food & Agricultural Organization's (FAO) (the United Nation's international agency for defeating hunger) use of a head of wheat as its official symbol, with the motto "Fiat Panis," literally, "let there be bread." Any effort to indict the credibility of this "king of grains" will prove challenging. As Rudolf Hauschka once remarked, wheat is "a kind of earth-spanning organism." It has vast socio-economic, political, and cultural significance. For example, in the Catholic Church, a wafer made of wheat was long considered irreplaceable as the embodiment of Christ.

Our dependence on monocultured wheat is matched only by its dependence on us. As Europeans have spread one-culture (monoculture) across the planet, so has this grain. We have assumed total responsibility for all phases of the wheat life cycle: from fending off its pests; to providing its ideal growing conditions; to facilitating reproduction and expansion into new territories. We have become so inextricably interdependent that neither species is perceived as sustainable at current population levels without this symbiotic relationship.

It is this codependence that may explain why our culture has, for so long, consistently confined wheat intolerance to categorically distinct, "genetically-based" diseases like "celiac." These categorizations may protect us from the realization that wheat exerts a vast number of deleterious effects on human health in the same way that "lactose intolerance" distracts attention from the deeper problems associated with the casein protein found in cow's milk. [For additional evidence of this view the over 200 adverse health effects linked to wheat consumption on the GreenMedInfo [wheat toxicity database](#)]. Rather than see wheat for what it very well may be: a biologically inappropriate food source, we "blame the victim," and look for genetic explanations for what's wrong with small subgroups of our population who have the most obvious forms of intolerance to wheat consumption, e.g. celiac disease, dermatitis herpetiformis, etc. The medical justification for these classifications may be secondary to economic and cultural imperatives that require the inherent problems associated with wheat consumption to be minimized or occluded.

In all probability, the celiac genotype represents a surviving vestigial branch of a once universal genotype, which, through accident or intention, have resulted in, through successive generations, only limited exposure to wheat. The celiac genotype, no doubt, survived through numerous bottlenecks or "die offs" represented by a dramatic shift from hunted and foraged/gathered foods to gluten-grain consumption and, for whatever reason, simply did not have adequate time to adapt or remove the gluten-grain incompatible genes. The celiac response may indeed reflect a prior, species-wide intolerance to a novel food source: the seed storage form of the monocotyledonous cereal grasses which our species only began consuming 1-500 generations ago at the advent of the Neolithic transition (10-12,000 BC). Let us return to the image of the celiac iceberg for greater clarification.

## OUR SUBMERGED GRAIN-FREE METABOLIC PREHISTORY

The iceberg metaphor is an excellent way to expand our understanding of what was once considered to be an extraordinarily rare disease into one that has statistical relevance for us all, but it has a few limitations. For one, it reiterates the commonly held view that celiac disease is a numerically distinct disease entity or "disease island," floating alongside other numerically distinct disease "ice cubes" in the vast sea of normal health. Though accurate in describing the sense of social and psychological isolation many of the afflicted feel, the celiac iceberg/condition may not be a distinct disease entity at all.

Although the HLA-DQ locus of disease susceptibility on chromosome 6 offers us a place to project blame, I believe we need to shift the emphasis of responsibility for the condition back to the disease "trigger" itself: namely, wheat and other prolamine-rich grains, e.g. barley, rye, spelt, and oats. Without these grains, the typical afflictions we call celiac disease would not exist. Within the scope of this view, the "celiac iceberg" is not actually free-floating, but an outcropping from an entire submerged subcontinent, representing our long-forgotten (cultural time), but relatively recent metabolic prehistory as hunters-and-gatherers (biological time), where grain consumption was, in all likelihood, non-existent, except in instances of near-starvation. The pressure on the celiac to be viewed as an exceptional case or deviation may have everything to do with our preconscious belief that wheat, and grains as a whole, are the "health foods," and very little to do with a rigorous investigation of the facts.

Grains have been heralded since time immemorial as the "staff of life," when in fact, they are more accurately described as a cane, precariously propping up a body starved of the nutrient-dense, low-starch vegetables, fruits, edible seeds and meats, they have so thoroughly supplanted (c.f. Paleolithic Diet). Most of the diseases of affluence, e.g. type 2 diabetes, coronary heart

disease, cancer, etc. can be linked to a grain-based diet, including secondary "hidden sources" of grain consumption in grain-fed fish, poultry, meat and milk products.

Our modern belief that grains make for good food, is simply not supported by the facts. The cereal grasses are within an entirely different super family: monocotyledonous (one-leafed embryo) than that from which our body sustained itself for millions of years: dicotyledonous (two-leafed embryo). The preponderance of scientific evidence points to a human origin in the tropical rainforests of Africa where dicotyledonous fruits would have been available for year-round consumption. It would not have been monocotyledonous plants, but the flesh of hunted animals that would have allowed for the migration from Africa 60,000 years ago into the northern latitudes where vegetation would have been sparse or non-existent during winter months. Collecting and cooking grains would have been improbable given the low nutrient and caloric content of grains, inadequate development of pyrotechnology ("cooking") and associated cooking utensils necessary to efficiently consume them. It was not until the end of the last Ice Age, 20,000 years ago that our human ancestors would have slowly transitioned to a cereal grass-based diet that evolved with emergence of civilization. 20,000 years is probably not enough time to fully adapt to the consumption of grains. Even animals like cows with a head start of thousands of years, evolved to graze on monocotyledons, equipped as ruminants with their four-chambered fore-stomach enabling the breakdown of cellulose and anti-nutrient rich plants, are not designed to consume grains. Cows are designed to consume the sprouted mature form of the grasses and not their seed storage form. Grains are so acidic/toxic in reaction that exclusively grain-fed cattle are prone to developing severe acidosis and subsequent liver abscesses and infections, etc. Feeding wheat to cattle provides an even greater challenge:

"Beef: Feeding wheat to ruminants requires some caution as it tends to be more apt than other cereal grains to cause acute indigestion in animals which are unadapted to it. The primary problem appears to be the high gluten content of which wheat in the rumen can result in a "pasty" consistency to the rumen contents and reduced rumen motility."  
(source: Ontario Ministry of Agriculture, Food & Rural Affairs)

Seeds, after all, are the "babies" of these plants, and are invested with not only the entire hope for continuance of their species, but contain a vast armory of anti-nutrients to help them accomplish this task: toxic lectins, phytates and oxalates, alpha-amylase and trypsin inhibitors, and endocrine disrupters. These not so appetizing phytochemicals enable plants to resist predation of their seeds, or at least, prevent them from "going out without a punch."

## WHEAT: AN EXCEPTIONALLY UNWHOLESOME GRAIN

Wheat presents a special case insofar as wild and selective breeding has produced variations which include up to six sets of chromosomes (3x the human genome worth!), capable of generating a massive number of proteins each with a distinct potentiality for antigenicity. Common bread wheat (*Triticum aestivum*), for instance, has over 23,788 proteins cataloged thus far. In fact, the genome for common bread wheat is actually 6.5 times larger than that of the human genome!

With up to a 50% increase in gluten content of some varieties of wheat versus their ancient predecessors, it is amazing that we continue to consider "glue-eating" a normal behavior; whereas wheat avoidance is left to the "celiac", still perceived by most health care practitioners as exhibiting a "freak" reaction to the consumption of something intrinsically wholesome.

Thankfully, we don't need to rely on our intuition, or even (not so) common sense to draw conclusions about the inherently unhealthy nature of wheat. A wide range of investigation has occurred over the past decade revealing the problem with the alcohol-soluble protein component of wheat known as gliadin; the glycoprotein known as lectin (wheat germ agglutinin (WGA)); the opioid-like peptides known as gluten exorphins and gliadomorphin, and the excitotoxic potentials of high levels of aspartic and glutamic acid found in wheat. Add to these, the anti-nutrients found in grains such as phytates, enzyme inhibitors, etc. and you have a substance which we may more appropriately consider the farthest thing from wholesome.

The remainder of this article will demonstrate the following adverse effects of wheat on both celiac and non-celiac populations: 1) wheat causes damage to the intestines 2) wheat causes intestinal permeability 3) wheat has pharmacologically active properties 4) wheat causes damage that is "out of the intestine", affecting distant organs 5) wheat induces molecular mimicry 6) wheat contains high concentrations of excitotoxins.

### 1) WHEAT GLIADIN CREATES IMMUNE MEDIATED DAMAGE TO THE INTESTINES

Gliadin is classified as a prolamin, which is a wheat storage protein high in the amino acids proline and glutamine and soluble in strong alcohol solutions. Gliadin, once deamidated by the enzyme tissue transglutaminase, is considered the primary epitope for T-cell activation and subsequent autoimmune destruction of intestinal villi. Yet, gliadin does not need to activate an autoimmune response, e.g. celiac disease, in order to have a deleterious effect on intestinal tissue.

In a study published in GUT in 2007, a group of researchers asked the question: "*Is gliadin really safe for non-coeliac individuals?*" In order to test the hypothesis that an innate immune response to gliadin is common in patients with celiac disease and without celiac disease, intestinal biopsy cultures were taken from both groups and challenged with crude gliadin, the gliadin synthetic 19-mer (19 amino acid long gliadin peptide) and 33-mer deamidated peptides. Results showed that all patients with or without celiac disease, when challenged with the various forms of gliadin, produced an interleukin-15-mediated response. The researchers concluded: "The data obtained in this pilot study supports the hypothesis that gluten elicits its harmful effect, throughout an IL15 innate immune response, *on all individuals* [my italics]."

The primary difference between the two groups is that the celiac disease (CD) patients experienced both an innate *and* an adaptive immune response to the gliadin, whereas the non-celiacs experienced only the innate response. The researchers hypothesized that the difference between the two groups may be attributable to greater genetic susceptibility at the HLA-DQ locus for triggering an adaptive immune response, higher levels of immune mediators or receptors, or perhaps greater permeability in the celiac intestine. It is possible that over and above the possibility of greater genetic susceptibility, most of the differences are from epigenetic factors that are influenced by the presence or absence of certain nutrients in the diet. Other factors such as exposure to NSAIDs like naproxen or aspirin can profoundly increase intestinal permeability in the non-celiac, rendering them susceptible to gliadin's potential for activating secondary adaptive immune responses. This may explain why, in up to 5% of all cases of classically defined celiac disease, the typical HLA-DQ haplotypes are not found. However, determining the factors associated with greater or lesser degrees of susceptibility to gliadin's intrinsically toxic effect should be *secondary to the fact that it has been demonstrated to be toxic to both non-celiacs and celiacs*.

### 2) WHEAT GLIADIN CREATES INTESTINAL PERMEABILITY

Gliadin upregulates the production of a protein known as zonulin, which modulates intestinal permeability. Over-expression of zonulin is involved in a number of autoimmune disorders, including CD and type 1 diabetes. Researchers have studied the effect of gliadin on increased zonulin production and subsequent gut permeability in both celiac and non-celiac intestines, and have found that "gliadin activates zonulin signaling irrespective of the genetic expression of autoimmunity, leading to increased intestinal permeability to macromolecules."<sup>10</sup> These results indicate, once again, that a pathological response to wheat gluten is a normal or human, species-specific response, and is not based entirely on genetic susceptibilities. Since intestinal permeability is associated with a wide range of disease states, including cardiovascular illness, liver disease and many autoimmune disorders, I believe this research indicates that gliadin (and therefore, wheat) should be avoided as a matter of principle.

### 3) WHEAT GLIADIN HAS PHARMACOLOGICAL PROPERTIES

Gliadin can be broken down into various amino acid lengths or peptides. Gliadorphin is a 7 amino acid long peptide: Tyr-Pro-Gln-Pro-Gln-Pro-Phe which forms when the gastrointestinal system is compromised. When digestive enzymes are insufficient to break gliadorphin down into 2-3 amino acid lengths and a compromised intestinal wall allows for the leakage of the entire 7



amino acid long fragment into the blood, glaidorphin can pass through to the brain through circumventricular organs and activate opioid receptors resulting in disrupted brain function.

There have been a number of gluten exorphins identified: gluten exorphin A4, A5, B4, B5 and C, and many of them have been hypothesized to play a role in autism, schizophrenia, ADHD and related neurological conditions. In the same way that the celiac iceberg illustrated the illusion that intolerance to wheat is rare, it is possible, even probable, that wheat exerts pharmacological influences on everyone. What distinguishes the schizophrenic or autistic individual from the functional wheat consumer is the degree to which they are affected.

Below the tip of the "Gluten Iceberg," we might find that these opiate-like peptides are responsible for bread's general popularity as a "comfort food", and our use of phrases like "I love bread," or "this bread is to die for" to be indicative of wheat's narcotic properties. I believe a strong argument can be made that the agricultural revolution that occurred approximately 10-12,000 years ago as we shifted from the Paleolithic into the Neolithic era, was precipitated as much by environmental necessities and human ingenuity, as it was by the addictive qualities of psychoactive peptides in the grains themselves.

The world-historical reorganization of society, culture and consciousness accomplished through the symbiotic relationship with cereal grasses, may have had as much to do with our ability to master agriculture, as to be mastered by it. The presence of pharmacologically active peptides would have further sweetened the deal, making it hard to distance ourselves from what became a global fascination with wheat.

An interesting example of wheat's addictive potential pertains to the Roman army. The Roman Empire was once known as the "Wheat Empire," with soldiers being paid in wheat rations. Rome's entire war machine, and its vast expansion, was predicated on the availability of wheat. Forts were actually granaries, holding up to a year's worth of grain in order to endure sieges from their enemies. Historians describe soldiers' punishment included being deprived of wheat rations and being given barley instead. An entire political strategy was developed called "Bread and Circuses," based on both entertaining (Colosseum) and feeding (free bread) the masses into submission. The Roman Empire went on to facilitate the global dissemination of wheat cultivation which fostered a form of imperialism with biological as well as cultural roots.

The Roman appreciation for wheat, like our own, may have had less to do with its nutritional value as "health food" than its ability to generate a unique narcotic reaction. It may fulfill our hunger while generating a repetitive, ceaseless cycle of craving more of the same, and by doing so, enabling the surreptitious control of human behavior. Other researchers have come to similar conclusions. According to the biologists Greg Wadley & Angus Martin:

*"Cereals have important qualities that differentiate them from most other drugs. They are a food source as well as a drug, and can be stored and transported easily. They are ingested in frequent small doses (not occasional large ones), and do not impede work performance in most people. A desire for the drug, even cravings or withdrawal, can be confused with hunger. These features make cereals the ideal facilitator of civilization (and may also have contributed to the long delay in recognizing their pharmacological properties)."*

#### 4) WHEAT LECTIN (WGA) DAMAGES OUR TISSUE

Wheat contains a lectin known as wheat germ agglutinin (WGA) which is responsible for causing direct, non-immune mediated damage to our intestines, and subsequent to entry into the bloodstream, results in damage to distant organs in our body.

Lectins are sugar-binding proteins which are highly selective for their sugar moieties. It is believed that wheat lectin, which binds to the monosaccharide N-acetyl glucosamine (NAG), provides defense against predation from bacteria, insects and animals. Bacteria have NAG in their cell wall, insects have an exoskeleton composed of polymers of NAG called chitin, and the epithelial tissue of mammals, e.g. gastrointestinal tract, have a "sugar coat" called the glycocalyx which is composed, in part, of NAG. The glycocalyx can be found on the outer surface (apical portion) of the microvilli within the small intestine.

There is evidence that WGA may cause increased shedding of the intestinal brush border membrane, reduction in surface area, acceleration of cell losses and shortening of villi, via binding to the surface of the villi. WGA can mimic the effects of epidermal growth factor (EGF) at the cellular level, indicating that the crypt hyperplasia seen in CD may be due to a mitogenic response induced by WGA. WGA has been implicated in obesity and "leptin resistance" by blocking the receptor in the hypothalamus for the appetite-satiating hormone leptin. WGA has also been shown to have an insulin-mimetic action, potentially contributing to weight gain and insulin resistance.<sup>15</sup> And, as discussed earlier, wheat lectin has been shown to induce IgA mediated damage to the kidney, indicating that nephropathy and kidney cancer may be associated with wheat consumption.

#### 5) WHEAT PEPTIDES EXHIBIT MOLECULAR MIMICRY

Gliadorphin and gluten exorphins exhibit a form of molecular mimicry that affects the nervous system, but other wheat proteins affect different organ systems. The digestion of gliadin produces a peptide that is 33 amino acids long and is known as 33-mer which has a remarkable homology to the internal sequence of pertactin, the immunodominant sequence in the *Bordetella pertussis* bacteria (whooping cough). Pertactin is considered a highly immunogenic virulence factor and is used in vaccines to amplify the adaptive immune response. It is possible that the immune system may confuse this 33-mer with a pathogen resulting in either a cell-mediated and/or adaptive immune response against self.

#### 6) WHEAT CONTAINS HIGH LEVELS OF EXCITO-TOXINS

John B. Symes, D.V.M. is responsible for drawing attention to the potential excitotoxicity of wheat, dairy, and soy, due to their exceptionally high levels of the non-essential, glutamic and aspartic amino acids. Excitotoxicity is a pathological process where glutamic and aspartic acids cause an over-activation of the nerve cell receptors (e.g. NMDA and AMPA receptors) leading to calcium-induced nerve and brain injury. Of all cereal grasses commonly consumed, wheat contains the highest levels of glutamic acid and aspartic acid. Glutamic acid is largely responsible for wheat's exceptional taste. The Japanese coined the word *umami* to describe the extraordinary "yummy" effect that glutamic acid exerts on the tongue and palate and invented monosodium *glutamate* (MSG) to amplify this sensation. Though the Japanese first synthesized MSG from kelp, wheat can also be used due to its high glutamic acid content. It is likely that wheat's popularity, alongside its opiate-like activity, has everything to do with the natural flavor-enhancers already contained within it. These amino acids may contribute to neurodegenerative conditions such as multiple sclerosis, Alzheimer's disease, Huntington's disease, and other nervous disorders such as epilepsy, attention deficit disorder and migraines.

#### CONCLUSION

In this article, I have proposed that celiac disease be viewed not as a rare "genetically-determined" disorder, but as an extreme example of our body's communicating to us a once universal, species-specific affliction: severe intolerance to wheat. Celiac disease reflects how profoundly our diet has diverged from what was, until only recently, a grain-free diet and even more recently, a wheat-free one. We are so profoundly distanced from that dramatic Neolithic transition in cultural time that "missing is any sense that anything is missing." The body, on the other hand, cannot help but remember a time when cereal grains were alien to the diet because in biological time, it was only moments ago.

Eliminating wheat, if not all of the members of the cereal grass family and returning to dicotyledons or pseudo-grains like quinoa, buckwheat and amaranth, may help us roll back the hands of biological and cultural time, to a time of clarity, health and vitality that many of us have never known before. When one eliminates wheat and fills the void left by its absence with fruits, vegetables, high-quality meats and foods consistent with our biological needs, we may begin to feel a sense of vitality that many would find hard to imagine. If wheat really is more like a drug than a food, anesthetizing us to its ill effects on our body, it will be difficult for us to understand its grasp upon us unless and until we eliminate it from our diet. I encourage everyone to see celiac disease not as a condition alien to our own. Rather, the celiac disease condition gives us a glimpse of how profoundly wheat may distort and disfigure our health if we continue to expose

ourselves to its ill effects. I hope this article will provide inspiration for non-celiacs to try a wheat free diet and judge for themselves if it is really worth eliminating.

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## Part II: Opening Pandora's Bread Box: The Critical Role of Wheat Lectin in Human Disease

By Sayer Ji, founder of

Now that celiac disease has been allowed official entry into the annals of established medical conditions, and gluten intolerance is no longer entirely a fringe medical concept, the time has come to draw attention to the powerful little chemical in wheat known as 'wheat germ agglutinin' (WGA) which is largely responsible for many of [wheat's pervasive, and difficult-to-diagnose, ill effects](#). Not only does WGA throw a monkey wrench into our assumptions about the primary causes of wheat intolerance, it also pulls the rug out from under one of the health food industry's favorite poster children since high concentrations of WGA is found in "whole wheat," including its supposedly superior sprouted form. Below the radar of conventional serological testing for antibodies against various gluten proteins and genetic testing for disease susceptibility, the WGA "lectin problem" remains almost entirely obscured. Lectins, though found in all grains, seeds, legumes, dairy and our beloved nightshades: the tomato and potato, are rarely connected with health or illness, even when their consumption may greatly reduce both the quality and length of our lives.

Although significant progress has been made in exposing the dark side of wheat over the past decade, gluten receives a disproportionate share of the attention. Given that modern bread wheat (*Triticum aestivum*) is an allohexaploid species containing six distinct sets of chromosomes capable of producing well over 23,000 unique proteins, it is not surprising that we are only now beginning to unravel the complexities of this plant's many secrets. [1] What is unique about WGA is that it can do *direct* damage to the majority of tissues in the human body without requiring a specific set of genetic susceptibilities and/or immune-mediated articulations. This may explain why chronic inflammatory and degenerative conditions are endemic to wheat-consuming populations even when overt allergies or intolerances to wheat gluten appear exceedingly rare. The future fate of wheat consumption and, by implication, our health, may depend largely on whether or not the toxic qualities of WGA come to light within the general population.

Nature engineers, within all species, a set of defenses against predation, though not all are as obvious as the thorns on a rose or the horns on a rhinoceros. Plants do not have the cell-mediated immunity of higher life forms, like ants, nor do they have the antibody-driven, secondary immune systems of vertebrates with jaws. Therefore, they must rely on a much simpler, innate immunity. It is for this reason that seeds of the grass family, e.g. rice, wheat, spelt, rye, have exceptionally high levels of defensive sugar-binding proteins known as lectins, which function much like "invisible thorns." Cooking, sprouting, fermentation and digestion are the traditional

ways in which people, for instance, deal with the various anti-nutrients found within this family of plants, However, lectins are, by design, particularly resistant to degradation through a wide range of pH and temperatures.

WGA lectin is an exceptionally tough adversary as it is formed by the same disulfide bonds that make vulcanized rubber and human hair so strong, flexible and durable. Like synthetic pesticides, lectins are extremely small, resistant to decomposition by living systems, and tend to accumulate and incorporate into tissues where they interfere with normal biological processes. Indeed, WGA lectin is so powerful as an insecticide that biotech firms have used recombinant DNA technology to create genetically modified WGA-enhanced plants. We can only hope that these virtually unregulated biotech companies, in the business of playing God with the genetic infrastructure of life, will realize the potential harm to humans that such genetic modifications can cause.

Lectins are *sugar-binding proteins* and, through thousands of years of selectively breeding wheat for increasingly larger quantities of protein, the concentration of WGA lectin has increased proportionately. This, no doubt, has contributed to wheat's global dominance as one of the world's favored monocultures, offering additional "built-in" pest resistance. The word lectin comes from the same etymological root as the word select, and literally means "to choose." Lectins are designed "to choose" specific carbohydrates that project from and attach to the surface of cells. In the case of WGA, the two glycoproteins it selects, in order of greatest affinity, are N-Acetyl Glucosamine and N-Acetylneuraminic acid (sialic acid).

WGA is nature's ingenious solution for protecting the wheat plant from the entire gamut of its natural enemies. Fungi have cell walls composed of a polymer of N-Acetylglucosamine. The cellular walls of bacteria are made from a layered structure called the peptidoglycan, a biopolymer of N-Acetylglucosamine. N-Acetylglucosamine is the basic unit of the biopolymer chitin, which forms the outer coverings of insects and crustaceans (shrimp, crab, etc.). All animals, including worms, fish, birds and humans, use N-Acetylglucosamine as a foundational substance for building the various tissues in their bodies, including the bones. The production of cartilage, tendons, and joints depends on the structural integrity of N-Acetylglucosamine. The mucus known as the glycocalyx, or literally, "sugar coat" is secreted in humans by the epithelial cells which line all the mucous membranes, from nasal cavities at the top to the alimentary tube at the bottom, as well as the protective and slippery lining of our blood vessels. The glycocalyx is composed largely of N-Acetylglucosamine and N-Acetylneuraminic acid (also known as sialic acid), with carbohydrate end of N-Acetylneuraminic acid of this protective glycoprotein forming the terminal sugar that is exposed to the contents of both the gut and the arterial lumen (opening). WGA's unique binding specificity to these exact two glycoproteins is not accidental. Nature has perfectly designed WGA to attach to, disrupt, and gain entry through these mucosal surfaces.

It may strike some readers as highly suspect that wheat - the "staff of life" - which has garnered a reputation for "wholesome goodness" the world over, could contain a powerful health-disrupting anti-nutrient, which is only now coming to public attention. WGA has been overshadowed by the other proteins in wheat. Humans – not nature – have spent thousands of years cultivating and selecting for larger and larger quantities of these proteins. These pharmacologically active, opiate-like proteins in gluten are known as gluten exorphins (A5, B4, B5, C) and gliadorphins. In the short term, they may effectively anesthetize us to the long-term, adverse effects of WGA. Gluten also contains exceptionally high levels of the excitotoxic l-aspartic and l-glutamic amino acids, which can also be highly addictive, not unlike their synthetic shadow molecules aspartame and monosodium glutamate. No doubt the narcotic properties of wheat is the primary reason why suspicions about its toxicity have remained merely speculative for thousands upon thousands of years.

WGA is most concentrated in the seed of the wheat plant, likely due to the fact that the seeds are the "babies" of these plants and are invested with the entire hope for continuance of their species. Protecting the seed against predation is necessarily a first priority. WGA is an exceedingly small glycoprotein (36 kilodaltons) and is concentrated deep within the embryo of the wheat berry (approximately 1 microgram per grain). WGA migrates during germination to the roots and tips of leaves, as the developing plant begins to project itself into the world and outside the safety of

its seed. In its quest for nourishment from the soil, its roots are challenged with fungi and bacteria that seek to invade the plant. In its quest for sunlight and other nourishment from the heavens, the plant's leaves become prey to insects, birds, mammals, etc. Even after the plant has developed beyond the germination and sprouting stages, it retains almost 50% of the levels of lectin found in the dry seeds. Approximately one third of this WGA is in the roots and two thirds is in the shoot, for at least 34 days [3]

Each grain contains approximately one microgram of WGA. That seems hardly enough to do any harm to animals our size. Lectins, however, are notoriously dangerous even in minute doses and can be fatal when inhaled or injected directly into the bloodstream. According to the Centers for Disease Control and Prevention, it takes only 500 micrograms (about half a grain of sand) of ricin (a lectin extracted from castor bean casings) to kill a human. A single, one ounce slice of wheat bread contains approximately 500 micrograms of WGA, which, if it were refined to its purest form and injected directly into the blood, could, in theory, have platelet-aggregating and erythrocyte-agglutinating effects strong enough to create an obstructive clot such as that occurring in myocardial infarction and stroke. This, however, is not a likely route of exposure and, in reality, the immediate pathologies associated with lectins like ricin and WGA are largely restricted to the gastrointestinal tract where they can cause mucosal injuries. The point is that WGA, even in small quantities, could have profoundly adverse effects, given suitable conditions. Ironically, WGA is exceptionally small, at 36 kilodaltons (approximately the mass of 36,000 hydrogen atoms) and it can pass through the cell membranes of the intestine with ease. The intestines will allow passage of molecules up to 1,000 kilodaltons in size. Moreover, one wheat kernel contains 16.7 trillion individual molecules of WGA, with each molecule of WGA having four N-Acetylglucosamine binding sites. The disruptive and damaging effects of whole wheat bread consumption are formidable in someone whose protective mucosal barrier has been compromised by something as simple as nonsteroidal anti-inflammatory drug (NSAID) use, or a recent viral or bacterial infection. The common consumption of both wheat and NSAIDs may suggest the frequency of the WGA vicious cycle. Anti-inflammatory medications, such as ibuprofen and aspirin, increase intestinal permeability and may cause absorption of even larger-than-normal quantities of pro-inflammatory WGA. Conversely, the inflammation caused by the absorption of WGA lectin is the very reason there is a great need for the inflammation-reducing effects of NSAIDs.

One way to gauge just how pervasive the adverse effects of WGA are among wheat-consuming populations is the popularity of the dietary supplement glucosamine. In the USA, a quarter-billion dollars' worth of glucosamine is sold annually. The main source of glucosamine on the market is from the N-Acetylglucosamine-rich chitin exoskeletons of crustaceans like shrimp and crab. Glucosamine is used for reducing pain and inflammation. We do not have a dietary deficiency of the pulverized shells of dead sea critters, just as our use of NSAIDs is not caused by a deficiency of these synthetic chemicals in our diet. When we consume glucosamine supplements, the WGA, instead of binding to our tissues, binds to the pulverized chitin in the glucosamine supplements, sparing us from the full impact of WGA. Many millions of Americans who have greatly reduced their pain and suffering by ingesting glucosamine and NSAIDs may be better served by removing wheat, the underlying cause of their malaise, from their diets. This would result in even greater relief from pain and inflammation along with far less dependency on both palliative supplements and medicines.

To further underscore this point, the following are several ways that WGA depletes our health while glucosamine works against it:

WGA may be Pro-inflammatory

At exceedingly small (nanomolar) concentrations, WGA stimulates the synthesis of pro-inflammatory chemical messengers (cytokines) including Interleukin 1, Interleukin 6 and Interleukin 8 in intestinal and immune cells.[4] WGA has been shown to induce NADPH-Oxidase in human neutrophils associated with the "respiratory burst" that results in the release of inflammatory free radicals called reactive oxygen species[5] WGA has been shown to play a causative role in patients with chronic thin gut inflammation.[6]

## WGA may be Immunotoxic

WGA induces thymus atrophy in rats[7] and may directly bind to, and activate, leukocytes [8]. Anti-WGA antibodies in human sera have been shown to cross-react with other proteins, indicating that they may contribute to autoimmunity [9]. Indeed, WGA appears to play a role in the pathogenesis of celiac disease (CD) that is entirely distinct from that of gluten, due to significantly higher levels of the immunoglobulins IgG and IgA antibodies against WGA found in patients with CD, when compared with patients with other intestinal disorders. These antibodies have also shown not to cross-react with gluten antigens[10] [11]

## WGA May be Neurotoxic

WGA can pass through the blood brain barrier (BBB) through a process called "adsorptive endocytosis"[12] and is able to travel freely among the tissues of the brain which is why it is used as a marker for tracing neural circuits[13]. WGA's ability to pass through the BBB, pulling bound substances with it, has piqued the interest of pharmaceutical developers who are looking to find ways of delivering drugs to the brain. WGA has a unique binding affinity for N-Acetylneuraminic acid, a crucial component of neuronal membranes found in the brain, such as gangliosides which have diverse roles such as cell-to-cell contact; ion conductance, as receptors, and whose dysfunction has been implicated in neurodegenerative disorders. WGA may attach to the protective coating on the nerves known as the myelin sheath[14] and is capable of inhibiting nerve growth factor [15] which is important for the growth, maintenance, and survival of certain target neurons. WGA binds to N-Acetylglucosamine which is believed to function as an atypical neurotransmitter functioning in nociceptive (pain) pathways.

## WGA May be Cytotoxic

WGA has been demonstrated to be cytotoxic to both normal and cancerous cell lines, capable of inducing either cell cycle arrest or programmed cell death (apoptosis).[16]

## WGA May Interfere with Gene Expression

WGA demonstrates both mitogenic and anti-mitogenic[17] activities. WGA may prevent DNA replication[18] WGA binds to polysialic acid (involved in post-translational modifications) and blocks chick tail bud development in embryogenesis, indicating that it may influence both genetic and epigenetic factors.

## WGA May Disrupt Endocrine Function

WGA has also been shown to have an insulin-mimetic action, potentially contributing to weight gain and insulin resistance [19]. WGA has been implicated in obesity and "leptin resistance" by blocking the receptor in the hypothalamus for the appetite satiating hormone leptin. WGA stimulates epidermal growth factor which, when upregulated, is associated with increased risk of cancer. WGA has a particular affinity for thyroid tissue and has been shown to bind to both benign and malignant thyroid nodules[20] WGA interferes with the production of secretin from the pancreas, which can inhibit with digestion and cause pancreatic hypertrophy. WGA attaches to sperm and ovary cells, indicating it may adversely influence fertility.

## WGA May be Cardiotoxic

WGA induces platelet activation and aggregation [21]. WGA has a potent, disruptive effect on platelet endothelial cell adhesion molecule-1, which plays a key role in tissue regeneration and safely removes neutrophils from our blood vessels.[22]

## WGA May Adversely Effect Gastrointestinal Function

WGA causes increased shedding of the intestinal brush border membrane, reduction in surface area, acceleration of cell losses and shortening of villi, via binding to the surface of the villi.



WGA can mimic the effects of epidermal growth factor (EGF) at the cellular level, indicating that the crypt hyperplasia seen in celiac disease may be due to the growth-promoting effects of WGA. WGA causes cytoskeletal degradation in intestinal cells, contributing to cell death and increased turnover. WGA decreases levels of heat shock proteins in gut epithelial cells leaving these cells less well protected against the potentially harmful content of the gut lumen.[23]

### WGA May Share Similarities with Certain Viruses

There are a number of interesting similarities between WGA lectin and viruses. Both viral particles and WGA lectin are several orders of magnitude smaller than the cells they enter, and subsequent to their attachment to the cell membrane, are taken into the cell through a process of endocytosis. Both influenza and WGA gain entry through the sialic acid coatings of our mucous membranes (glycocalyx) each with a sialic acid-specific substance: the neuraminidase enzyme for viruses and the sialic acid binding sites on the WGA lectin. Once the influenza virus and WGA lectin have made their way into wider circulation in the host body, they are both capable of blurring the line in the host between self and non-self. Influenza accomplishes this by incorporating itself into the genetic material of our cells and taking over the protein production machinery to replicate itself, with the result that our immune system must attack its own virally transformed cell, to clear the infection. Studies done with herpes simplex virus have shown that WGA has the capacity to block viral infectivity through competitively binding to the same cell surface receptors, indicating that they may effect cells through very similar pathways. WGA has the capability of influencing the gene expression of certain cells, e.g. mitogenic/anti-mitogenic action, and like other lectins associated with autoimmunity, e.g. soy lectin, and viruses like Epstein-Barr virus, WGA may be capable of causing certain cells to exhibit class 2 human leukocyte antigens (HLA-II), which mark them for autoimmune destruction by white blood cells. Since human antibodies to WGA have been shown to cross-react with other proteins, even if WGA does not directly transform the phenotype of our cells into "other," the resulting cross-reactivity of antibodies to WGA with our own cells would nonetheless result in autoimmunity.

Given the multitude of ways in which WGA may disrupt our health, gain easy entry through our intestine into systemic circulation, and remain refractory to traditional antibody-based clinical diagnoses, it is altogether possible that the consumption of wheat is detracting from the general health of the wheat-consuming world and that we have been, for all these years, "digging our graves with our teeth." This perspective may come as a great surprise to the health food industry whose particular love affair for whole wheat products has begun to go mass market. The increasingly hyped-up marketing of "whole wheat," "sprouted grain," and "wheat germ" enriched products, all of which may have considerably higher levels of WGA than their processed, fractionized, non-germinated and supposedly "less healthy" equivalents, may contribute to making us all significantly less healthy.

It is my belief that a careful study of the wheat plant will reveal that, despite claims to the contrary, man does not have dominion over nature. All that he deems fit for his consumption may not be his inborn right. Though the wheat plant's apparently defenseless disposition would seem to make it suitable for mass human consumption, it has been imbued with a multitude of invisible "thorns," with WGA being its smallest and perhaps most potent defense against predation. While WGA may be an uninvited guest at our table, wheat is equally inhospitable to us. Perhaps the courteous thing to do, having realized our mistaken intrusion, is to lick our wounds and simply go our separate ways. Perhaps, as we separate from our infatuation with wheat, we will grow more sensitive to our bodies' true needs and discover far more suitable forms of nourishment that nature has not impregnated with such high levels of addictive and potentially debilitating proteins.

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Topic: [Wheat](#)





# Wheat

10/09/2012

Parent Child Relationship:

[Gluten](#)

[Gluten exorphins](#)

[Gliadin](#)

[Wheat Germ Agglutinin \(WGA\)](#)

Despite popular opinion wheat consumption may not be beneficial to health. These two published articles make a strong argument against perceiving wheat intolerance as simply a matter of allergy/genetic intolerance in a minority subset of the human population, *but rather* as a species-specific intolerance, applicable to all.

Part 1: [The Dark Side of Wheat: New Perspectives on Celiac Disease & Wheat Intolerance](#)

Part 2: [Opening Pandora's Bread Box: The Critical Role of Wheat Lectin in Human Disease.](#)

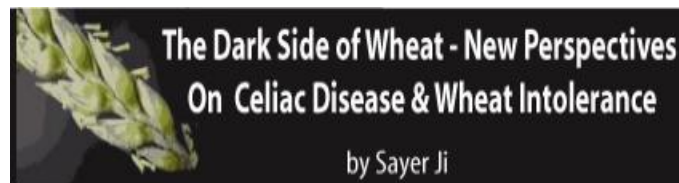
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## The Dark Side of Wheat - New Perspectives On Celiac Disease & Wheat Intolerance - by Sayer Ji

[The 2nd part of this article entitled "Opening Pandora's Box: The Critical Role of Wheat Lectin in Human Disease" can be viewed [here](#)]

[View the 121 Diseases linked to wheat consumption in the biomedical literature [here](#).]



by [Sayer Ji](#)

The globe-spanning presence of wheat and its exalted status among secular and sacred institutions alike differentiates this food from all others presently enjoyed by humans. Yet the unparalleled rise of wheat as the very catalyst for the emergence of ancient civilization has not occurred without a great price. While wheat was the engine of civilization's expansion and was glorified as a "necessary food," both in the physical (staff of life) and spiritual sense (the body of Christ), those suffering from celiac disease are living testimony to the [lesser known dark side of wheat](#). A study of celiac disease may help unlock the mystery of why modern man, who dines daily at the table of wheat, is the sickest animal yet to have arisen on this strange planet of ours.

### THE CELIAC ICEBERG

Celiac disease (CD) was once considered an extremely rare affliction, limited to individuals of European origin. Today, however, a growing number of studies indicate that celiac disease is found throughout the US at a rate of up to 1 in every 133 persons, which is several orders of magnitude higher than previously estimated.

These findings have led researchers to visualize CD as an iceberg. The tip of the iceberg represents the relatively small number of the world's population whose gross presentation of clinical symptoms often leads to the diagnosis of celiac disease. This is the classical case of CD characterized by gastrointestinal symptoms, malabsorption and malnourishment. It is confirmed with the "gold standard" of an intestinal biopsy. The submerged middle portion of the iceberg is largely invisible to classical clinical diagnosis, but not to modern serological screening methods in the form of antibody testing. This middle portion is

composed of asymptomatic and latent celiac disease as well as “out of the intestine” varieties of wheat intolerance. Finally, at the base of this massive iceberg sits approximately 20-30% of the world’s population – those who have been found to carry the HLA-DQ locus of genetic susceptibility to celiac disease on chromosome 6.\*

The “Celiac Iceberg” may not simply illustrate the problems and issues associated with diagnosis and disease prevalence, but may represent the need for a paradigm shift in how we view both CD and wheat consumption among non-CD populations.

First let us address the traditional view of CD as a rare, but clinically distinct species of genetically-determined disease, which I believe is now running itself aground upon the emerging, post-Genomic perspective, whose implications for understanding and treating disease are Titanic in proportion.

### **IT IS NOT THE GENES, BUT WHAT WE EXPOSE THEM TO**

Despite common misconceptions, monogenic diseases, or diseases that result from errors in the nucleotide sequence of a single gene are exceedingly rare. Perhaps only 1% of all diseases fall within this category, and Celiac disease is not one of them. In fact, following the completion of the Human Genome Project (HGP) in 2003 it is no longer accurate to say that our genes “cause” disease, any more than it is accurate to say that DNA is sufficient to account for all the proteins in our body. Despite initial expectations, the HGP revealed that there are only 20,000-25,000 genes in human DNA (genome), rather than the 100,000 + believed necessary to encode the 100,000 + proteins found in the human body (proteome).

The “blueprint” model of genetics: one gene → one protein → one cellular behavior, which was once the holy grail of biology, has now been supplanted by a model of the cell where *epigenetic* factors (literally: “beyond the control of the gene”) are primary in determining how DNA will be interpreted, translated and expressed. A single gene can be used by the cell to express a multitude of proteins and it is not the DNA itself that determines how or what genes will be expressed. Rather, we must look to the epigenetic factors to understand what makes a liver cell different from a skin cell or brain cell. All of these cells share the exact same 3 billion base pairs that make up our DNA code, but it is the epigenetic factors, e.g. regulatory proteins and post-translational modifications, that make the determination as to which genes to turn on and which to silence, resulting in each cell’s unique phenotype. Moreover, epigenetic factors are directly and indirectly influenced by the presence or absence of key nutrients in the diet, as well as exposures to chemicals, pathogens and other environmental influences.

### **In a nutshell, what we eat and what we are exposed to in our environment directly affects our DNA and its expression.**

Within the scope of this new perspective even classical monogenic diseases like Cystic Fibrosis (CF) can be viewed in a new, more promising light. In CF many of the adverse changes that result from the defective expression of the Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) gene may be preventable or reversible, owing to the fact that the misfolding of the CFTR gene product has been shown to undergo partial or full correction (in the rodent model) when exposed to phytochemicals found in turmeric, cayenne, and soybean. Moreover, nutritional deficiencies of selenium, zinc, riboflavin, vitamin e, etc. in the womb or early in life, may “trigger” the faulty expression or folding patterns of the CFTR gene in Cystic Fibrosis which might otherwise have avoided epigenetic activation. This would explain why it is possible to live into one’s late seventies with this condition, as was the case for Katherine Shores (1925-2004). The implications of these findings are rather extraordinary: epigenetic and not genetic factors are primary in determining disease outcome. Even if we exclude the possibility of reversing certain monogenic diseases, the basic lesson from the post-Genomic era is that we can’t blame our DNA for causing disease. Rather, it may have more to do with what we choose to expose our DNA to.

### **CELIAC DISEASE REVISITED**

What all of this means for CD is that the genetic susceptibility locus, HLA DQ, does not determine the exact clinical outcome of the disease. Instead of being the cause, if the HLA genes are activated, they are a *consequence* of the disease process. Thus, we may need to shift our epidemiological focus from viewing this as a classical “disease” involving a passive subject controlled by aberrant genes, to viewing it as an expression of a natural, protective response to the ingestion of something that the human body was not designed to consume.

If we view celiac disease not as an unhealthy response to a healthy food, but as a healthy response to an unhealthy food, classical CD symptoms like diarrhea may make more sense. Diarrhea can be the body’s way to reduce the duration of exposure to a toxin or pathogen, and villous atrophy can be the body’s way of preventing the absorption and hence, the systemic effects of chronic exposure to wheat.

I believe we would be better served by viewing the symptoms of CD as expressions of bodily intelligence rather than deviance. We must shift the focus back to the disease trigger, which is wheat itself.

People with celiac may actually have an advantage over the apparently unafflicted because those who are “non-symptomatic” and whose wheat intolerance goes undiagnosed or misdiagnosed because they lack

the classical symptoms and may suffer in ways that are equally or more damaging, but expressed more subtly, or in distant organs. Within this view celiac disease would be redefined as a protective (healthy?) response to exposure to an inappropriate substance, whereas “asymptomatic” ingestion of the grain with its concomitant “out of the intestine” and mostly silent symptoms, would be considered the unhealthy response insofar as it does not signal in an obvious and acute manner that there is a problem with consuming wheat.

It is possible that celiac disease represents both an extreme reaction to a global, species-specific intolerance to wheat that we all share in varying degrees. CD symptoms may reflect the body’s innate intelligence when faced with the consumption of a substance that is inherently toxic. Let me illustrate this point using Wheat Germ Agglutinin (WGA), as an example.

WGA is classified as a lectin and is known to play a key role in kidney pathologies, such as IgA nephropathy. In the article: “*Do dietary lectins cause disease?*” the Allergist David L J Freed points out that WGA binds to “glomerular capillary walls, mesangial cells and tubules of human kidney and (in rodents) binds IgA and induces IgA mesangial deposits,” indicating that wheat consumption may lead to kidney damage in susceptible individuals. Indeed, a study from the Mario Negri Institute for Pharmacological Research in Milan Italy published in 2007 in the *International Journal of Cancer* looked at bread consumption and the risk of kidney cancer. They found that those who consumed the most bread had a 94% higher risk of developing kidney cancer compared to those who consumed the least bread. Given the inherently toxic effect that WGA may have on kidney function, it is possible that in certain genetically predisposed individuals (e.g. HLA-DQ2/DQ8) the body – in its innate intelligence – makes an executive decision: either continue to allow damage to the kidneys (or possibly other organs) until kidney failure and rapid death result, or launch an autoimmune attack on the villi to prevent the absorption of the offending substance which results in a prolonged though relatively malnourished life. This is the explanation typically given for the body’s reflexive formation of mucus following exposure to certain highly allergenic or potentially toxic foods, e.g. dairy products, sugar, etc? The mucus coats the offending substance, preventing its absorption and facilitating safe elimination via the gastrointestinal tract. From this perspective the HLA-DQ locus of disease susceptibility in the celiac is not simply activated but *utilized* as a defensive adaptation to continual exposure to a harmful substance. In those who do not have the HLA-DQ locus, an autoimmune destruction of the villi will not occur as rapidly, and exposure to the universally toxic effects of WGA will likely go unabated until silent damage to distant organs leads to the diagnosis of a disease that is apparently unrelated to wheat consumption.

Loss of kidney function may only be the “tip of the iceberg,” when it comes to the possible adverse effects that wheat proteins and wheat lectin can generate in the body. If kidney cancer is a likely possibility, then other cancers may eventually be linked to wheat consumption as well. This correlation would fly in the face of globally sanctioned and reified assumptions about the inherent benefits of wheat consumption. It would require that we suspend cultural, socio-economic, political and even religious assumptions about its inherent benefits. In many ways, the reassessment of the value of wheat as a food requires a William Burroughs-like moment of shocking clarity when we perceive “in a frozen moment....what is on the end of every fork.” Let’s take a closer look at what is on the end of our forks.

## **OUR BIOLOGICALLY INAPPROPRIATE DIET**

In a previous article, I discussed the role that wheat plays as an industrial adhesive (e.g. paints, paper mache’, and book binding-glue) in order to illustrate the point that it may not be such a good thing for us to eat. The problem is implicit in the word gluten, which literally means “glue” in Latin and in words like pastry and pasta, which derives from wheatpaste, the original concoction of wheat flour and water which made such good plaster in ancient times. What gives gluten its adhesive and difficult-to-digest qualities are the high levels of disulfide bonds it contains. These same sulfur-to-sulfur bonds are found in hair and vulcanized rubber products, which we all know are difficult to decompose and are responsible for the sulfurous odor they give off when burned.

There will be 676 million metric tons of wheat produced this year alone, making it the primary cereal of temperate regions and third most prolific cereal grass on the planet. This global dominance of wheat is signified by the Food & Agricultural Organization’s (FAO) (the United Nation’s international agency for defeating hunger) use of a head of wheat as its official symbol. Any effort to indict the credibility of this “king of grains” will prove challenging. As Rudolf Hauschka once remarked, wheat is “a kind of earth-spanning organism.” It has vast socio-economic, political, and cultural significance. For example, in the Catholic Church, a wafer made of wheat is considered irreplaceable as the embodiment of Christ. .

Our dependence on wheat is matched only by its dependence on us. As Europeans have spread across the planet, so has this grain. We have assumed total responsibility for all phases of the wheat life cycle: from fending off its pests; to providing its ideal growing conditions; to facilitating reproduction and expansion into new territories. We have become so inextricably interdependent that neither species is sustainable at current population levels without this symbiotic relationship.



It is this codependence that may explain why our culture has for so long consistently confined wheat intolerance to categorically distinct, "genetically-based" diseases like "celiac." These categorizations may protect us from the realization that wheat exerts a vast number of deleterious effects on human health in the same way that "lactose intolerance" distracts attention from the deeper problems associated with the casein protein found in cow's milk. Rather than see wheat for what it very well may be: a biologically inappropriate food source, we "blame the victim," and look for genetic explanations for what's wrong with small subgroups of our population who have the most obvious forms of intolerance to wheat consumption, e.g. celiac disease, dermatitis herpetiformis, etc. The medical justification for these classifications may be secondary to economic and cultural imperatives that require the inherent problems associated with wheat consumption be minimized or occluded.

In all probability the celiac genotype represents a surviving vestigial branch of a once universal genotype, which through accident or intention, have had through successive generations only limited exposure to wheat. The celiac genotype, no doubt, survived through numerous bottlenecks or "die offs" represented by a dramatic shift from hunted and foraged/gathered foods to gluten-grain consumption, and for whatever reason simply did not have adequate time to adapt or select out the gluten-grain incompatible genes. The celiac response may indeed reflect a prior, species-wide intolerance to a novel food source: the seed storage form of the monocotyledonous cereal grasses which our species only began consuming 1-500 generations ago at the advent of the Neolithic transition (10-12,000 BC). Let us return to the image of the celiac iceberg for greater clarification.

### **OUR SUBMERGED GRAIN-FREE METABOLIC PREHISTORY**

The iceberg metaphor is an excellent way to expand our understanding of what was once considered to be an extraordinarily rare disease into one that has statistical relevance for us all, but it has a few limitations. For one, it reiterates the commonly held view that Celiac is a numerically distinct disease entity or "disease island," floating alongside other numerically distinct disease "ice cubes" in the vast sea of normal health. Though accurate in describing the sense of social and psychological isolation many of the afflicted feel, the celiac iceberg/condition may not be a distinct disease entity at all.

Although the HLA-DQ locus of disease susceptibility on chromosome 6 offers us a place to project blame, I believe we need to shift the emphasis of responsibility for the condition back to the disease "trigger" itself: namely, wheat and other prolamine rich grains, e.g. barley, rye, spelt, and oats. Without these grains the typical afflictions we call celiac would not exist. Within the scope of this view the "celiac iceberg" is not actually free floating but an outcropping from an entire submerged subcontinent, representing our long-forgotten (cultural time) but relatively recent metabolic prehistory as hunters-and-gatherers (biological time), where grain consumption was, in all likelihood, non-existent, except in instances of near-starvation.

The pressure on the celiac to be viewed as an exceptional case or deviation may have everything to do with our preconscious belief that wheat, and grains as a whole are the "health foods," and very little to do with a rigorous investigations of the facts.

Grains have been heralded since time immemorial as the "staff of life," when in fact they are more accurately described as a cane, precariously propping up a body starved of the nutrient-dense, low-starch vegetables, fruits, edible seeds and meats, they have so thoroughly supplanted (c.f. Paleolithic Diet). Most of the diseases of affluence, e.g. type 2 diabetes, coronary heart disease, cancer, etc. can be linked to the consumption of a grain-based diet, including secondary "hidden sources" of grain consumption in grain-fed fish, poultry, meat and milk products.

Our modern belief that grains make for good food, is simply not supported by the facts. The cereal grasses are within an entirely different family: monocotyledonous (one leaf) than that from which our body sustained itself for millions of years: dicotyledonous (two-leaf). The preponderance of scientific evidence points to a human origin in the tropical rainforests of Africa where dicotyledonous fruits would have been available for year round consumption. It would not have been monocotyledonous plants, but the flesh of hunted animals that would have allowed for the migration out of Africa 60,000 years ago into the northern latitudes where vegetation would have been sparse or non-existent during winter months. Collecting and cooking grains would have been improbable given the low nutrient and caloric content of grains and the inadequate development of pyrotechnology and associated cooking utensils necessary to consume them with any efficiency. It was not until the end of the last Ice Age 20,000 years ago that our human ancestors would have slowly transitioned to a cereal grass based diet coterminous with emergence of civilization. 20,000 years is probably not enough time to fully adapt to the consumption of grains. Even animals like cows with a head start of thousands of years, having evolved to graze on monocotyledons and equipped as ruminants with the four-chambered fore-stomach enabling the breakdown of cellulose and anti-nutrient rich plants, are not designed to consume grains. Cows are designed to consume the sprouted mature form of the grasses and not their seed storage form. Grains are so acidic/toxic in reaction that exclusively grain-fed cattle are prone to developing severe acidosis and subsequent liver abscesses and infections, etc. Feeding wheat to cattle provides an even greater challenge:

"Beef: Feeding wheat to ruminants requires some caution as it tends to be more apt than other cereal grains to cause acute indigestion in animals which are unadapted to it. The primary problem appears to be the high gluten content of which wheat in the rumen can result in a "pasty" consistency to the rumen

contents and reduced rumen motility.”

(source: Ontario ministry of Agriculture food & Rural affairs)

Seeds, after all, are the "babies" of these plants, and are invested with not only the entire hope for continuance of its species, but a vast armory of anti-nutrients to help it accomplish this task: toxic lectins, phytates and oxalates, alpha-amylase and trypsin inhibitors, and endocrine disrupters. These not so appetizing phytochemicals enable plants to resist predation of their seeds, or at least preventing them from "going out without a punch."

## **WHEAT: AN EXCEPTIONALLY UNWHOLESOME GRAIN.**

Wheat presents a special case insofar as wild and selective breeding has produced variations which include up to 6 sets of chromosomes (3x the human genome worth!) capable of generating a massive number of proteins each with a distinct potentiality for antigenicity. Common bread wheat (*Triticum aestivum*), for instance, has over 23,788 proteins cataloged thus far. In fact, the genome for common bread wheat is actually 6.5 times larger than that of the human genome!

With up to a 50% increase in gluten content of some varieties of wheat, it is amazing that we continue to consider "glue-eating" a normal behavior, whereas wheat-avoidance is left to the "celiac" who is still perceived by the majority of health care practitioners as mounting a "freak" reaction to the consumption of something intrinsically wholesome.

Thankfully we don't need to rely on our intuition, or even (not so) common sense to draw conclusions about the inherently unhealthy nature of wheat. A wide range of investigation has occurred over the past decade revealing the problem with the alcohol soluble protein component of wheat known as gliadin, the glycoprotein known as lectin (Wheat Germ Agglutinin), the exorphin known as gliadomorphin, and the excitotoxic potentials of high levels of aspartic and glutamic acid found in wheat. Add to these the anti-nutrients found in grains such as phytates, enzyme inhibitors, etc. and you have a substance which we may more appropriately consider the farthest thing from wholesome.

The remainder of this article will demonstrate the following adverse effects of wheat on both celiac and non-celiac populations: 1) wheat causes damage to the intestines 2) wheat causes intestinal permeability 3) wheat has pharmacologically active properties 4) wheat causes damage that is "out of the intestine" affecting distant organs 5) wheat induces molecular mimicry 6) wheat contains high concentrations of excitotoxins.

### **1) WHEAT GLIADIN CREATES IMMUNE MEDIATED DAMAGE TO THE INTESTINES**

Gliadin is classified as a prolamin, which is a wheat storage protein high in the amino acids proline and glutamine and soluble in strong alcohol solutions. Gliadin, once deamidated by the enzyme Tissue Transglutaminase, is considered the primary epitope for T-cell activation and subsequent autoimmune destruction of intestinal villi. Yet gliadin does not need to activate an autoimmune response, e.g. Celiac disease, in order to have a deleterious effect on intestinal tissue.

In a study published in GUT in 2007 a group of researchers asked the question: "*Is gliadin really safe for non-coeliac individuals?*" In order to test the hypothesis that an innate immune response to gliadin is common in patients with celiac disease and without celiac disease, intestinal biopsy cultures were taken from both groups and challenged with crude gliadin, the gliadin synthetic 19-mer (19 amino acid long gliadin peptide) and 33-mer deamidated peptides. Results showed that all patients with or without Celiac disease when challenged with the various forms of gliadin produced an interleukin-15-mediated response. The researchers concluded:

"The data obtained in this pilot study supports the hypothesis that gluten elicits its harmful effect, throughout an IL15 innate immune response, *on all individuals* [my italics]."

The primary difference between the two groups is that the celiac disease patients experienced both an innate **and** an adaptive immune response to the gliadin, whereas the non-celiacs experienced only the innate response. The researchers hypothesized that the difference between the two groups may be attributable to greater genetic susceptibility at the HLA-DQ locus for triggering an adaptive immune response, higher levels of immune mediators or receptors, or perhaps greater permeability in the celiac intestine. It is possible that over and above the possibility of greater genetic susceptibility, most of the differences are from epigenetic factors that are influenced by the presence or absence of certain nutrients in the diet. Other factors such as exposure to NSAIDs like naproxen or aspirin can profoundly increase intestinal permeability in the non-celiac, rendering them susceptible to gliadin's potential for activating secondary adaptive immune responses. This may explain why in up to 5% of all cases of classically defined celiac disease the typical HLA-DQ haplotypes are not found. However, determining the factors associated greater or lesser degrees of susceptibility to gliadin's intrinsically toxic effect should be a *secondary to the fact that it is has been demonstrated to be toxic to both non-celiacs and celiacs*.

### **2) WHEAT GLIADIN CREATES INTESTINAL PERMEABILITY**

Gliadin upregulates the production of a protein known as zonulin, which modulates intestinal permeability. Over-expression of zonulin is involved in a number of autoimmune disorders, including celiac disease and Type 1 diabetes. Researchers have studied the effect of gliadin on increased zonulin production and subsequent gut permeability in both celiac and non-celiac intestines, and have found that

“gliadin activates zonulin signaling irrespective of the genetic expression of autoimmunity, leading to increased intestinal permeability to macromolecules.”<sup>10</sup> These results indicate, once again, that a pathological response to wheat gluten is a normal or human, species specific response, and is not based entirely on genetic susceptibilities. Because intestinal permeability is associated with wide range of disease states, including cardiovascular illness, liver disease and many autoimmune disorders, I believe this research indicates that gliadin (and therefore wheat) should be avoided as a matter of principle.

### 3) WHEAT GLIADIN HAS PHARMACOLOGICAL PROPERTIES

Gliadin can be broken down into various amino acid lengths or peptides. Gliadorphin is a 7 amino acid long peptide: Tyr-Pro-Gln-Pro-Gln-Pro-Phe which forms when the gastrointestinal system is compromised. When digestive enzymes are insufficient to break gliadorphin down into 2-3 amino acid lengths and a compromised intestinal wall allows for the leakage of the entire 7 amino acid long fragment into the blood, gliadorphin can pass through to the brain through circumventricular organs and activate opioid receptors resulting in disrupted brain function.

There have been a number of gluten exorphins identified: gluten exorphin A4, A5, B4, B5 and C, and many of them have been hypothesized to play a role in autism, schizophrenia, ADHD and related neurological conditions. In the same way that the celiac iceberg illustrated the illusion that intolerance to wheat is rare, it is possible, even probable, that wheat exerts pharmacological influences on everyone. What distinguishes the schizophrenic or autistic individual from the functional wheat consumer is the degree to which they are affected.

Below the tip of the “Gluten Iceberg,” we might find these opiate-like peptides to be responsible for bread’s general popularity as a “comfort food”, and our use of phrases like “I love bread,” or “this bread is to die for” to be indicative of wheat’s narcotic properties. I believe a strong argument can be made that the agricultural revolution that occurred approximately 10-12,000 years ago as we shifted from the Paleolithic into the Neolithic era was precipitated as much by environmental necessities and human ingenuity, as it was by the addictive qualities of psychoactive peptides in the grains themselves.

The world-historical reorganization of society, culture and consciousness accomplished through the symbiotic relationship with cereal grasses, may have had as much to do with our ability to master agriculture, as to be mastered by it. The presence of pharmacologically active peptides would have further sweetened the deal, making it hard to distance ourselves from what became a global fascination with wheat.

An interesting example of wheat’s addictive potential pertains to the Roman army. The Roman Empire was once known as the “Wheat Empire,” with soldiers being paid in wheat rations. Rome’s entire war machine, and its vast expansion, was predicated on the availability of wheat. Forts were actually granaries, holding up to a year’s worth of grain in order to endure sieges from their enemies. Historians describe soldiers’ punishment included being deprived of wheat rations and being given barley instead. The Roman Empire went on to facilitate the global dissemination of wheat cultivation which fostered a form of imperialism with biological as well as cultural roots.

The Roman appreciation for wheat, like our own, may have had less to do with its nutritional value as “health food” than its ability to generate a unique narcotic reaction. It may fulfill our hunger while generating a repetitive, ceaseless cycle of craving more of the same, and by doing so, enabling the surreptitious control of human behavior. Other researchers have come to similar conclusions. According to the biologists Greg Wadley & Angus Martin:

“Cereals have important qualities that differentiate them from most other drugs. They are a food source as well as a drug, and can be stored and transported easily. They are ingested in frequent small doses (not occasional large ones), and do not impede work performance in most people. A desire for the drug, even cravings or withdrawal, can be confused with hunger. These features make cereals the ideal facilitator of civilization (and may also have contributed to the long delay in recognizing their pharmacological properties).”

### 4) WHEAT LECTIN (WGA) DAMAGES OUR TISSUE.

Wheat contains a lectin known as Wheat Germ Agglutinin which is responsible for causing direct, non-immune mediated damage to our intestines, and subsequent to entry into the bloodstream, damage to distant organs in our body.

Lectins are sugar-binding proteins which are highly selective for their sugar moieties. It is believed that wheat lectin, which binds to the monosaccharide N-acetyl glucosamine (NAG), provides defense against predation from bacteria, insects and animals. Bacteria have NAG in their cell wall, insects have an exoskeleton composed of polymers of NAG called chitin, and the epithelial tissue of mammals, e.g. gastrointestinal tract, have a “sugar coat” called the glycocalyx which is composed, in part, of NAG. The glycocalyx can be found on the outer surface (apical portion) of the microvilli within the small intestine.

There is evidence that WGA may cause increased shedding of the intestinal brush border membrane, reduction in surface area, acceleration of cell losses and shortening of villi, via binding to the surface of the villi. WGA can mimic the effects of epidermal growth factor (EGF) at the cellular level, indicating that the crypt hyperplasia seen in celiac disease may be due to a mitogenic response induced by WGA. WGA has been implicated in obesity and “leptin resistance” by blocking the receptor in the hypothalamus for the

appetite satiating hormone leptin. WGA has also been shown to have an insulin-mimetic action, potentially contributing to weight gain and insulin resistance.<sup>15</sup> And, as discussed earlier, wheat lectin has been shown to induce IgA mediated damage to the kidney, indicating that nephropathy and kidney cancer may be associated with wheat consumption.

#### 5) WHEAT PEPTIDES EXHIBIT MOLECULAR MIMICRY

Gliadorphin and gluten exorphins exhibit a form of molecular mimicry that affects the nervous system, but other wheat proteins effect different organ systems. The digestion of gliadin produces a peptide that is 33 amino acids long and is known as 33-mer which has a remarkable homology to the internal sequence of pertactin, the immunodominant sequence in the Bordetella pertussis bacteria (whooping cough). Pertactin is considered a highly immunogenic virulence factor, and is used in vaccines to amplify the adaptive immune response. It is possible the immune system may confuse this 33-mer with a pathogen resulting in either or both a cell-mediated and adaptive immune response against Self.

#### 6) WHEAT CONTAINS HIGH LEVELS OF EXCITO-TOXINS

John B. Symes, D.V.M. is responsible for drawing attention to the potential excitotoxicity of wheat, dairy, and soy, due to their exceptionally high levels of the non-essential amino acids glutamic and aspartic acid. Excitotoxicity is a pathological process where glutamic and aspartic acid cause an over-activation of the nerve cell receptors (e.g. NMDA and AMPA receptor) leading to calcium induced nerve and brain injury. Of all cereal grasses commonly consumed wheat contains the highest levels of glutamic acid and aspartic acid. Glutamic acid is largely responsible for wheat's exceptional taste. The Japanese coined the word *umami* to describe the extraordinary "yummy" effect that glutamic acid exerts on the tongue and palate, and invented monosodium *glutamate* (MSG) to amplify this sensation. Though the Japanese first synthesized MSG from kelp, wheat can also be used due to its high glutamic acid content. It is likely that wheat's popularity, alongside its opiate-like activity, has everything to do with the natural flavor-enhancers already contained within it. These amino acids may contribute to neurodegenerative conditions such as multiple sclerosis, Alzheimer disease, Huntington's disease, and other nervous disorders such as epilepsy, attention deficit disorder and migraines.

### CONCLUSION

In this article I have proposed that celiac disease be viewed not as a rare "genetically-determined" disorder, but as an extreme example of our body communicating to us a once universal, species-specific affliction: severe intolerance to wheat. Celiac disease reflects back to us how profoundly our diet has diverged from what was, until only recently a grain free diet, and even more recently, a wheat free one. We are so profoundly distanced from that dramatic Neolithic transition in cultural time that "missing is any sense that anything is missing." The body, on the other hand, cannot help but remember a time when cereal grains were alien to the diet, because in biological time it was only moments ago.

Eliminating wheat, if not all of the members of the cereal grass family, and returning to dicotyledons or pseudo-grains like quinoa, buckwheat and amaranth, may help us roll back the hands of biological and cultural time, to a time of clarity, health and vitality that many of us have never known before. When one eliminates wheat and fills the void left by its absence with fruits, vegetables, high quality meats and foods consistent with our biological needs we may begin to feel a sense of vitality that many would find hard to imagine. If wheat really is more like a drug than a food, anesthetizing us to its ill effects on our body, it will be difficult for us to understand its grasp upon us unless and until we eliminate it from our diet. I encourage everyone to see celiac disease not as a condition alien to our own. Rather, the celiac gives us a glimpse of how profoundly wheat may distort and disfigure our health if we continue to expose ourselves to its ill effects. I hope this article will provide inspiration for non-celiacs to try a wheat free diet and judge for themselves if it is really worth eliminating.



A critically acclaimed internet classic, **The Dark Side of Wheat** is [now available to own as a downloadable document](#) exclusively from GreenMedInfo.com. It includes two hard-hitting essays that represent a seachange in the way wheat intolerance is comprehended; no longer a rare, strictly genetically-based disease, wheat is revealed to be a species-specific intolerance, whose role in health and disease has been greatly misunderstood since ancient times. The downloadable document also includes a 90-page quick reference guide containing hyperlinks to research on the National Library of Medicine on over 120 diseases that have been linked to wheat consumption.

The Dark Side of Wheat has changed many minds about the exalted status of wheat among secular and

sacred institutions alike.

As Dr. Ron Hoggan, co-author of "Dangerous Grains" puts it in the foreword: "Sir Isaac Newton's famous metaphor (perhaps quoting others) said something to the effect that we see further, not because of any special endowment of our own, but because we are standing on the shoulders of giants. After reading Sayer's work on wheat, I felt as if I had just been boosted to a higher plane from which I could see and understand much, much more. Sayer's insights continue to shape and inform much of my effort to understand the various impacts of grains on human health."



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[here\]](#)

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## Opening Pandora's Bread Box: The Critical Role of Wheat Lectin in Human Disease.

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by Sayer Ji, founder of GreenMedInfo.com

Now that celiac disease has been allowed official entry into the pantheon of established medical conditions, and gluten intolerance is no longer entirely a fringe medical concept, the time has come to draw attention to the powerful little chemical in wheat known as 'wheat germ agglutinin' (WGA) which is largely responsible for many of [wheat's pervasive, and difficult to diagnose, ill effects](#). Not only does WGA throw a monkey wrench into our assumptions about the primary causes of wheat intolerance, but due to the fact that WGA is found in highest concentrations in "whole wheat," including its supposedly superior sprouted form, it also pulls the rug out from under one of the health food industry's favorite poster children.

Below the radar of conventional serological testing for antibodies against the various gluten proteins and genetic testing for disease susceptibility, the WGA "lectin problem" remains almost entirely obscured. Lectins, though found in all grains, seeds, legumes, dairy and our beloved nightshades: the tomato and potato, are rarely discussed in connection with health or illness, even when their presence in our diet may greatly reduce both the quality and length of our lives.

Although significant progress has been made in exposing [the dark side of wheat](#) over the past decade, gluten receives a disproportionate share of the attention. Given that modern bread wheat (*Triticum Aestivum*) is a hexaploid species containing six distinct sets of chromosomes capable of producing well over 23,000 unique proteins, it is not surprising that we are only now beginning to unravel the complexities of this plant's many secrets. [1] What is unique about WGA is that it can do *direct* damage to the majority of tissues in the human body without requiring a specific set of genetic susceptibilities and/or immune-mediated articulations. This may explain why chronic inflammatory and degenerative conditions are endemic to wheat-consuming populations even when overt allergies or intolerances to wheat gluten appear exceedingly rare. The future fate of wheat consumption, and by implication our health, may depend largely on whether or not the toxic qualities of WGA come to light in the general population.

Nature engineers, within all species, a set of defenses against predation, though not all are as obvious as the thorns on a rose or the horns on a rhinoceros. Plants do not have the cell-mediated immunity of higher life forms, like ants, nor do they have the antibody driven, secondary immune systems of vertebrates with jaws. They must rely on a much simpler, innate immunity. It is for this reason that seeds of the grass family, e.g. rice, wheat, spelt, rye, have exceptionally high levels of defensive glycoproteins known as lectins, which function much like "invisible thorns." Cooking, sprouting, fermentation and digestion are the traditional ways in which man, for instance, deals with the various anti-nutrients found within this family of plants, but lectins are, by design, particularly resistant to degradation through a wide range of pH and temperatures.

WGA lectin is an exceptionally tough adversary as it is formed by the same disulfide bonds that make vulcanized rubber and human hair so strong, flexible and durable. Like man-made pesticides, lectins are extremely small, resistant to break-down by living systems, and tend to accumulate and become incorporated into tissues where they interfere with normal biological processes. Indeed, WGA lectin is so powerful as an insecticide that biotech firms have used recombinant DNA technology to create genetically modified WGA-enhanced plants. We can only hope that these virtually unregulated biotech companies, who are in the business of playing God with the genetic infrastructure of Life, will realize the potential harm to humans that such genetic modifications can cause.

Lectins are *sugar-binding proteins*, and through thousands of years of selectively breeding wheat for increasingly larger quantities of protein, the concentration of WGA lectin has increased proportionately. This, no doubt, has contributed to wheat's global dominance as one of the world's favored monocultures,

offering additional “built-in” pest resistance. The word lectin comes from the same etymological root as the word select, and literally means “to choose.” Lectins are designed “to choose” specific carbohydrates that project off the surface of cells and upon which they attach. In the case of WGA the two glycoproteins it selects for, in order of greatest affinity, are N-Acetyl Glucosamine and N-Acetylneuraminic acid (sialic acid).

WGA is Nature's ingenious solution for protecting the wheat plant from the entire gamut of its natural enemies. Fungi have cell walls composed of a polymer of N-Acetylglucosamine. The cellular walls of bacteria are made from a layered structure called the peptidoglycan, a biopolymer of N-Acetylglucosamine. N-acetylglucosamine is the basic unit of the biopolymer chitin, which forms the outer coverings of insects and crustaceans (shrimp, crab, etc.). All animals, including worms, fish, birds and humans, use N-Acetylglucosamine as a foundational substance for building the various tissues in their bodies, including the bones. The production of cartilage, tendons, and joints depend on the structural integrity of N-Acetylglucosamine. The mucous known as the glycocalyx, or literally, “sugar coat” is secreted in humans by the epithelial cells which line all the mucous membranes, from nasal cavities to the top to the bottom of the alimentary tube, as well as the protective and slippery lining of our blood vessels. The glycocalyx is composed largely of N-Acetylglucosamine and N-Acetylneuraminic acid (also known as sialic acid), with carbohydrate end of N-Acetylneuraminic acid of this protective glycoprotein forming the terminal sugar that is exposed to the contents of both the gut and the arterial lumen (opening). WGA's unique binding specificity to these exact two glycoproteins is not accidental. Nature has designed WGA perfectly to attach to, disrupt, and gain entry through these mucosal surfaces.

It may strike some readers as highly suspect that wheat - the “staff of life” - which has garnered a reputation for “wholesome goodness” the world over, could contain a powerful health-disrupting anti-nutrient, which is only now coming to public attention. WGA has been overshadowed by the other proteins in wheat. Humans - not Nature - have spent thousands of years cultivating and selecting for larger and larger quantities of these proteins. These pharmacologically active, opiate-like proteins in gluten are known as gluten exorphins (A5, B4, B5, C) and gliadorphins. They may effectively anesthetize us, in the short term, to the long term, adverse effects of WGA. Gluten also contains exceptionally high levels of the excitotoxic L-aspartic and L-glutamic amino acids, which can also be highly addictive, not unlike their synthetic shadow molecules aspartame and monosodium glutamate.<sup>1</sup>In a previous article on the topic, [The Dark Side of Wheat: New Perspectives on Celiac Disease and Wheat Intolerance](#)<sup>[2]</sup>, we explored the role that these psychotropic qualities in grains played in ushering in civilization at the advent of the Neolithic transition 10,000 BC. No doubt the narcotic properties of wheat are the primary reason why suspicions about its toxicity have remained merely speculation for thousands upon thousands of years.

WGA is most concentrated in the seed of the wheat plant, likely due to the fact that the seeds are the “babies” of these plants and are invested with the entire hope for continuance of their species. Protecting the seed against predation is necessarily a first priority. WGA is an exceedingly small glycoprotein (36 kilodaltons) and is concentrated deep within the embryo of the wheat berry (approximately 1 microgram per grain). WGA migrates during germination to the roots and tips of leaves, as the developing plant begins to project itself into the world and outside the safety of its seed. In its quest for nourishment from the soil, its roots are challenged with fungi and bacteria that seek to invade the plant. In its quest for sunlight and other nourishment from the heavens the plant's leaves become prey to insects, birds, mammals, etc. Even after the plant has developed beyond the germination and sprouting stages it contains almost 50% of the levels of lectin found in the dry seeds. Approximately one third of this WGA is in the roots and two thirds is in the shoot, for at least 34 days <sup>[3]</sup>

Each grain contains about 1 microgram of WGA. That seems hardly enough to do any harm to animals our size. Lectins, however, are notoriously dangerous even in minute doses and can be fatal when inhaled or injected directly into the bloodstream. According to the U.S. Centers for Disease Control it takes only 500 micrograms (about half a grain of sand) of ricin (a lectin extracted from castor bean casings) to kill a human. A single, one ounce slice of wheat bread contains approximately 500 micrograms of WGA, which if it were refined to its pure form and injected directly into the blood, could, in theory, have platelet aggregating and erythrocyte agglutinating effects strong enough to create an obstructive clot such as occurs in myocardial infarction and stroke. This, however, is not a likely route of exposure and in reality the immediate pathologies associated with lectins like ricin and WGA are largely restricted to the gastrointestinal tract where they cause mucosal injuries. The point is that WGA, even in small quantities, could have profoundly adverse effects, given suitable conditions. Ironically, WGA is exceptionally small, at 36 kilodaltons (approximately the mass of 36,000 hydrogen atoms) and it can pass through the cell membranes of the intestine with ease. The intestines will allow passage of molecules up to 1,000 kilodaltons in size. Moreover, one wheat kernel contains 16.7 trillion individual molecules of WGA, with each molecule of WGA having four N-Acetylglucosamine binding sites. The disruptive and damaging effects of whole wheat bread consumption are formidable in someone whose protective mucosal barrier has been compromised by something as simple as Non-Steroidal Anti-Inflammatory Drug (NSAID) use, or a recent viral or bacterial infection. The common consumption of both wheat and NSAIDs may suggest the frequency of the WGA vicious cycle. Anti-inflammatory medications, such as ibuprofen and aspirin, increase intestinal permeability and may cause absorption of even larger than normal quantities of pro-inflammatory WGA. Conversely, the inflammation caused by the absorption of WGA lectin is the very

reason there is a great need for the inflammation-reducing effects of NSAIDs.

One way to gauge just how pervasive the adverse effects of WGA are among wheat-consuming populations is the popularity of the dietary supplement glucosamine. In the USA, a quarter-billion dollars' worth of the glucosamine is sold annually. The main source of glucosamine on the market is from the N-Acetylglucosamine rich chitin exoskeletons of crustaceans, like shrimp and crab. Glucosamine is used for reducing pain and inflammation. We do not have a dietary deficiency of the pulverized shells of dead sea critters, just as our use of NSAIDs is not caused by a deficiency of these synthetic chemicals in our diet. When we consume glucosamine supplements, the WGA, instead of binding to our tissues, binds to the pulverized chitin in the glucosamine supplements, sparing us from the full impact of WGA. Many millions of Americans who have greatly reduced their pain and suffering by ingesting glucosamine and NSAIDs may be better served by removing wheat, the underlying cause of their malaise, from their diets. This would result in even greater relief from pain and inflammation along with far less dependency on palliative supplements and medicines alike.

To further underscore this point, the following are several ways that WGA depletes our health while glucosamine works against it:

### **WGA may be Pro-inflammatory**

At exceedingly small concentrations (nanomolar) WGA stimulates the synthesis of pro-inflammatory chemical messengers (cytokines) including Interleukin 1, Interleukin 6 and Interleukin 8 in intestinal and immune cells.[\[4\]](#) WGA has been shown to induce NADPH-Oxidase in human neutrophils associated with the "respiratory burst" that results in the release of inflammatory free radicals called reactive oxygen species[\[5\]](#) WGA has been shown to play a causative role in patients with chronic thin gut inflammation.[\[6\]](#)

### **WGA may be Immunotoxic**

WGA induces thymus atrophy in rats[\[7\]](#) and may directly bind to, and activate, leukocytes [\[8\]](#). Anti-WGA antibodies in human sera have been shown to cross-react with other proteins, indicating that they may contribute to autoimmunity[\[9\]](#). Indeed, WGA appears to play a role in the pathogenesis of celiac disease (CD) that is entirely distinct from that of gluten, due to significantly higher levels of IgG and IgA antibodies against WGA found in patients with CD, when compared with patients with other intestinal disorders. These antibodies have also shown not to cross-react with gluten antigens[\[10\]](#) [\[11\]](#)

### **WGA may be Neurotoxic**

WGA can pass through the blood brain barrier (BBB) through a process called "adsorptive endocytosis" [\[12\]](#) and is able to travel freely among the tissues of the brain which is why it is used as a marker for tracing neural circuits[\[13\]](#). WGA's ability to pass through the BBB, pulling bound substances with it, has piqued the interest of pharmaceutical developers who are looking to find ways of delivering drugs to the brain. WGA has a unique binding affinity for N-Acetylneuraminic acid, a crucial component of neuronal membranes found in the brain, such as gangliosides which have diverse roles such as cell-to-cell contact, ion conductance, as receptors, and whose dysfunction has been implicated in neurodegenerative disorders. WGA may attach to the protective coating on the nerves known as the myelin sheath[\[14\]](#) and is capable of inhibiting nerve growth factor [\[15\]](#) which is important for the growth, maintenance, and survival of certain target neurons. WGA binds to N-Acetylglucosamine which is believed to function as an atypical neurotransmitter functioning in nociceptive (pain) pathways.

### **WGA may be Cytotoxic**

WGA has been demonstrated to be cytotoxic to both normal and cancerous cell lines, capable of inducing either cell cycle arrest or programmed cell death (apoptosis).[\[16\]](#)

### **WGA may interfere with Gene Expression**

WGA demonstrates both mitogenic and anti-mitogenic[\[17\]](#) activities. WGA may prevent DNA replication[\[18\]](#) WGA binds to polysialic acid (involved in post-translational modifications) and blocks chick tail bud development in embryogenesis, indicating that it may influence both genetic and epigenetic factors.

### **WGA may disrupt Endocrine Function**

WGA has also been shown to have an insulin-mimetic action, potentially contributing to weight gain and insulin resistance [\[19\]](#). WGA has been implicated in obesity and "leptin resistance" by blocking the receptor in the hypothalamus for the appetite satiating hormone leptin. WGA stimulates epidermal growth factor which when upregulated is associated with increased risk of cancer. WGA has a particular affinity for thyroid tissue and has been shown to bind to both benign and malignant thyroid nodules[\[20\]](#) WGA interferes with the production of secretin from the pancreas, which can interfere with digestion and can cause pancreatic hypertrophy. WGA attaches to sperm and ovary cells, indicating it may adversely influence fertility.



## **WGA may be Cardiotoxic**

WGA induces platelet activation and aggregation [21]. WGA has a potent, disruptive effect on platelet endothelial cell adhesion molecule-1, which plays a key role in tissue regeneration and safely removing neutrophils from our blood vessels.[22]

## **WGA may adversely effect Gastrointestinal Function**

WGA causes increased shedding of the intestinal brush border membrane, reduction in surface area, acceleration of cell losses and shortening of villi, via binding to the surface of the villi. WGA can mimic the effects of epidermal growth factor (EGF) at the cellular level, indicating that the crypt hyperplasia seen in celiac disease may be due to the growth-promoting effects of WGA. WGA causes cytoskeleton degradation in intestinal cells, contributing to cell death and increased turnover. WGA decreases levels of heat shock proteins in gut epithelial cells leaving these cells less well protected against the potentially harmful content of the gut lumen.[23]

## **WGA may share pathogenic similarities with certain Viruses**

There are a number of interesting similarities between WGA lectin and viruses. Both viral particles and WGA lectin are several orders of magnitude smaller than the cells they enter, and subsequent to their attachment to the cell membrane, are taken into the cell through a process of endocytosis. Both influenza and WGA gain entry through the sialic acid coatings of our mucous membranes (glycocalyx) each with a sialic acid specific substance, the neuraminidase enzyme for viruses and the sialic acid binding sites on the WGA lectin. Once the influenza virus and WGA lectin have made their way into wider circulation in the host body they are both capable of blurring the line in the host between self-and non-self. Influenza accomplishes this by incorporating itself into the genetic material of our cells and taking over the protein production machinery to make copies of itself, with the result that our immune system must attack its own virally transformed cell, in order to clear the infection. Studies done with herpes simplex virus have shown that WGA has the capacity to block viral infectivity through competitively binding to the same cell surface receptors, indicating that they may effect cells through very similar pathways. WGA has the capability of influencing the gene expression of certain cells, e.g. mitogenic/anti-mitogenic action, and like other lectins associated with autoimmunity, e.g. soy lectin, and viruses like Epstein-Barr Virus, WGA may be capable of causing certain cells to exhibit class 2 human leukocyte antigens (HLA-II), which mark them for autoimmune destruction by white blood cells. Since human antibodies to WGA have been shown to cross react with other proteins, even if WGA does not directly transform the phenotype of our cells into "other," the resulting cross-reactivity of antibodies to WGA with our own cells would result in autoimmunity nonetheless.

Given the multitude of ways in which WGA may disrupt our health, gain easy entry through our intestine into systemic circulation, and remain refractory to traditional antibody-based clinical diagnoses, it is altogether possible that the consumption of wheat is detracting from the general health of the wheat-consuming world and that we have been, for all these years, "digging our graves with our teeth." This perspective may come as a great surprise to the health food industry whose particular love affair for whole wheat products has begun to go mass market. The increasingly hyped-up marketing of "whole wheat," "sprouted grain," and "wheat germ" enriched products, all of which may have considerably higher levels of WGA than their processed, fractionized, non-germinated and supposedly "less healthy" equivalents, may contribute to making us all significantly less healthy.

It is my belief that a careful study of the wheat plant will reveal that, despite claims to the contrary, man does not have dominion over nature. All that he deems fit for his consumption may not be his inborn right. Though the wheat plant's apparently defenseless disposition would seem to make it suitable for mass human consumption, it has been imbued with a multitude of invisible "thorns," with WGA being its smallest and perhaps most potent defense against predation. While WGA may be an uninvited guest at our table, wheat is equally inhospitable to us. Perhaps the courteous thing to do, having realized our mistaken intrusion, is to lick our wounds and simply go our separate ways. Perhaps as the distance between man and his infatuation with wheat grows, he will grow closer to himself and will discover far more suitable forms of nourishment that Nature has not impregnated with such high levels of addictive and potentially debilitating proteins.

View 40+ studies on [Wheat Germ Lectin \(WGA\)](#) on the GreenMedInfo.com WGA page.



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- [18] DNA replication in cell-free extracts from *Xenopus* eggs is prevented by disrupting nuclear envelope function. **J Cell Sci**. 1992 Jan;101 ( Pt 1):43-53. PMID: [1569128](#)
- [19] Effects of wheat germ agglutinin and concanavalin A on the accumulation of glycosaminoglycans in pericellular matrix of human dermal fibroblasts. A comparison with insulin. **Acta Biochim Pol**. 2001;48(2):563-72. PMID: [11732625](#)
- [20] Analysis of lectin binding in benign and malignant thyroid nodules. **Arch Pathol Lab Med**. 1989 Feb;113(2):186-9. PMID: [2916907](#)
- [21] Further characterization of wheat germ agglutinin interaction with human platelets: exposure of fibrinogen receptors. **Thromb Haemost**. 1986 Dec 15;56(3):323-7. PMID: [3105108](#)
- [22] Wheat germ agglutinin-induced platelet activation via platelet endothelial cell adhesion molecule-1: involvement of rapid phospholipase C gamma 2 activation by Src family kinases. **Biochemistry**. 2001 Oct 30;40(43):12992-3001. PMID: [11669637](#)
- [23] Decreased levels of heat shock proteins in gut epithelial cells after exposure to plant lectins. **Gut**. 2000 May;46(5):679-87. PMID: [10764712](#)

Article Count - 206

## What is Cumulative Knowledge, and Why Should it Interest Me?

**Cumulative Knowledge** is determined by ascribing a numerical value to all the articles indexed on our database. The [GreenMedInfo.com](#) algorithm appraises a study's overall evidentiary power and quality by generating a numerical value. This "Cumulative Knowledge" score incorporates variables such as study type, with the following types listed in descending order by their power: Meta-Analysis, Human Study, Human: Case Study, Animal: Transgenic, Animal, In Vitro, Review, and Commentary. The cumulative total will provide you an idea about the depth and quality of information that this topic has accumulated on our site. For instance, if you downloaded a document on "**Cancers: All**", you might see "**Curcumin**" with a **Cumulative Knowledge** of **677** and **Resveratrol** with a **Cumulative Knowledge** of **175**. This does not mean that **Curcumin** is better, but just that we have gathered more quality research on the Substance **Curcumin**. [Click here to read a more in depth explanation](#)

## How are Topics and Articles Sorted in this PDF?

Articles in this document are placed within their respective **Topic** category. If you download a document on the Disease "**Cancers: All**" and are interested in all articles pertaining to the Substance "**Curcumin**" with regard to "**Cancers: All**", you will find them under the "**Curcumin**" sub-section underneath the **Cumulative Knowledge** section. **Topics** are sorted based on their **Cumulative Knowledge** in relation to the main topic of the download. In the previous example, it

would be in relation to "**Cancers: All**". Articles are then sorted based on the articles **Published Date. Articles** are sorted in a descending fashion, which means that the most recent articles are displayed first. **Articles** may appear more than once in this document. For each **Topic** that an **Article** contains, it will be displayed in that sub-section. For example, if an **Article** contains the **Substances "Pterostilbene" and "Resveratrol"**, the article will be displayed under each **Topic**.

## Related Topics

This Topic includes articles from the following related Topics : [Gliadin](#), [Gluten](#), [Gluten exorphins](#), [Wheat Germ Agglutinin \(WGA\)](#)

Quick Summary: 206 Diseases

Name	Cumulative Knowledge	Article Count
<a href="#">Celiac Disease</a>	1255	169
<a href="#">Wheat Intolerance</a>	402	51
<a href="#">Gluten Sensitivity</a>	370	49
<a href="#">Gluten Intolerance</a>	335	46
<a href="#">Autoimmune Diseases</a>	136	18
<a href="#">Schizophrenia</a>	111	12
<a href="#">Food Allergies: Wheat</a>	96	14
<a href="#">Food Allergies</a>	87	11
<a href="#">Psoriasis</a>	82	10
<a href="#">Down Syndrome</a>	80	8
<a href="#">Diabetes Mellitus: Type 1</a>	71	13
<a href="#">Irritable Bowel Syndrome</a>	70	7
<a href="#">Autism Spectrum Disorders</a>	61	6
<a href="#">Celiac Disease: Diagnostic Considerations</a>	61	7
<a href="#">Diabetes Mellitus: Type 1: Prevention</a>	60	10
<a href="#">Sjogren's Syndrome</a>	60	6
<a href="#">Cerebellar Ataxia</a>	53	6
<a href="#">Dermatitis Herpetiformis</a>	50	5
<a href="#">Graves Disease</a>	50	5
<a href="#">Liver Disease</a>	50	5
<a href="#">Multiple Myeloma</a>	50	5
<a href="#">Multiple Sclerosis</a>	50	5
<a href="#">Epilepsy</a>	44	6
<a href="#">Migraine Disorders</a>	43	5
<a href="#">Casein Intolerance</a>	40	4
<a href="#">Gastroesophageal Reflux</a>	40	4
<a href="#">Hyperthyroidism</a>	40	4
<a href="#">Anaphylaxis: Exercise-Induced</a>	37	6
<a href="#">IgA Nephropathy</a>	36	6
<a href="#">Gastrointestinal Inflammation</a>	34	6
<a href="#">Infertility</a>	31	4
<a href="#">Atopic Dermatitis</a>	30	3
<a href="#">Autoimmune Thyroiditis</a>	30	3
<a href="#">Cirrhosis: Liver</a>	30	3
<a href="#">Diarrhea: IBS associated</a>	30	3
<a href="#">Hypothyroidism</a>	30	3
<a href="#">IgA rheumatoid factor: elevated</a>	30	3
<a href="#">Infertility: Female</a>	30	3
<a href="#">Non-Hodgkin Lymphoma</a>	30	3
<a href="#">Polyarthrits</a>	30	3
<a href="#">Psychoses</a>	30	3
<a href="#">Eosinophilic esophagitis</a>	26	4
<a href="#">Epilepsy: With Cerebral Calcifications</a>	25	5

<a href="#">Cerebral Calcifications</a>	23	3
<a href="#">Diarrhea</a>	23	3
<a href="#">Celiac Disease: Prevention</a>	22	2
<a href="#">Abortion: Spontaneous</a>	21	3
<a href="#">Ataxia: Cerebellar</a>	21	3
<a href="#">Miscarriage: Recurrent</a>	21	3
<a href="#">Thyroid Nodule</a>	21	3
<a href="#">Atherosclerosis</a>	20	2
<a href="#">Attention Deficit Disorder with Hyperactivity</a>	20	2
<a href="#">Attention Deficit Hyperactivity Disorder</a>	20	2
<a href="#">Autism</a>	20	2
<a href="#">Cardiomyopathy</a>	20	2
<a href="#">Cholestasis</a>	20	2
<a href="#">Cholestasis: Autoimmune</a>	20	2
<a href="#">Coronary Artery Disease</a>	20	2
<a href="#">End-Stage Autoimmune Liver Disease (ESALD)</a>	20	2
<a href="#">Hashimoto's thyroiditis</a>	20	2
<a href="#">IgE-Mediated Hypersensitivity</a>	20	2
<a href="#">Infant Nutrition</a>	20	1
<a href="#">Meniere's Disease</a>	20	2
<a href="#">Organ Transplantation: Liver</a>	20	2
<a href="#">Palmoplantar Pustulosis</a>	20	2
<a href="#">Peripheral Neuropathies</a>	20	2
<a href="#">Restless Legs Syndrome</a>	20	2
<a href="#">Rett Syndrome</a>	20	2
<a href="#">Sensory Neuropathies</a>	20	2
<a href="#">Macroamylasemia</a>	19	4
<a href="#">Intestinal Permeability</a>	17	7
<a href="#">Ataxia</a>	14	3
<a href="#">Headache</a>	13	2
<a href="#">Pancreatitis</a>	13	2
<a href="#">Lymphoma</a>	12	3
<a href="#">Psychiatric Disorders</a>	12	3
<a href="#">Rheumatoid Arthritis</a>	12	3
<a href="#">Cancers: All</a>	11	2
<a href="#">Thyroid Cancer</a>	11	2
<a href="#">Acquired hypogammaglobulinemia</a>	10	1
<a href="#">Allergy: Cow's Milk</a>	10	1
<a href="#">Anaphylaxis</a>	10	1
<a href="#">Aphthous Ulcer</a>	10	1
<a href="#">Ataxia: Dominant</a>	10	1
<a href="#">Ataxia: Sporadic</a>	10	1
<a href="#">Atopic Dermatitis: Infant &amp; Childhood</a>	10	1
<a href="#">Attention Deficit Disorder</a>	10	1
<a href="#">Brain Injury: Hippocampal Damage</a>	10	1
<a href="#">CNS White Matter Abnormalities</a>	10	1
<a href="#">Carpal Tunnel Syndrome</a>	10	1
<a href="#">Celiac Disease: Early Onset</a>	10	1
<a href="#">Child Mortality</a>	10	1
<a href="#">Children: Impaired Growth</a>	10	1
<a href="#">Chronic Constipation, Children</a>	10	1
<a href="#">Colitis: Collagenous</a>	10	1
<a href="#">Constipation</a>	10	1
<a href="#">Depression: Unipolar</a>	10	1
<a href="#">Diarrhea: in Children</a>	10	1
<a href="#">Enamel Defects</a>	10	1
<a href="#">Epithelium Damage: Lymphocytic infiltration</a>	10	1

<a href="#">Food Allergies/Intolerances: Cereals/Grains</a>	10	1
<a href="#">Gastrointestinal Hemorrhage</a>	10	1
<a href="#">Gluten Ataxia</a>	10	1
<a href="#">Hepatitis: Autoimmune</a>	10	1
<a href="#">Hippocampal Sclerosis</a>	10	1
<a href="#">Hypertransaminasemia</a>	10	1
<a href="#">Hypogammaglobulinemia</a>	10	1
<a href="#">Kidney Cancer</a>	10	1
<a href="#">Liver Fibrosis</a>	10	1
<a href="#">Mania: Acute</a>	10	1
<a href="#">Microscopic Colitis Syndrome</a>	10	1
<a href="#">Mortality: All-Cause</a>	10	1
<a href="#">Mucosa: Flattened</a>	10	1
<a href="#">Myocarditis: Autoimmune</a>	10	1
<a href="#">Myopathies</a>	10	1
<a href="#">Myopathies: Inflammatory</a>	10	1
<a href="#">Nervous System Diseases</a>	10	1
<a href="#">Neurological Illness: GAD antibody-associated</a>	10	1
<a href="#">Nightshade Foods Intolerance</a>	10	1
<a href="#">Pregnancy: Prevention of Problems</a>	10	1
<a href="#">Small-for-gestational-age infant</a>	10	1
<a href="#">Spinocerebellar Ataxia Type 2</a>	10	1
<a href="#">Stiff-Person Syndrome</a>	10	1
<a href="#">Stomatitis: Aphthous</a>	10	1
<a href="#">Temporal Lobe Epilepsy (TLE)</a>	10	1
<a href="#">Thyroid Neoplasms</a>	10	1
<a href="#">Turner Syndrome</a>	10	1
<a href="#">Urinary Stone Disease</a>	10	1
<a href="#">Kidney Diseases</a>	9	4
<a href="#">Prolactin: Inappropriate Secretion</a>	8	4
<a href="#">Anemia</a>	6	2
<a href="#">Conjunctival Tumor</a>	6	2
<a href="#">Ectopic Calcification</a>	6	2
<a href="#">Encephalopathies</a>	6	2
<a href="#">Glomerulonephritis</a>	6	3
<a href="#">Hypocalcemia</a>	6	2
<a href="#">Neuromyelitis Optica</a>	6	2
<a href="#">Pituitary Diseases</a>	6	3
<a href="#">Polyneuropathies</a>	6	2
<a href="#">Prolactin Hypersecretion Syndrome</a>	6	3
<a href="#">Seizures</a>	6	2
<a href="#">Splenic Calcifications</a>	6	2
<a href="#">Splenic Diseases</a>	6	2
<a href="#">Systemic Lupus Erythematosus</a>	6	2
<a href="#">Urticaria</a>	6	2
<a href="#">Immune Disorders: Low Immune Function</a>	5	1
<a href="#">Enteropathy</a>	4	2
<a href="#">Insulin: Elevated</a>	4	2
<a href="#">Male Hormone Imbalances</a>	4	2
<a href="#">Asthma</a>	3	1
<a href="#">Demyelinating Diseases</a>	3	2
<a href="#">Diabetes Mellitus: Type 2</a>	3	1
<a href="#">Facial Palsy</a>	3	1
<a href="#">Folic Acid/Folate Deficiency</a>	3	1
<a href="#">Food Allergy: Immunoglobulin E-mediated</a>	3	1
<a href="#">Gastrointestinal Diseases</a>	3	2
<a href="#">Hydronephrosis</a>	3	1

<a href="#">Hyperamylasemia</a>	3	1
<a href="#">Insulin Disorders</a>	3	2
<a href="#">Kidney Stones</a>	3	1
<a href="#">Malabsorption Syndrome</a>	3	1
<a href="#">Opiate Addiction/Withdrawal</a>	3	3
<a href="#">Osteogenesis Imperfecta</a>	3	1
<a href="#">Osteomalacia</a>	3	1
<a href="#">Osteopenia</a>	3	1
<a href="#">Osteoporosis</a>	3	1
<a href="#">Parathyroid Diseases</a>	3	1
<a href="#">Parathyroid adenoma</a>	3	1
<a href="#">Stroke</a>	3	1
<a href="#">Thrombosis</a>	3	1
<a href="#">Tremor</a>	3	1
<a href="#">Urolithiasis</a>	3	1
<a href="#">Uveitis</a>	3	1
<a href="#">A1C</a>	2	1
<a href="#">Allergies</a>	2	2
<a href="#">Blood-Brain-Barrier Disorders</a>	2	2
<a href="#">Diabetes: Glycation/A1C</a>	2	1
<a href="#">Drug Toxicity: Methotrexate</a>	2	1
<a href="#">Glucagon: Excess Secretion</a>	2	1
<a href="#">Gluten Enteropathy</a>	2	1
<a href="#">Gynecomastia</a>	2	1
<a href="#">HPA Axis Dysregulation</a>	2	2
<a href="#">Inflammation</a>	2	1
<a href="#">Insulinitis</a>	2	1
<a href="#">Low Immune Function: Thymus Dysfunction</a>	2	1
<a href="#">Serotonin Disorders</a>	2	1
<a href="#">Thymus Atrophy</a>	2	1
<a href="#">Ataxia: Idiopathic</a>	1	1
<a href="#">Brain: Microglial Activation</a>	1	1
<a href="#">Breast Cancer</a>	1	1
<a href="#">Chorea</a>	1	1
<a href="#">Clotting</a>	1	1
<a href="#">Dementia</a>	1	1
<a href="#">Food Poisoning</a>	1	1
<a href="#">Guillain-Barre Syndrome</a>	1	1
<a href="#">Huntington Disease</a>	1	1
<a href="#">Hyperinsulinism</a>	1	1
<a href="#">Insulin Resistance</a>	1	1
<a href="#">Lane-Hamilton syndrome</a>	1	1
<a href="#">Lectin-Induced Toxicity</a>	1	1
<a href="#">Miscarriage</a>	1	1
<a href="#">Myelopathy</a>	1	1
<a href="#">Neurologic Disorders</a>	1	1
<a href="#">Neuropathy</a>	1	1
<a href="#">Osteoarthritis</a>	1	1
<a href="#">Oxidative Stress</a>	1	1

#### Article Count - 20

Quick Summary: 20 Adverse Pharmacological Actions

Name	Cumulative Knowledge	Article Count
<a href="#">Neurotoxic</a>	287	34
<a href="#">Immunoreactive</a>	128	16
<a href="#">Immunotoxic</a>	99	12
<a href="#">Teratogenic</a>	91	8

<a href="#">Inflammatory</a>	40	8
<a href="#">Interleukin-15 downregulation</a>	20	2
<a href="#">Proliferative</a>	20	2
<a href="#">Nephrotoxic</a>	13	2
<a href="#">Diabetogenic</a>	12	6
<a href="#">Allergenic</a>	11	2
<a href="#">Cardiotoxic</a>	10	1
<a href="#">Endocrine Disruptor</a>	6	3
<a href="#">Immunosuppressive</a>	5	1
<a href="#">Cytotoxic</a>	4	4
<a href="#">Endocrine Disruptor: Insulin Resistance</a>	2	1
<a href="#">Endocrine Disruptor: Pancreas</a>	2	1
<a href="#">Serotonin Down-Regulation</a>	2	1
<a href="#">Interleukin-4 Up-Regulation</a>	1	1
<a href="#">Oxidant</a>	1	1
<a href="#">Vascular Endothelial Growth Factor C Up-Regulation</a>	1	1

## Category: Diseases

### Topic: Celiac Disease

#### [Breastfeeding seems to offer a protection against the development of CD in predisposed infants.](#) - GMI Summary

**Pubmed Data** : Evid Based Med. 2012 Aug 4. Epub 2012 Aug 4. PMID: [22864373](#)

**Article Published Date** : Aug 03, 2012

**Authors** : Camilla Henriksson, Anne-Marie Boström, Ingela E Wiklund

**Study Type** : Meta Analysis

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Celiac Disease: Prevention : CK\(32\) : AC\(3\)](#), [Infant Nutrition : CK\(70\) : AC\(13\)](#)

**Therapeutic Actions** : [Breastfeeding : CK\(657\) : AC\(67\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

#### [Recurrent miscarriages may occur due to undiagnosed celiac disease, and may resolve after a gluten-free diet.](#) - GMI Summary

**Pubmed Data** : Dig Dis Sci. 2008 Nov;53(11):2925-8. Epub 2008 Mar 27. PMID: [18368491](#)

**Article Published Date** : Nov 01, 2008

**Authors** : Antonio Tursi, Gianmarco Giorgetti, Giovanni Brandimarte, Walter Elisei

**Study Type** : Meta Analysis

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Teratogenic : CK\(304\) : AC\(59\)](#)

#### ["Frequency of celiac disease and irritable bowel syndrome coexistence and its influence on the disease course"](#) - GMI Summary

**Pubmed Data** : Przegl Lek. 2009 ;66(3):126-9. PMID: [19689036](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Małgorzata Zwolińska-Wcisło, Danuta Galicka-Latała, Piotr Rozpondek, Lucyna Rudnicka-Sosin, Tomasz Mach

**Study Type** : Human Study



#### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Irritable Bowel Syndrome : CK\(803\) : AC\(66\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[6 months of a gluten free diet result in improvements in celiac disease patients with hypertransaminasemia liver involvement](#) - GMI Summary**

**Pubmed Data** : Scand J Gastroenterol. 2012 Apr 19. Epub 2012 Apr 19. PMID: [22512436](#)

**Article Published Date** : Apr 18, 2012

**Authors** : Sara Massironi, Roberta Elisa Rossi, Mirella Fraquelli, Maria Teresa Bardella, Luca Elli, Marco Maggioni, Serena Della Valle, Matilde Pia Spampatti, Massimo Colombo, Dario Conte

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Hypertransaminasemia : CK\(10\) : AC\(1\)](#), [Liver Fibrosis : CK\(341\) : AC\(74\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords** : [Transient Elastography \(TE\) : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[A gluten free diet could be a useful approach in reducing GERD symptoms in adult celiac patients.](#) - GMI Summary**

**Pubmed Data** : J Gastroenterol Hepatol. 2008 Sep ;23(9):1368-72. PMID: [18853995](#)

**Article Published Date** : Sep 01, 2008

**Authors** : Paolo Usai, Roberto Manca, Rosario Cuomo, Maria Antonia Lai, Luigi Russo, Maria Francesca Boi

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gastroesophageal Reflux : CK\(278\) : AC\(41\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[A glutenfree diet showed short-term benefits by reducing GI symptoms and severe hypoglycaemia in T1D and CD](#) - GMI Summary**

**Pubmed Data** : Pediatr Diabetes. 2011 Jun ;12(4 Pt 1):322-5. Epub 2011 Mar 29. PMID: [21615651](#)

**Article Published Date** : May 31, 2011

**Authors** : Noina Abid, Oonagh McGlone, Chris Cardwell, William McCallion, Dennis Carson

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 1: Prevention : CK\(163\) : AC\(24\)](#)

**Additional Keywords** : [Autoantibodies : CK\(30\) : AC\(3\)](#), [Body Mass Index \(BMI\) : CK\(10\) : AC\(1\)](#),

[Glycosylated Haemoglobin \(HbA1c\) : CK\(10\) : AC\(1\)](#), [Hypoglycemia : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Insulin : CK\(69\) : AC\(11\)](#)

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### **[A high frequency of celiac disease was found in patients with lymphoma in the southeast region of Turkey.](#) - GMI Summary**

**Pubmed Data** : Turk J Gastroenterol. 2009 Jun ;20(2):87-92. PMID: [19530040](#)

**Article Published Date** : Jun 01, 2009

**Authors** : Timuçin Cil, Abdullah Altıntaş, Abdurrahman Işikdoğan, Semir Paşa, Kadim Bayan, Sabri Batun, Hüseyin Büyükbayram

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Lymphoma : CK\(225\) : AC\(68\)](#), [Non-Hodgkin Lymphoma : CK\(515\) : AC\(67\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[A significant percentage of the newly diagnosed patients with CD have macroamylasemia.](#) - GMI Summary**

**Pubmed Data** : Am J Gastroenterol. 2001 Apr ;96(4):1096-100. PMID: [11316153](#)

**Article Published Date** : Apr 01, 2001

**Authors** : A Rabsztyn, P H Green, I Berti, A Fasano, J A Perman, K Horvath

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Macroamylasemia : CK\(19\) : AC\(1\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[A significant proportion of patients with migraine may have celiac disease, and that a gluten free diet may lead to a improvement in the migraine in these patients.](#) - GMI Summary**

**Pubmed Data** : Am J Gastroenterol. 2003 Mar;98(3):625-9. PMID: [12650798](#)

**Article Published Date** : Mar 01, 2003

**Authors** : Maurizio Gabrielli, Filippo Cremonini, Giuseppe Fiore, Giovanni Addolorato, Cristiano Padalino, Marcello Candelli, Maria Elena De Leo, Luca Santarelli, Mario Giacobazzo, Antonio Gasbarrini, Paolo Pola, Antonio Gasbarrini

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Migraine Disorders : CK\(455\) : AC\(54\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[A subgroup of Irritable Bowel Syndrome patients have latent/potential celiac disease and respond to a gluten-free diet.](#) - GMI Summary**

**Pubmed Data** : Gastroenterology. 2001 Dec;121(6):1329-38. PMID: [11729112](#)

**Article Published Date** : Dec 01, 2001

**Authors** : U Wahnschaffe, R Ullrich, E O Riecken, J D Schulzke

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Irritable Bowel Syndrome : CK\(803\) : AC\(66\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[ADHD sympomatology is markedly over represented among untreated CD patients and that a gluten-free diet may improve symptoms significantly within a short period of time.](#) - GMI Summary**

**Pubmed Data** : J Atten Disord. 2006 Nov;10(2):200-4. PMID: [17085630](#)

**Article Published Date** : Nov 01, 2006

**Authors** : Helmut Niederhofer, Klaus Pittschieler

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Attention Deficit Disorder with Hyperactivity : CK\(230\) : AC\(32\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#), [Gluten and ADHD : CK\(20\) : AC\(2\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Adults with Type 1 diabetes have a higher prevalance of celiac disease associated antibodies.](#) - GMI Summary**

**Pubmed Data** : Diabetes Nutr Metab. 2001 Feb;14(1):37-42. PMID: [11345164](#)

**Article Published Date** : Feb 01, 2001

**Authors** : E Matteucci, V Cinapri, S Quilici, A Lucchetti, P Mugnaini, O Giampietro

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Diabetes Mellitus: Type 1: Prevention : CK\(163\) : AC\(24\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Cardiomyopathy in patients with celiac disease may be completely reversible with a gluten-free diet. - GMI Summary](#)**

**Pubmed Data** : Mayo Clin Proc. 2005 May;80(5):674-6. PMID: [15887437](#)

**Article Published Date** : May 01, 2005

**Authors** : Nisheeth K Goel, Robert D McBane, Patrick S Kamath

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Cardiomyopathy : CK\(77\) : AC\(15\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Celiac disease has a far higher prevalence in autoimmune thyroid disorders. - GMI Summary](#)**

**Pubmed Data** : Ital J Gastroenterol Hepatol. 1999 May;31(4):283-7. PMID: [10425571](#)

**Article Published Date** : May 01, 1999

**Authors** : L Cuoco, M Certo, R A Jorizzo, I De Vitis, A Tursi, A Papa, L De Marinis, P Fedeli, G Fedeli, G Gasbarrini

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Thyroiditis : CK\(134\) : AC\(17\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Hashimoto's thyroiditis : CK\(265\) : AC\(10\)](#), [Thyroid Nodule : CK\(92\) : AC\(11\)](#)

**Additional Keywords** : [Wheat Intolerance : CK\(21\) : AC\(2\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Celiac disease has a high prevalence rate in autoimmune cholestatic liver disorders. - GMI Summary](#)**

**Pubmed Data** : Am J Gastroenterol. 2002 Oct;97(10):2609-13. PMID: [12385447](#)

**Article Published Date** : Oct 01, 2002

**Authors** : Umberto Volta, Luis Rodrigo, Alessandro Granito, Nunzio Petrolini, Paolo Muratori, Luigi Muratori, Antonio Linares, Lorenza Veronesi, Dolores Fuentes, Daniela Zauli, Francesco B Bianchi

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cholestasis : CK\(274\) : AC\(30\)](#), [Cholestasis: Autoimmune : CK\(10\) : AC\(1\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Celiac disease has been associated with autoimmune myocarditis. - GMI Summary](#)**

**Pubmed Data** : Circulation. 2002 Jun 4;105(22):2611-8. PMID: [12045166](#)

**Article Published Date** : Jun 04, 2002

**Authors** : Andrea Frustaci, Lucio Cuoco, Cristina Chimenti, Maurizio Pieroni, Giuseppina Fioravanti, Nicola Gentiloni, Attilio Maseri, Giovanni Gasbarrini

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Myocarditis: Autoimmune : CK\(14\) : AC\(3\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Cardiotoxic : CK\(628\) : AC\(74\)](#)

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### **[Celiac disease is a common condition in Down syndrome. - GMI Summary](#)**

**Pubmed Data** : J Pediatr Gastroenterol Nutr. 1995 Nov;21(4):443-5. PMID: [8583297](#)

**Article Published Date** : Nov 01, 1995

**Authors** : U Jansson, C Johansson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Down Syndrome : CK\(50\) : AC\(5\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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### **[Celiac disease is associated with ataxic syndromes without definite diagnosis, suggesting that it plays a part in the pathogenesis of some ataxic syndromes.](#) - GMI Summary**

**GMI Summary**

**Pubmed Data** : J Neurol Neurosurg Psychiatry. 1999 Jan ;66(1):32-5. PMID: [9886447](#)

**Article Published Date** : Jan 01, 1999

**Authors** : M T Pellecchia, R Scala, A Filla, G De Michele, C Ciacci, P Barone

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Ataxia: Cerebellar : CK\(67\) : AC\(3\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Celiac disease is associated with restless legs syndrome.](#) - GMI Summary**

**GMI Summary**

**Pubmed Data** : Dig Dis Sci. 2010 Jun ;55(6):1667-73. PMID: [19731029](#)

**Article Published Date** : Jun 01, 2010

**Authors** : Leonard B Weinstock, Arthur S Walters, Gerard E Mullin, Stephen P Duntley

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Restless Legs Syndrome : CK\(91\) : AC\(8\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Celiac disease is far higher in those diagnosed with Grave's disease.](#) - GMI Summary**

**GMI Summary**

**Pubmed Data** : Endocrine. 2006 Oct;30(2):175-83. PMID: [17322576](#)

**Article Published Date** : Oct 01, 2006

**Authors** : Cihangir Erem, Orhan Deger, Ercüment Ovali, Yasam Barlak

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Graves Disease : CK\(93\) : AC\(9\)](#), [Hyperthyroidism : CK\(189\) : AC\(33\)](#)

**Additional Keywords** : [Anti-Gliadin Antibodies : CK\(71\) : AC\(8\)](#), [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Celiac disease is found in a far higher percentage of patients with end-stage autoimmune liver disease.](#) - GMI Summary**

**GMI Summary**

**Pubmed Data** : Liver Int. 2008 Apr;28(4):467-76. PMID: [18339073](#)

**Article Published Date** : Apr 01, 2008

**Authors** : Alberto Rubio-Tapia, Ahmad S Abdulkarim, Russell H Wiesner, S Breannan Moore, Patricia K Krause, Joseph A Murray

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [End-Stage Autoimmune Liver Disease \(ESALD\) : CK\(10\) : AC\(1\)](#), [Liver Disease : CK\(114\) : AC\(30\)](#), [Organ Transplantation: Liver : CK\(202\) : AC\(24\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

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**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Celiac disease is markedly overrepresented among patients presenting with ADHD. - GMI Summary](#)**

**Pubmed Data :** Prim Care Companion CNS Disord. 2011 ;13(3). PMID: [21977364](#)

**Article Published Date :** Jan 01, 2011

**Authors :** Helmut Niederhofer

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Attention Deficit Hyperactivity Disorder : CK\(160\) : AC\(14\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Therapeutic Actions :** [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords :** [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Celiac disease prevalence is significantly higher in those diagnosed with Sjogren's syndrome. - GMI Summary](#)**

**Pubmed Data :** Rheumatol Int. 2004 Sep;24(5):278-82. Epub 2003 Sep 17. PMID: [13680146](#)

**Article Published Date :** Sep 01, 2004

**Authors :** Peter Szodoray, Zsolt Barta, Gabriella Lakos, Szabolcs Szakáll, Margit Zeher

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Sjogren's Syndrome : CK\(81\) : AC\(14\)](#)

**Additional Keywords :** [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Celiac disease prevalence was found to be 3.5% in children with type 1 diabetes. - GMI Summary](#)**

**Pubmed Data :** J Pediatr Endocrinol Metab. 1996 Mar;9 Suppl 1:101-11. PMID: [8887160](#)

**Article Published Date :** Mar 01, 1996

**Authors :** R Lorini, A Scaramuzza, L Vitali, G d'Annunzio, M A Avanzini, C De Giacomo, F Severi

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Diabetes Mellitus: Type 1: Prevention : CK\(163\) : AC\(24\)](#)

**Additional Keywords :** [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[Coeliac disease prevalence may be relatively common in Northern Ireland, as indicated by the 5.7% positive rate for anti-gliadin antibodies in those sampled. - GMI Summary](#)**

**Pubmed Data :** Gut. 1996 Jul ;39(1):43-7. PMID: [8881807](#)

**Article Published Date :** Jul 01, 1996

**Authors :** S A McMillan, R P Watson, E E McCrum, A E Evans

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Additional Keywords :** [Celiac Prevalence : CK\(121\) : AC\(13\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[Diarrhea-predominant irritable bowel syndrome is associated with celiac-disease associated serum IgG in many patients tested. A gluten-free diet results in significant improvements. - GMI Summary](#)**

**Pubmed Data :** Clin Gastroenterol Hepatol. 2007 Jul;5(7):844-50; quiz 769. Epub 2007 Jun 5. PMID: [17553753](#)

**Article Published Date :** Jul 01, 2007

**Authors** : Ulrich Wahnschaffe, Jörg-Dieter Schulzke, Martin Zeitz, Reiner Ullrich

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diarrhea: IBS associated : CK\(10\) : AC\(1\)](#), [Irritable Bowel Syndrome : CK\(803\) : AC\(66\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Due to the fact that monozygotic twins share the same genotype but do not always both get celiac disease, other environmental and genetic factors might contribute to determining the disease. - GMI Summary](#)**

**Pubmed Data** : Arq Gastroenterol. 2010 Mar;47(1):56-60. PMID: [20520976](#)

**Article Published Date** : Mar 01, 2010

**Authors** : Magda Bahia, Francisco José Penna, Dora Mendez Del Castillo, Marina Guimarães Corrê Hassegawa, Aline Cristina Vieira, Vanessa Ribeiro Orlando

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Celiac Disease: Diagnostic Considerations : CK\(91\) : AC\(8\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Enteropathy-type intestinal lymphoma is not necessarily connected with celiac disease markers, but nonetheless may reflect profound gluten intolerance and may improve upon gluten withdrawal. - GMI Summary](#)**

**Pubmed Data** : Acta Gastroenterol Belg. 2005 Oct-Dec;68(4):419-23. PMID: [16432993](#)

**Article Published Date** : Oct 01, 2005

**Authors** : L Van Overbeke, N Ectors, J Tack

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Epilepsy with cerebral calcifications of unexplained origin may likely be caused by undiagnosed celiac disease. - GMI Summary](#)**

**Pubmed Data** : Lancet. 1992 Aug 22;340(8817):439-43. PMID: [1354781](#)

**Article Published Date** : Aug 22, 1992

**Authors** : G Gobbi, F Bouquet, L Greco, A Lambertini, C A Tassinari, A Ventura, M G Zaniboni

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cerebral Calcifications : CK\(13\) : AC\(2\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#), [Epilepsy: With Cerebral Calcifications : CK\(24\) : AC\(3\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Gluten causes gastrointestinal symptoms in subjects without celiac disease. - GMI Summary](#)**

**Pubmed Data** : Am J Gastroenterol. 2011 Jan 11. Epub 2011 Jan 11. PMID: [21224837](#)

**Article Published Date** : Jan 11, 2011

**Authors** : Jessica R Biesiekierski, Evan D Newnham, Peter M Irving, Jacqueline S Barrett, Melissa Haines, James D Doecke, Susan J Shepherd, Jane G Muir, Peter R Gibson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Wheat Intolerance : CK\(2213\) :](#)

[AC\(231\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Gluten sensitivity has been defined as an abnormal non-allergic sensibility to gluten.](#) - GMI Summary**

**Pubmed Data :** [Pediatr Med Chir. 2010 Sep-Oct;32\(5\):211-5. PMID: 21174642](#)

**Article Published Date :** Sep 01, 2010

**Authors :** G M Tronconi, B Parma, G Barera

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[High serum levels of anti-deamidated gliadin peptides may predict celiac disease in children younger than 2 years](#) - GMI Summary**

**Pubmed Data :** [Dig Liver Dis. 2011 Jun ;43\(6\):465-9. Epub 2011 Jan 22. PMID: 21257356](#)

**Article Published Date :** May 31, 2011

**Authors :** Maria Barbato, Giulia Maiella, Chiara Di Camillo, Sofia Guida, Francesco Valitutti, Ginevra Lastrucci, Fabrizio Mainiero, Salvatore Cucchiara

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diarrhea : CK\(549\) : AC\(72\)](#)

**Therapeutic Actions :** [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords :** [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[Hippocampal sclerosis in refractory temporal lobe epilepsy is associated with gluten sensitivity.](#) - GMI Summary**

**Pubmed Data :** [J Neurol Neurosurg Psychiatry. 2009 Jun;80\(6\):626-30. Epub 2009 Feb 24. PMID: 19244266](#)

**Article Published Date :** Jun 01, 2009

**Authors :** M Peltola, K Kaukinen, P Dastidar, K Haimila, J Partanen, A-M Haapala, M Mäki, T Keränen, J Peltola

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Brain Injury: Hippocampal Damage : CK\(35\) : AC\(16\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Hippocampal Sclerosis : CK\(10\) : AC\(1\)](#), [Temporal Lobe Epilepsy \(TLE\) : CK\(10\) : AC\(1\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Hypothesis confirmed that gluten elicits harmful IL-15 related immune response effect on all individuals.](#) - GMI Summary**

**Article Publish Status :** This is a free article. [Click here to read the entire article.](#)

**Pubmed Data :** [Gut. 2007 Jun ;56\(6\):889-90. PMID: 17519496](#)

**Article Published Date :** May 31, 2007

**Authors :** D Bernardo, J A Garrote, L Fernández-Salazar, S Riestra, E Arranz

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Individuals with celiac disease are at moderately increased risk of epilepsy](#) - GMI Summary**

**Pubmed Data :** [Neurology. 2012 Apr 18. Epub 2012 Apr 18. PMID: 22517096](#)

**Article Published Date :** Apr 17, 2012

**Authors** : J F Ludvigsson, F Zingone, T Tomson, A Ekblom, C Ciacci

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#)

**Additional Keywords** : [Epilepsy : CK\(128\) : AC\(27\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Individuals with schizophrenia have a novel immune response to gluten. - GMI Summary](#)**

**Pubmed Data** : Schizophr Res. 2010 May;118(1-3):248-55. Epub 2009 Sep 11. PMID: [19748229](#)

**Article Published Date** : May 01, 2010

**Authors** : Diana Samaroo, Faith Dickerson, Donald D Kasarda, Peter H R Green, Chiara Briani, Robert H Yolken, Armin Alaedini

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Schizophrenia : CK\(247\) : AC\(29\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Intolerance to wheat \(CD autoantibodies\) is higher than background rates in those with Turner syndrome. - GMI Summary](#)**

**Pubmed Data** : Clin Exp Immunol. 2009 May;156(2):205-10. Epub 2009 Feb 26. PMID: [19298606](#)

**Article Published Date** : May 01, 2009

**Authors** : K H Mortensen, L Cleemann, B E Hjerrild, E Nexø, H Locht, E M Jeppesen, C H Gravholt

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Hypothyroidism : CK\(525\) : AC\(78\)](#), [Turner Syndrome : CK\(10\) : AC\(1\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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### **[Markers of gluten sensitivity and celiac disease are increased in recent-onset psychosis and multi-episode schizophrenia. - GMI Summary](#)**

**Pubmed Data** : Biol Psychiatry. 2010 Jul 1;68(1):100-4. Epub 2010 May 14. PMID: [20471632](#)

**Article Published Date** : Jul 01, 2010

**Authors** : Faith Dickerson, Cassie Stallings, Andrea Origoni, Crystal Vaughan, Sunil Khushalani, Flora Leister, Shuojia Yang, Bogdana Krivogorsky, Armin Alaedini, Robert Yolken

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Psychoses : CK\(12\) : AC\(3\)](#), [Schizophrenia : CK\(247\) : AC\(29\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Myopathy associated with gluten sensitivity has been demonstrated. - GMI Summary](#)**

**Pubmed Data** : Muscle Nerve. 2007 Apr;35(4):443-50. PMID: [17143894](#)

**Article Published Date** : Apr 01, 2007

**Authors** : Marios Hadjivassiliou, Arup K Chattopadhyay, Richard A Grünewald, John A Jarratt, Rosalind H Kandler, D G Rao, D S Sanders, S B Wharton, G A B Davies-Jones

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Myopathies :](#)



[CK\(241\) : AC\(51\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Neurological symptoms occur in 6-10% of those with celiac disease, with cerebella ataxia being the most frequent symptom.](#) - GMI Summary**

**Pubmed Data :** [Mov Disord. 2009 Dec 15;24\(16\):2358-62. PMID: 19845007](#)

**Article Published Date :** Dec 15, 2009

**Authors :** Katrin Bürk, Marie-Louise Farecki, Georg Lamprecht, Guenter Roth, Patrice Decker, Michael Weller, Hans-Georg Rammensee, Wolfgang Oertel

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Carpal Tunnel Syndrome : CK\(80\) : AC\(8\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cerebellar Ataxia : CK\(36\) : AC\(4\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Migraine Disorders : CK\(455\) : AC\(54\)](#), [Psychiatric Disorders : CK\(71\) : AC\(10\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords :** [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions :** [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Patients with biopsy-verified coeliac disease are at moderately increased risk of urinary stone disease.](#) - GMI Summary**

**Pubmed Data :** [Aliment Pharmacol Ther. 2012 Feb ;35\(4\):477-84. Epub 2012 Jan 4. PMID: 22221254](#)

**Article Published Date :** Feb 01, 2012

**Authors :** J F Ludvigsson, F Zingone, M Fored, C Ciacci, M Cirillo

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Urinary Stone Disease : CK\(10\) : AC\(1\)](#)

**Additional Keywords :** [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances :** [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Patients with multiple myeloma have immunoreactivity to gliadin similar to those with celiac disease.](#) - GMI Summary**

**Pubmed Data :** [BMC Immunol. 2009;10:32. Epub 2009 May 31. PMID: 19480718](#)

**Article Published Date :** Jan 01, 2009

**Authors :** Aleksandra Konic-Ristic, Dejan Dodig, Radmilo Krstic, Svetislav Jelic, Ivan Stankovic, Aleksandra Ninkovic, Jelena Radic, Irina Besu, Branka Bonaci-Nikolic, Njegica Jojic, Milica Djordjevic, Dragan Popovic, Zorica Juranic

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Multiple Myeloma : CK\(146\) : AC\(53\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords :** [Differences in Immunoreactivity Within Different Wheat Cultivars : CK\(11\) : AC\(2\)](#), [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions :** [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **[Patients with psoriasis show elevated sensitivity to gluten.](#) - GMI Summary**

**Pubmed Data :** [J Clin Lab Anal. 2010;24\(4\):269-72. PMID: 20626025](#)

**Article Published Date :** Jan 01, 2010

**Authors :** Sangeeta Singh, Gyanendra Kumar Sonkar, Usha, Sanjay Singh

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Psoriasis : CK\(270\) : AC\(42\)](#)

**Additional Keywords :** [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Positive serum antigliadin antibodies without celiac disease have been](#)**

## [associated with rheumatoid arthritis and depression in the elderly.](#) - GMI Summary

**Pubmed Data** : Scand J Gastroenterol. 2010 Oct;45(10):1197-202. PMID: [20545470](#)

**Article Published Date** : Oct 01, 2010

**Authors** : Anitta Ruuskanen, Katri Kaukinen, Pekka Collin, Heini Huhtala, Raisa Valve, Markku Mäki, Liisa Luostarinen

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Celiac Disease: Diagnostic Considerations : CK\(91\) : AC\(8\)](#), [Depression: Unipolar : CK\(662\) : AC\(84\)](#), [Rheumatoid Arthritis : CK\(414\) : AC\(64\)](#)

**Additional Keywords** : [Antigliadin Antibodies \(AGA\) : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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## [Review: prevalence of celiac disease in the Asia-Pacific region.](#) - GMI Summary

**Pubmed Data** : J Gastroenterol Hepatol. 2009 Aug;24(8):1347-51. PMID: [19702902](#)

**Article Published Date** : Aug 01, 2009

**Authors** : Adrian G Cummins, Ian C Roberts-Thomson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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## [Sensory ganglionopathy may be a manifestation of gluten sensitivity.](#) - GMI Summary

**Pubmed Data** : Neurology. 2010 Sep 14;75(11):1003-8. PMID: [20837968](#)

**Article Published Date** : Sep 14, 2010

**Authors** : M Hadjivassiliou, D G Rao, S B Wharton, D S Sanders, R A Grünewald, A G B Davies-Jones

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Peripheral Neuropathies : CK\(454\) : AC\(31\)](#), [Sensory Neuropathies : CK\(10\) : AC\(1\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## [The GFD is associated with a rapid and persistent improvement in reflux symptoms in classically untreated celiac disease patients that resembles the healthy population.](#) - GMI Summary

**Pubmed Data** : Clin Gastroenterol Hepatol. 2011 Mar ;9(3):214-9. Epub 2010 Jun 30. PMID: [20601132](#)

**Article Published Date** : Mar 01, 2011

**Authors** : Fabio Nachman, Horacio Vázquez, Andrea González, Paola Andrenacci, Liliana Compagni, Hugo Reyes, Emilia Sugai, María Laura Moreno, Edgardo Smecuol, Hui Jer Hwang, Inés Pinto Sánchez, Eduardo Mauriño, Julio César Bai

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gastroesophageal Reflux : CK\(278\) : AC\(41\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## [The global burden of childhood coeliac disease is likely a neglected component of diarrhoeal mortality.](#) - GMI Summary

**Pubmed Data** : PLoS One. 2011 ;6(7):e22774. Epub 2011 Jul 26. PMID: [21818388](#)

**Article Published Date** : Jan 01, 2011

**Authors** : Peter Byass, Kathleen Kahn, Anneli Ivarsson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Child Mortality : CK\(64\) : AC\(8\)](#), [Diarrhea: in Children : CK\(213\) : AC\(21\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[The glutenfree diet described as only effective therapy to prevent acute pancreatitis relapses associated with gluten enteropathy](#) - GMI Summary**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Rev Esp Enferm Dig. 2008 Dec ;100(12):746-51. PMID: [19222332](#)

**Article Published Date** : Nov 30, 2008

**Authors** : L Rodrigo, N Alvarez, S Riestra, R de Francisco, O González Bernardo, L García Isidro, A López Vázquez, C López Larrea

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Pancreatitis : CK\(163\) : AC\(40\)](#)

**Additional Keywords** : [Pancreatitis : CK\(163\) : AC\(40\)](#), [Pancreatitis : CK\(163\) : AC\(40\)](#), [Pancreatitis : CK\(163\) : AC\(40\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[The incidence of non-Hodgkin's lymphoma was significantly increased in patients with dermatitis herpetiformis, indicating the potential that wheat/gluten may contribute to malignancies.](#) - GMI Summary**

**Pubmed Data** : Gut. 1996 Apr ;38(4):528-30. PMID: [8707082](#)

**Article Published Date** : Mar 31, 1996

**Authors** : P Collin, E Pukkala, T Reunala

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Non-Hodgkin Lymphoma : CK\(515\) : AC\(67\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[The involvement of wheat intolerance in multiple sclerosis may be as high as 12% of patients.](#) - GMI Summary**

**Pubmed Data** : Neurology. 2004 Jun 22;62(12):2326-7. PMID: [15210909](#)

**Article Published Date** : Jun 22, 2004

**Authors** : Connie D S N A Pengiran Tengah, Robert J Lock, D Joseph Unsworth, Adrian J Wills

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Multiple Sclerosis : CK\(716\) : AC\(133\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[The prevalence of CD could be as high as 1 in 33 persons.](#) - GMI Summary**

**Pubmed Data** : J Pediatr. 2000 Jan ;136(1):86-90. PMID: [10636980](#)

**Article Published Date** : Jan 01, 2000

**Authors** : I Hill, A Fasano, R Schwartz, D Counts, M Glock, K Horvath

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Additional Keywords** : [Celiac Prevalence : CK\(121\) : AC\(13\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[The prevalence of celiac disease in Down syndrome in the southeastern United States was 1 in 14 cases.](#) - GMI Summary**

**Pubmed Data** : J Pediatr Gastroenterol Nutr. 2000 Sep;31(3):275-9. PMID: [10997372](#)

**Article Published Date** : Sep 01, 2000

**Authors** : D A Zachor, E Mroczek-Musulman, P Brown

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Down Syndrome](#) : CK(50) : AC(5)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104)

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### **[The prevalence rate of celiac disease in Libyan children with type 1 diabetes was 10.3%. - GMI Summary](#)**

**Pubmed Data** : Diabetes Metab Res Rev. 2003 Jan-Feb;19(1):69-75. PMID: [12592646](#)

**Article Published Date** : Jan 01, 2003

**Authors** : Abdelhakim Ashabani, Umaima Abushofa, Suliman Abusrewill, Mahmoud Abdelazez, Ludmila Tucková, Helena Tlaskalová-Hogenová

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Diabetes Mellitus: Type 1](#) : CK(1023) : AC(221),

[Diabetes Mellitus: Type 1: Prevention](#) : CK(163) : AC(24)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104)

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### **[There is a close association between Sjögren's syndrome and celiac disease. Even among nonceliac patients with primary Sjögren's syndrome, an ongoing inflammation is often present in the small bowel mucosa. - GMI Summary](#)**

**Pubmed Data** : Am J Gastroenterol. 1999 Apr;94(4):1042-6. PMID: [10201480](#)

**Article Published Date** : Apr 01, 1999

**Authors** : S Iltanen, P Collin, M Korpela, K Holm, J Partanen, A Polvi, M Mäki

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Sjogren's Syndrome](#) : CK(81) : AC(14)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Wheat](#) : CK(2371) : AC(280)

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### **[There is a high frequency of autoimmune thyroid disease among celiac disease patients. - GMI Summary](#)**

**Pubmed Data** : J Pediatr Gastroenterol Nutr. 2003 Jul;37(1):63-6. PMID: [12827007](#)

**Article Published Date** : Jul 01, 2003

**Authors** : Nicoletta Ansaldi, Tiziana Palmas, Andrea Corrias, Maria Barbato, Mario Rocco D'Altiglia, Angelo Campanozzi, Mariella Baldassarre, Francesco Rea, Rosanna Pluvio, Margherita Bonamico, Rosanna Lazzari, Giovanni Corrao

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases](#) : CK(5084) : AC(779), [Autoimmune Thyroiditis](#) : CK(134) : AC(17), [Celiac Disease](#) : CK(1393) : AC(185), [Hypothyroidism](#) : CK(525) : AC(78)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Wheat](#) : CK(2371) : AC(280)

**Adverse Pharmacological Actions** : [Immunotoxic](#) : CK(230) : AC(38)

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### **[There is a high prevalence of antibodies to gliadin in patients with inflammatory myopathies, indicating a higher prevalence of gluten sensitivity or celiac disease in this patient group. - GMI Summary](#)**

**Pubmed Data** : Ann N Y Acad Sci. 2009 Sep;1173:174-9. PMID: [19758147](#)

**Article Published Date** : Sep 01, 2009

**Authors** : Hedi Orbach, Nimrod Amitai, Ori Barzilai, Mona Boaz, Maya Ram, Gisele Zandman-Goddard, Yehuda Shoenfeld

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Gluten Sensitivity](#) : CK(2319) : AC(246), [Myopathies](#) :

[Inflammatory : CK\(10\) : AC\(1\)](#)

**Additional Keywords :** [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[There is a high prevalence of gluten sensitivity in Japanese patients with adult-onset cerebellar ataxia. - GMI Summary](#)**

**Pubmed Data :** Intern Med. 2006;45(3):135-40. Epub 2006 Mar 1. PMID: [16508226](#)

**Article Published Date :** Jan 01, 2006

**Authors :** Masafumi Ihara, Fumi Makino, Hideyuki Sawada, Takahiro Mezaki, Kotaro Mizutani, Hiroshi Nakase, Makoto Matsui, Hidekazu Tomimoto, Shun Shimohama

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cerebellar Ataxia : CK\(36\) : AC\(4\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions :** [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[There is a higher frequency of celiac disease associated antibodies in autoimmune hepatitis. - GMI Summary](#)**

**Pubmed Data :** Dig Dis Sci. 1998 Oct;43(10):2190-5. PMID: [9790453](#)

**Article Published Date :** Oct 01, 1998

**Authors :** U Volta, L De Franceschi, N Molinaro, F Cassani, L Muratori, M Lenzi, F B Bianchi, A J Czaja

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Hepatitis: Autoimmune : CK\(41\) : AC\(8\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[There is a higher prevalence of celiac disease and gluten sensitivity in patients with Grave's hyperthyroidism. - GMI Summary](#)**

**Pubmed Data :** Clin Endocrinol (Oxf). 2005 Mar;62(3):303-6. PMID: [15730411](#)

**Article Published Date :** Mar 01, 2005

**Authors :** Chin Lye Ch'ng, Moushmi Biswas, Ann Benton, M Keston Jones, Jeremy G C Kingham

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Graves Disease : CK\(93\) : AC\(9\)](#), [Hyperthyroidism : CK\(189\) : AC\(33\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[There is a higher prevalence of celiac disease in patients with Down syndrome than background populations. - GMI Summary](#)**

**Pubmed Data :** Acta Paediatr. 1999 Sep;88(9):953-6. PMID: [10519335](#)

**Article Published Date :** Sep 01, 1999

**Authors :** S M Pueschel, C Romano, P Failla, C Barone, R Pettinato, A Castellano Chiodo, D L Plumari

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Down Syndrome : CK\(50\) : AC\(5\)](#)

**Additional Keywords :** [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[There is a prevalence of IgA-antigliadin antibodies and IgA-antiendomysium antibodies related to celiac disease in children with Down syndrome. - GMI Summary](#)**

**Pubmed Data :** Pediatrics. 1998 Feb;101(2):272-5. PMID: [9445503](#)

**Article Published Date :** Feb 01, 1998

**Authors** : A Carlsson, I Axelsson, S Borulf, A Bredberg, M Forslund, B Lindberg, K Sjöberg, S A Ivarsson  
**Study Type** : Human Study  
**Additional Links**  
**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Down Syndrome : CK\(50\) : AC\(5\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)  
**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)  
**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[There is an association between psoriasis and asymptomatic celiac disease/gluten intolerance.](#) - GMI Summary**

**Pubmed Data** : J Eur Acad Dermatol Venereol. 2008 Sep;22(9):1055-61. Epub 2008 Apr 1. PMID: [18384553](#)

**Article Published Date** : Sep 01, 2008

**Authors** : A Damasiewicz-Bodzek, T Wielkoszyński

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Psoriasis : CK\(270\) : AC\(42\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[There is an increased frequency of gliadin antibodies in patients with Down syndrome, indicating the possibility of an increased incidence of celiac disease in this population.](#) - GMI Summary**

**Pubmed Data** : Eur J Pediatr. 1990 Sep;149(12):833-4. PMID: [2146127](#)

**Article Published Date** : Sep 01, 1990

**Authors** : W Storm

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Down Syndrome : CK\(50\) : AC\(5\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[There is evidence that intolerance to wheat \(measured by CD associated anti-endomysial antibodies\) may play a role in Graves' disease.](#) - GMI Summary**

**Pubmed Data** : Digestion. 1999 Jan-Feb;60(1):86-8. PMID: [9892805](#)

**Article Published Date** : Jan 01, 1999

**Authors** : A Carroccio, N Custro, G Montalto, L Giannitrapani, M Soresi, A Notarbartolo

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Graves Disease : CK\(93\) : AC\(9\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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### **[There was a 31% prevalence of RLS in the CD population that was significantly higher than the prevalence in the control population \(4%; P<0.001\). 6](#) - GMI Summary**

**Pubmed Data** : Mov Disord. 2010 May 15 ;25(7):877-81. PMID: [20461805](#)

**Article Published Date** : May 15, 2010

**Authors** : Marcello Moccia, Maria Teresa Pellicchia, Roberto Erro, Fabiana Zingone, Sara Marelli, Damiano Giuseppe Barone, Carolina Ciacci, Luigi Ferini Strambi, Paolo Barone

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Restless Legs Syndrome : CK\(91\) : AC\(8\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **Those with celiac disease may experience neurological damage as a result of the intolerance. - GMI Summary**

**Pubmed Data** : Gastroenterology. 2007 Jul ;133(1):195-206. Epub 2007 May 3. PMID: [17631142](#)

**Article Published Date** : Jul 01, 2007

**Authors** : Elisabetta Cervio, Umberto Volta, Manuela Verri, Federica Boschi, Ornella Pastoris, Alessandro Granito, Giovanni Barbara, Claudia Parisi, Cristina Felicani, Marcello Tonini, Roberto De Giorgio

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Pharmacological Actions** : [Apoptotic : CK\(1465\) : AC\(1099\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **Thyroid autoimmunity is associated with celiac disease in children. - GMI Summary**

**Pubmed Data** : J Pediatr. 2010 Feb;156(2):292-5. Epub 2009 Oct 20. PMID: [19846116](#)

**Article Published Date** : Feb 01, 2010

**Authors** : Alessandra Cassio, Giampaolo Ricci, Federico Baronio, Angela Miniaci, Milva Bal, Barbara Bigucci, Veronica Conti, Alessandro Cicognani

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#),

[Hypothyroidism : CK\(525\) : AC\(78\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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## **Unexplained infertility in women may be due to celiac disease. - GMI Summary**

**Pubmed Data** : Minerva Med. 2007 Jun;98(3):217-9. PMID: [17592443](#)

**Article Published Date** : Jun 01, 2007

**Authors** : R Pellicano, M Astegiano, M Bruno, S Fagoonee, M Rizzetto

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Infertility : CK\(443\) : AC\(94\)](#), [Infertility: Female : CK\(182\) : AC\(33\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Teratogenic : CK\(304\) : AC\(59\)](#)

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## **Unless diagnosis rates improve there will be about 600,000 celiac patients will die in the Mediterranean area in the next 10 years, with an excess of 44.4% vs age- and sex-matched controls. - GMI Summary**

**Pubmed Data** : World J Gastroenterol. 2011 Dec 7 ;17(45):4971-8. PMID: [22174546](#)

**Article Published Date** : Dec 07, 2011

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Additional Keywords** : [Celiac Prevalence : CK\(121\) : AC\(13\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Wheat gluten may exert its adverse effects through activation of complement (a cascade of proteins in the blood that form part of innate immunity). - GMI Summary**

**Pubmed Data** : Clin Exp Immunol. 1993 Dec;94(3):539-43. PMID: [8252813](#)

**Article Published Date** : Dec 01, 1993

**Authors** : D J Unsworth, R Würzner, D L Brown, P J Lachmann

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Acquired hypogammaglobulinemia : CK\(81\) : AC\(8\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Dermatitis Herpetiformis : CK\(40\) : AC\(4\)](#), [Hypogammaglobulinemia : CK\(10\) : AC\(1\)](#)

**Additional Keywords** : [Plant Extracts : CK\(3435\) : AC\(1172\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Anti-tissue transglutaminase antibodies from celiac patients are responsible for trophoblast damage associated with infertility.](#) - GMI Summary**

**Pubmed Data** : Am J Gastroenterol. 2010 Oct ;105(10):2254-61. Epub 2010 Jun 22. PMID: [20571491](#)

**Article Published Date** : Oct 01, 2010

**Authors** : Nicoletta Di Simone, Marco Silano, Roberta Castellani, Fiorella Di Nicuolo, Maria C D'Alessio, Francesco Franceschi, Alessandra Tritarelli, Antonio M Leone, Chiara Tersigni, Giovanni Gasbarrini, Nicolò G Silveri, Alessandro Caruso, Antonio Gasbarrini

**Study Type** : Human In Vitro

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Pharmacological Actions** : [Apoptotic : CK\(1465\) : AC\(1099\)](#)

**Additional Keywords** : [Apoptotic : CK\(1465\) : AC\(1099\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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### **[Ascorbate decreases mucosal inflammatory response to gluten and might play a role in future supplementary therapy in CD](#) - GMI Summary**

**Pubmed Data** : Allergol Immunopathol (Madr). 2012 Jan-Feb;40(1):3-8. Epub 2011 Mar 21. PMID: [21420224.1](#)

**Article Published Date** : Dec 31, 2011

**Authors** : D Bernardo, B Martínez-Abad, S Vallejo-Diez, E Montalvillo, V Benito, B Anta, L Fernández-Salazar, A Blanco-Quirós, J A Garrote, E Arranz

**Study Type** : Human In Vitro

**Additional Links**

**Substances** : [Vitamin C : CK\(1226\) : AC\(238\)](#)

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[Leukocyte migration was inhibited by the wheat-derived peptides in celiac patients.](#) - GMI Summary**

**Pubmed Data** : Neuropeptides. 1987 Feb-Mar;9(2):113-22. PMID: [3033541](#)

**Article Published Date** : Feb 01, 1987

**Authors** : L Graf, K Horvath, E Walcz, I Berzetei, J Burnier

**Study Type** : Human In Vitro

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Immune Disorders: Low Immune Function : CK\(488\) : AC\(115\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunosuppressive : CK\(143\) : AC\(23\)](#)

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### **[A Glutenfree diet improves osteogenesis imperfecta associated with celiac disease and type II diabetes](#) - GMI Summary**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Case Report Med. 2012 ;2012:813461. Epub 2012 Mar 5. PMID: [22481956](#)

**Article Published Date** : Dec 31, 2011

**Authors** : Luis Rodrigo, Isabel Pérez-Martinez

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 2 : CK\(3229\) : AC\(328\)](#)



[Diarrhea : CK\(549\) : AC\(72\)](#), [Osteogenesis Imperfecta : CK\(3\) : AC\(1\)](#)

**Therapeutic Actions :** [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords :** [Multiple Fractures : CK\(3\) : AC\(1\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Benign neuromyelitis optica has been linked to celiac disease.](#) - GMI Summary**

**Pubmed Data :** J Neurol. 2009 Aug 18. Epub 2009 Aug 18. PMID: [21473007](#)

**Article Published Date :** Aug 18, 2009

**Authors :** R Bergamaschi, S Jarius, M Robotti, A Pichiecchio, B Wildemann, G Meola

**Study Type :** Human: Case Report

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Neuromyelitis Optica : CK\(4\) : AC\(2\)](#)

**Problem Substances :** [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Calcium, Vitamin D and a Gluten-Free diet decreased bone pain and improved muscle strength.](#) - GMI Summary**

**Article Publish Status :** This is a free article. [Click here to read the entire article.](#)

**Pubmed Data :** Arch Osteoporos. 2011 Dec ;6(1-2):209-213. Epub 2011 Jun 15. PMID: [22207878](#)

**Article Published Date :** Dec 01, 2011

**Authors :** Noortje M Rabelink, Hans M Westgeest, Nathalie Bravenboer, Maarten A J M Jacobs, Paul Lips

**Study Type :** Human: Case Report

**Additional Links**

**Substances :** [Calcium : CK\(232\) : AC\(35\)](#), [Vitamin D : CK\(1640\) : AC\(238\)](#)

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Osteomalacia : CK\(37\) : AC\(5\)](#), [Osteoporosis : CK\(1136\) : AC\(205\)](#)

**Therapeutic Actions :** [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[CD: GFD provides drug free control of seizures and helps correct other features of malabsorption like hypocalcaemia and anaemia](#) - GMI Summary**

**Pubmed Data :** J Assoc Physicians India. 2010 Aug ;58:512-5. PMID: [21189704](#)

**Article Published Date :** Jul 31, 2010

**Authors :** Vashishth P Maniar, Sameer S Yadav, Yojana A Gokhale

**Study Type :** Human: Case Report

**Additional Links**

**Diseases :** [Anemia : CK\(89\) : AC\(12\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Hypocalcemia : CK\(7\) : AC\(3\)](#), [Seizures : CK\(122\) : AC\(28\)](#)

**Therapeutic Actions :** [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords :** [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Celiac disease and autoimmune pancreatitis: a case report.](#) - GMI Summary**

**Pubmed Data :** Eur J Gastroenterol Hepatol. 2011 Nov ;23(12):1270-2. PMID: [21946127](#)

**Article Published Date :** Oct 31, 2011

**Authors :** Ibrahim Masoodi, Hamidullah Wani, Khalid Alsayari, Tarek Sulaiman, Nadeem Syed Hassan, Adel Nazmi Alqutub, Ahmed Al Omair, Abed H Al-Lehibi

**Study Type :** Human: Case Report

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Pancreatitis : CK\(163\) : AC\(40\)](#)

**Additional Keywords :** [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions :** [Inflammatory : CK\(150\) : AC\(37\)](#)

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### **[Celiac disease and migraine disorders may be linked.](#) - GMI Summary**

**Pubmed Data :** Headache. 1998 Sep;38(8):627-8. PMID: [11398309](#)

**Article Published Date :** Sep 01, 1998

**Authors** : J Serratrice, P Disdier, C de Roux, C Christides, P J Weiller

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Celiac disease can be associated with cerebral venous thrombosis.](#) - GMI Summary**

**Pubmed Data** : J Mal Vasc. 2005 Sep;30(4 Pt 1):228-30. PMID: [16292200](#)

**Article Published Date** : Sep 01, 2005

**Authors** : M Bahloul, A Chaari, N Khlaf-Bouaziz, H Kallel, L Chaari, C Ben Hamida, H Chelly, N Rekik, M Bouaziz

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Stroke : CK\(540\) : AC\(47\)](#), [Thrombosis : CK\(657\) : AC\(74\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Celiac disease presenting as severe osteopenia has been reported.](#) - GMI Summary**

**Pubmed Data** : Hawaii Med J. 2011 Nov ;70(11):242-4. PMID: [22162604](#)

**Article Published Date** : Nov 01, 2011

**Authors** : Christopher J Mulder, Anthony P Cardile, Judith Dickert

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Osteopenia : CK\(207\) : AC\(41\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Celiac disease with multiple foci of calcification in the spleen has been reported.](#) - GMI Summary**

**Pubmed Data** : Indian J Pediatr. 2010 Dec 3. Epub 2010 Dec 3. PMID: [21128017](#)

**Article Published Date** : Dec 03, 2010

**Authors** : Anu Maheshwari, Satinder Aneja, Praveen Kumar, Shreshtha Banga

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Ectopic Calcification : CK\(792\) : AC\(113\)](#), [Splenic Calcifications : CK\(3\) : AC\(1\)](#), [Splenic Diseases : CK\(15\) : AC\(3\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Celiac disease, eosinophilic esophagitis, and immediate-type immunoglobulin E-mediated food allergy.](#) - GMI Summary**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : J Investig Allergol Clin Immunol. 2011 ;21(1):73-5. PMID: [21370728](#)

**Article Published Date** : Dec 31, 2010

**Authors** : S Sánchez-García, M D Ibáñez, M J Martínez-Gómez, C Escudero, A Vereda, M Fernández-Rodríguez, P Rodríguez del Río

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Eosinophilic esophagitis : CK\(66\) : AC\(5\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [Food Allergy: Immunoglobulin E-mediated : CK\(3\) : AC\(1\)](#), [Urticaria : CK\(130\) : AC\(8\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Deep vein thrombosis risk has been associated with celiac disease.](#) - GMI Summary**

**Pubmed Data** : Bratisl Lek Listy. 2009;110(4):263-4. PMID: [19507658](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Esin Beyan, Merve Pamukcuoglu, Cengiz Beyan

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Epilepsy with cerebral calcifications poorly responsive to antiepileptic treatment have been reported significantly improved with folic acid and a gluten-free diet.](#) - GMI Summary**

**Pubmed Data** : Acta Paediatr Scand. 1991 May;80(5):559-62. PMID: [1908173](#)

**Article Published Date** : May 01, 1991

**Authors** : A Ventura, F Bouquet, C Sartorelli, E Barbi, G Torre, G Tommasini

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cerebral Calcifications : CK\(13\) : AC\(2\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#), [Epilepsy: With Cerebral Calcifications : CK\(24\) : AC\(3\)](#), [Folic Acid/Folate Deficiency : CK\(13\) : AC\(2\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Gluten sensitivity has been mistaken for Systemic Lupus Erythematosus.](#) - GMI Summary**

**Pubmed Data** : Ann Rheum Dis. 2004 Nov ;63(11):1501-3. PMID: [15479903](#)

**Article Published Date** : Nov 01, 2004

**Authors** : M Hadjivassiliou, D S Sanders, R A Grünewald, M Akil

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Systemic Lupus Erythematosus : CK\(387\) : AC\(54\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Gluten-free diet effective in celiac disease related uveitis](#) - GMI Summary**

**Pubmed Data** : Rheumatol Int. 2011 Mar ;31(3):399-402. Epub 2009 Oct 14. PMID: [19826819](#)

**Article Published Date** : Feb 28, 2011

**Authors** : Karin Klack, Rosa Maria Rodrigues Pereira, Jozélio Freire de Carvalho

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Uveitis : CK\(63\) : AC\(9\)](#)

**Additional Keywords** : [Uveitis : CK\(63\) : AC\(9\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Hyperamylasemia due to macroamylasemia in adult gluten enteropathy has been reported.](#) - GMI Summary**

**Pubmed Data** : Scand J Clin Lab Invest. 1997 May ;57(3):271-3. PMID: [9238763](#)

**Article Published Date** : May 01, 1997

**Authors** : G Bonetti, G Serricchio, A Giudici, M Bettonagli, G B Vadacca, R Bruno, E Coslovich, R Moratti

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Hyperamylasemia : CK\(3\) : AC\(1\)](#), [Macroamylasemia : CK\(19\) : AC\(1\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[IgA, intestinal biopsy point to link between cold urticaria and celiac disease in high-risk HLA types](#) - GMI Summary**

**Pubmed Data** : J Investig Allergol Clin Immunol. 2008 ;18(2):123-5. PMID: [18447142](#)

**Article Published Date** : Dec 31, 2007

**Authors** : M Pedrosa Delgado, F Martín Muñoz, I Polanco Allué, M Martín Esteban

**Study Type** : Human: Case Report

**Additional Links**

**Substances** : [Dietary Modification: Wheat/Gluten Free : CK\(3\) : AC\(1\)](#)

**Diseases** : [Asthma : CK\(857\) : AC\(134\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Urticaria : CK\(130\) : AC\(8\)](#)

**Additional Keywords** : [Urticaria : CK\(130\) : AC\(8\)](#), [Urticaria : CK\(130\) : AC\(8\)](#), [Urticaria : CK\(130\) : AC\(8\)](#), [Urticaria : CK\(130\) : AC\(8\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Regression of conjunctival tumor in celiac disease patient attributed to glutenfree diet.](#) - GMI Summary**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Indian J Ophthalmol. 2010 Sep-Oct;58(5):433-4. PMID: [20689203](#)

**Article Published Date** : Aug 31, 2010

**Authors** : Samuray Tuncer, Baris Yeniad, Gonul Peksayar

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Conjunctival Tumor : CK\(3\) : AC\(1\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#), [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#), [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#), [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Renal complications can occur as a result of celiac disease.](#) - GMI Summary**

**Pubmed Data** : Indian J Pediatr. 2011 Jul 9. Epub 2011 Jul 9. PMID: [21744127](#)

**Article Published Date** : Jul 09, 2011

**Authors** : Mukta Mantan, Dhulika Dhingra, Gulshan Rai Sethi

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Kidney Diseases : CK\(424\) : AC\(71\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[A rhesus monkey model of gluten sensitivity for histopathology of CD, intestinal permeability, and states of epithelial integrity and disrepair.](#) - GMI Summary**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : PLoS One. 2010 ;5(4):e10228. Epub 2010 Apr 19. PMID: [20419103](#)

**Article Published Date** : Dec 31, 2009

**Authors** : Kaushiki Mazumdar, Xavier Alvarez, Juan T Borda, Jason Dufour, Edith Martin, Michael T Bethune, Chaitan Khosla, Karol Sestak

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Dietary cereals contribute to intestinal permeability in experimental enteropathy in rats.](#) - GMI Summary**

**Pubmed Data** : Gut. 1983 Sep ;24(9):825-30. PMID: [6411526](#)

**Article Published Date** : Sep 01, 1983

**Authors** : J S Sandhu, D R Fraser

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Drug Toxicity: Methotrexate : CK\(30\) : AC\(13\)](#), [Intestinal Permeability : CK\(263\) : AC\(56\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#), [Grains : CK\(27\) : AC\(8\)](#)

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## **[Gliadin triggered insulinitis in type 1 diabetes associated with celiac disease - GMI Summary](#)**

**Article Publish Status :** This is a free article. [Click here to read the entire article.](#)

**Pubmed Data :** J Immunol. 2011 Oct 15 ;187(8):4338-46. Epub 2011 Sep 12. PMID: [21911598](#)

**Article Published Date :** Oct 14, 2011

**Authors :** Heather J Galipeau, Nestor E Rulli, Jennifer Jury, Xianxi Huang, Romina Araya, Joseph A Murray, Chella S David, Fernando G Chirido, Kathy D McCoy, Elena F Verdu

**Study Type :** Animal Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Enteropathy : CK\(28\) : AC\(4\)](#), [Insulinitis : CK\(2\) : AC\(1\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#)

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## **[Primates exhibit gluten sensitivity. - GMI Summary](#)**

**Pubmed Data :** PLoS One. 2008;3(2):e1614. Epub 2008 Feb 20. PMID: [18286171](#)

**Article Published Date :** Jan 01, 2008

**Authors :** Michael T Bethune, Juan T Borda, Erin Ribka, Michael-Xun Liu, Kathrine Phillippi-Falkenstein, Ronald J Jandacek, Gaby G M Doxiadis, Gary M Gray, Chaitan Khosla, Karol Sestak

**Study Type :** Animal Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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## **[Retinoic Acid \(a Vitamin A metabolite\) in conjunction with IL-15 promotes rather than prevents Inflammation in Celiacs - GMI Summary](#)**

**Article Publish Status :** This is a free article. [Click here to read the entire article.](#)

**Pubmed Data :** Nature. 2011 Mar 10 ;471(7337):220-4. Epub 2011 Feb 9. PMID: [21307853](#)

**Article Published Date :** Mar 09, 2011

**Authors :** R W DePaolo, V Abadie, F Tang, H Fehlner-Peach, J A Hall, W Wang, E V Marietta, D D Kasarda, T A Waldmann, J A Murray, C Semrad, S S Kupfer, Y Belkaid, S Guandalini, B Jabri

**Study Type :** Transgenic Animal Study

**Additional Links**

**Substances :** [Vitamin A : CK\(371\) : AC\(58\)](#)

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Additional Keywords :** [Celiac Disease : CK\(4\) : AC\(2\)](#), [HLA-DQ2/DQ8 : CK\(24\) : AC\(5\)](#), [IL-15 : CK\(4\) : AC\(2\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions :** [Inflammatory : CK\(150\) : AC\(37\)](#)

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## **[Because anti-gliadin antibodies bind to neuronal synapsin I it is possible that molecular mimicry and antibody cross-reactivity are responsible for neurological symptoms associated with gluten sensitivity. - GMI Summary](#)**

**Pubmed Data :** J Immunol. 2007 May 15 ;178(10):6590-5. PMID: [17475890](#)

**Article Published Date :** May 15, 2007

**Authors :** Armin Alaedini, Haruka Okamoto, Chiara Briani, Kurt Wollenberg, Holly A Shill, Khalafalla O Bushara, Howard W Sander, Peter H R Green, Mark Hallett, Norman Latov

**Study Type :** Review

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords :** [Anti-Gliadin Antibodies : CK\(71\) : AC\(8\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions :** [Immunoreactive : CK\(127\) : AC\(17\)](#)

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## **[Celiac disease is diagnosed in 1 in 100-200 individuals, but still only one in four](#)**

## **[cases is diagnosed.](#) - GMI Summary**

**Pubmed Data** : Eur J Pediatr. 2012 Mar 16. Epub 2012 Mar 16. PMID: [22422192](#)

**Article Published Date** : Mar 16, 2012

**Authors** : C M Frank Kneepkens, B Mary E von Blomberg

**Study Type** : Review

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Additional Keywords** : [Celiac Prevalence : CK\(121\) : AC\(13\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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## **[Celiac disease should be ruled out in the differential diagnosis of neurological dysfunction of unknown cause, including ataxia, epilepsy and dementia.](#) - GMI Summary**

**Pubmed Data** : Arq Neuropsiquiatr. 2004 Dec ;62(4):969-72. Epub 2004 Dec 15. PMID: [15608953](#)

**Article Published Date** : Dec 01, 2004

**Authors** : José Ibiapina Siqueira Neto, Ana Carolina Leite Vieira Costa, Francisco George Magalhães, Gisele Sampaio Silva

**Study Type** : Review

**Additional Links**

**Diseases** : [Ataxia : CK\(96\) : AC\(14\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Dementia : CK\(225\) : AC\(31\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **[Celiac disease: strong association to HLA and 39 nonHLA risk genes, mostly immune-related](#) - GMI Summary**

**Pubmed Data** : Trends Mol Med. 2010 Nov ;16(11):537-50. Epub 2010 Oct 12. PMID: [20947431](#)

**Article Published Date** : Oct 31, 2010

**Authors** : Gosia Trynka, Cisca Wijmenga, David A van Heel

**Study Type** : Review

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#), [HLA-DQ2/DQ8 : CK\(24\) : AC\(5\)](#), [HLA-DQ2/DQ8 : CK\(24\) : AC\(5\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **[Diarrhoea due to coeliac disease may be mistakenly diagnosed as 'diabetic diarrhoea.'](#) - GMI Summary**

**Pubmed Data** : Q J Med. 1978 Jan ;47(185):89-100. PMID: [674552](#)

**Article Published Date** : Jan 01, 1978

**Authors** : C H Walsh, B T Cooper, A D Wright, J M Malins, W T Cooke

**Study Type** : Review

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **[GFD beneficial in HLA-related celiac disease with epilepsy and cerebral calcifications](#) - GMI Summary**

**Pubmed Data** : Brain Dev. 2005 Apr ;27(3):189-200. PMID: [15737700](#)

**Article Published Date** : Mar 31, 2005

**Authors** : Giuseppe Gobbi

**Study Type** : Review

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Epilepsy: With Cerebral Calcifications : CK\(24\) : AC\(3\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords :** [HLA-DQ2/DQ8 : CK\(24\) : AC\(5\)](#), [HLA-DQ2/DQ8 : CK\(24\) : AC\(5\)](#)  
**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Gluten contaminates 23.8% of the supplements tested. - GMI Summary](#)**

**Pubmed Data :** Roum Arch Microbiol Immunol. 2011 Oct-Dec;70(4):174-7. PMID: [22568265](#)

**Article Published Date :** Oct 01, 2011

**Authors :** Simona Oancea, Adriana Wagner, Elena Cîrstea, Mirela Sima

**Study Type :** Review

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Additional Keywords :** [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Glutenfree diet still recommended response to celiac disease; new approaches under investigation. - GMI Summary](#)**

**Pubmed Data :** Aliment Pharmacol Ther. 2012 Apr ;35(7):768-81. Epub 2012 Feb 13. PMID: [22324389](#)

**Article Published Date :** Mar 31, 2012

**Authors :** S Rashtak, J A Murray

**Study Type :** Review

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Therapeutic Actions :** [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords :** [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Identification of gluten fractions and derived peptides involved in wheat allergy and intolerance, including celiac disease - GMI Summary](#)**

**Pubmed Data :** Expert Rev Proteomics. 2011 Feb ;8(1):95-115. PMID: [21329430](#)

**Article Published Date :** Jan 31, 2011

**Authors :** Gianfranco Mamone, Gianluca Picariello, Francesco Addeo, Pasquale Ferranti

**Study Type :** Review

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords :** [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances :** [Barley : CK\(13\) : AC\(3\)](#), [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Rye : CK\(12\) : AC\(3\)](#)

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### **[Methods for detecting trace amounts of gluten proteins in gluten-free foods for celiac disease patients - GMI Summary](#)**

**Pubmed Data :** J Mass Spectrom. 2007 Dec ;42(12):1531-48. PMID: [18085572](#)

**Article Published Date :** Nov 30, 2007

**Authors :** Pasquale Ferranti, Gianfranco Mamone, Gianluca Picariello, Francesco Addeo

**Study Type :** Review

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Additional Keywords :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[Recognizing women with unexplained infertility and previous adverse pregnancy outcomes as at risk of celiac disease. - GMI Summary](#)**

**Pubmed Data :** Womens Health (Lond Engl). 2010 Sep ;6(5):753-66. PMID: [20887172](#)

**Article Published Date :** Aug 31, 2010

**Authors :** Sveta Shah, Daniel Leffler

**Study Type :** Review

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Infertility : CK\(443\) : AC\(94\)](#)  
**Additional Keywords** : [Enteropathy : CK\(3\) : AC\(2\)](#)  
**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Recurrent miscarriages may be due to undiagnosed celiac disease.](#) - GMI Summary**

**Pubmed Data** : Recent Prog Med. 2000 Feb;91(2):72-5. PMID: [10748651](#)

**Article Published Date** : Feb 01, 2000

**Authors** : P Caramaschi, D Biasi, A Carletto, M Randon, M L Pacor, L M Bambara

**Study Type** : Review

#### **Additional Links**

**Diseases** : [Abortion: Spontaneous : CK\(204\) : AC\(29\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Miscarriage : CK\(516\) : AC\(35\)](#), [Miscarriage: Recurrent : CK\(21\) : AC\(3\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Teratogenic : CK\(304\) : AC\(59\)](#)

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### **[Review: parallels between pathogens and gluten peptides in celiac sprue.](#) - GMI Summary**

**Pubmed Data** : PLoS Pathog. 2008 Feb;4(2):e34. PMID: [18425213](#)

**Article Published Date** : Feb 01, 2008

**Authors** : Michael T Bethune, Chaitan Khosla

**Study Type** : Review

#### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Additional Keywords** : [Wheat Intolerance Analogy to Infection : CK\(1\) : AC\(1\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[The effect of gliadin on lymphocytes from patients with celiac disease may be mediated through opioid-like receptors.](#) - GMI Summary**

**Pubmed Data** : Lancet. 1985 Jul 27;2(8448):184-5. PMID: [2862373](#)

**Article Published Date** : Jul 27, 1985

**Authors** : K Horváth, L Gráf, E Walcz, H Bodánszky, D Schuler

**Study Type** : Commentary

#### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[There are neurologic and psychiatric manifestations to gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : Psychiatr Q. 2011 Aug 30. Epub 2011 Aug 30. PMID: [21877216](#)

**Article Published Date** : Aug 30, 2011

**Authors** : Jessica R Jackson, William W Eaton, Nicola G Cascella, Alessio Fasano, Deanna L Kelly

**Study Type** : Review

#### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Psychiatric Disorders : CK\(71\) : AC\(10\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Wheat germ agglutinin \(WGA\) may be involved in the pathogenesis of celiac disease.](#) - GMI Summary**

**Pubmed Data** : Clin Exp Immunol. 1986 Jan;63(1):95-100. PMID: [3754186](#)

**Article Published Date** : Jan 01, 1986

**Authors** : L M Sollid, J Kolberg, H Scott, J Ek, O Fausa, P Brandtzaeg

**Study Type** : Commentary



### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Additional Keywords** : [Lectins : CK\(58\) : AC\(36\)](#)

**Problem Substances** : [Lectins : CK\(35\) : AC\(27\)](#), [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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### **Wheat germ agglutinin (WGA) may be responsible for the crypt hyperplasia found in celiac children due to a mitogenic response induced by wheat germ agglutinin (WGA). - GMI Summary**

**Pubmed Data** : [Pediatr Allergy Immunol. 1995 May;6\(2\):98-102. PMID: 7581728](#)

**Article Published Date** : May 01, 1995

**Authors** : K Fälth-Magnusson, K E Magnusson

**Study Type** : Commentary

### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Lectin-Induced Toxicity : CK\(5\) : AC\(4\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#), [Epidermal Growth Factor Mimetic : CK\(1\) : AC\(1\)](#)

**Problem Substances** : [Lectins : CK\(35\) : AC\(27\)](#), [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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### **Wheat gliadin exhibits non-specific cytotoxicity to a variety of human cells. - GMI Summary**

**Pubmed Data** : [Lancet. 1976 Feb 14;1\(7955\):339-41. PMID: 54743](#)

**Article Published Date** : Feb 14, 1976

**Authors** : D A Hudson, H J Cornell, D R Purdham, C J Rolles

**Study Type** : In Vitro Study

### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Lectins : CK\(58\) : AC\(36\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Cytotoxic : CK\(68\) : AC\(35\)](#)

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### **Wheat lectin may be responsible for aggravating celiac disease through secondary intolerances, as well as the occurrence of intestinal lesions in healthy subjects administered high levels of gluten. - GMI Summary**

**Pubmed Data** : [J Pediatr Gastroenterol Nutr. 1985 Dec;4\(6\):923-30. PMID: 3906076](#)

**Article Published Date** : Dec 01, 1985

**Authors** : S Auricchio, G De Ritis, M De Vincenzi, V Silano

**Study Type** : Commentary

### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Lectins : CK\(58\) : AC\(36\)](#)

**Problem Substances** : [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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### **Wheat, rye, and barley proteins may act as aids to carcinogens. - GMI Summary**

**Pubmed Data** : [Med Hypotheses. 1997 Sep;49\(3\):285-8. PMID: 9293475](#)

**Article Published Date** : Sep 01, 1997

**Authors** : R Hoggan

**Study Type** : Commentary

### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [HPA Axis Dysregulation : CK\(69\) : AC\(11\)](#), [Intestinal Permeability : CK\(263\) : AC\(56\)](#), [Lymphoma : CK\(225\) : AC\(68\)](#)

**Problem Substances** : [Barley : CK\(13\) : AC\(3\)](#), [Gluten exorphins : CK\(26\) : AC\(10\)](#), [Grains : CK\(27\) : AC\(8\)](#), [Rye : CK\(12\) : AC\(3\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Topic: Wheat Intolerance**

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## **Recurrent miscarriages may occur due to undiagnosed celiac disease, and may resolve after a gluten-free diet. - GMI Summary**

**Pubmed Data** : Dig Dis Sci. 2008 Nov;53(11):2925-8. Epub 2008 Mar 27. PMID: [18368491](#)

**Article Published Date** : Nov 01, 2008

**Authors** : Antonio Tursi, Gianmarco Giorgetti, Giovanni Brandimarte, Walter Elisei

**Study Type** : Meta Analysis

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Teratogenic : CK\(304\) : AC\(59\)](#)

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## **A Gluten-free diet in psoriasis patients with antibodies to gliadin results in significant clinical improvements. - GMI Summary**

**Pubmed Data** : Acta Derm Venereol. 2003;83(6):425-9. PMID: [14690336](#)

**Article Published Date** : Jan 01, 2003

**Authors** : Gerd Michaëlsson, Stina Ahs, Ingrid Hammarström, Inger Pihl Lundin, Eva Hagforsen

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Psoriasis : CK\(270\) : AC\(42\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Anti-Gliadin Antibodies : CK\(71\) : AC\(8\)](#), [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **A significant proportion of patients with migraine may have celiac disease, and that a gluten free diet may lead to a improvement in the migraine in these patients. - GMI Summary**

**Pubmed Data** : Am J Gastroenterol. 2003 Mar;98(3):625-9. PMID: [12650798](#)

**Article Published Date** : Mar 01, 2003

**Authors** : Maurizio Gabrielli, Filippo Cremonini, Giuseppe Fiore, Giovanni Addolorato, Cristiano Padalino, Marcello Candelli, Maria Elena De Leo, Luca Santarelli, Mario Giacobozzo, Antonio Gasbarrini, Paolo Pola, Antonio Gasbarrini

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Migraine Disorders : CK\(455\) : AC\(54\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Celiac disease is markedly overrepresented among patients presenting with ADHD. - GMI Summary**

**Pubmed Data** : Prim Care Companion CNS Disord. 2011 ;13(3). PMID: [21977364](#)

**Article Published Date** : Jan 01, 2011

**Authors** : Helmut Niederhofer

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Attention Deficit Hyperactivity Disorder : CK\(160\) : AC\(14\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Celiac disease should be considered among the differential diagnoses in a patient with poly-arthritis. - GMI Summary**

**Pubmed Data** : Reumatol Clin. 2011 Jan-Feb;7(1):27-9. Epub 2010 Jun 23. PMID: [21794776](#)

**Article Published Date** : Jan 01, 2011

**Authors** : José Dionisio Castillo-Ortiz, Sergio Durán-Barragán, Adriana Sánchez-Ortíz, Cesar Ramos-Remus

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Polyarthritis : CK\(134\) : AC\(1\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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**[Children with autism show elevations against gliadin \(wheat protein\) and cerebellar proteins simultaneously. These proteins simulate antibodies that may cross-react, resulting in neurological damage. - GMI Summary](#)**

**Pubmed Data** : Nutr Neurosci. 2004 Jun;7(3):151-61. PMID: [15526989](#)

**Article Published Date** : Jun 01, 2004

**Authors** : A Vojdani, T O'Bryan, J A Green, J Mccandless, K N Woeller, E Vojdani, A A Nourian, E L Cooper

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autism : CK\(1340\) : AC\(65\)](#), [Autism Spectrum Disorders : CK\(1118\) : AC\(108\)](#), [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Molecular Mimicry : CK\(47\) : AC\(10\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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**[Elevated IgA antibodies to gluten and gliadin proteins and to casein in milk have been found in patients with Rett syndrome. - GMI Summary](#)**

**Pubmed Data** : Autism. 2006 Mar;10(2):189-97. PMID: [16613867](#)

**Article Published Date** : Mar 01, 2006

**Authors** : K L Reichelt, O Skjeldal

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Casein Intolerance : CK\(44\) : AC\(7\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Rett Syndrome : CK\(20\) : AC\(2\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Casein : CK\(123\) : AC\(16\)](#), [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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**[Gluten causes gastrointestinal symptoms in subjects without celiac disease. - GMI Summary](#)**

**Pubmed Data** : Am J Gastroenterol. 2011 Jan 11. Epub 2011 Jan 11. PMID: [21224837](#)

**Article Published Date** : Jan 11, 2011

**Authors** : Jessica R Biesiekierski, Evan D Newnham, Peter M Irving, Jacqueline S Barrett, Melissa Haines, James D Doecke, Susan J Shepherd, Jane G Muir, Peter R Gibson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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**[Multiple myeloma patients exhibit humoral immunoreactivity to gliadin and to tissue transglutaminase, not unlike those with celiac disease. - GMI Summary](#)**

**Pubmed Data** : BMC Immunol. 2008;9:22. Epub 2008 May 28. PMID: [18507842](#)

**Article Published Date** : Jan 01, 2008

**Authors** : [No authors listed]

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Multiple Myeloma : CK\(146\) : AC\(53\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)  
**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **[Myopathy associated with gluten sensitivity has been demonstrated.](#) - GMI Summary**

**Pubmed Data** : Muscle Nerve. 2007 Apr;35(4):443-50. PMID: [17143894](#)

**Article Published Date** : Apr 01, 2007

**Authors** : Marios Hadjivassiliou, Arup K Chattopadhyay, Richard A Grünewald, John A Jarratt, Rosalind H Kandler, D G Rao, D S Sanders, S B Wharton, G A B Davies-Jones

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Myopathies : CK\(241\) : AC\(51\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Neurological symptoms occur in 6-10% of those with celiac disease, with cerebella ataxia being the most frequent symptom.](#) - GMI Summary**

**Pubmed Data** : Mov Disord. 2009 Dec 15;24(16):2358-62. PMID: [19845007](#)

**Article Published Date** : Dec 15, 2009

**Authors** : Katrin Bürk, Marie-Louise Farecki, Georg Lamprecht, Guenter Roth, Patrice Decker, Michael Weller, Hans-Georg Rammensee, Wolfgang Oertel

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Carpal Tunnel Syndrome : CK\(80\) : AC\(8\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cerebellar Ataxia : CK\(36\) : AC\(4\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Migraine Disorders : CK\(455\) : AC\(54\)](#), [Psychiatric Disorders : CK\(71\) : AC\(10\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Patients with multiple myeloma have immunoreactivity to gliadin similar to those with celiac disease.](#) - GMI Summary**

**Pubmed Data** : BMC Immunol. 2009;10:32. Epub 2009 May 31. PMID: [19480718](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Aleksandra Konic-Ristic, Dejan Dodig, Radmilo Krstic, Svetislav Jelic, Ivan Stankovic, Aleksandra Ninkovic, Jelena Radic, Irina Besu, Branka Bonaci-Nikolic, Njegica Jojic, Milica Djordjevic, Dragan Popovic, Zorica Juranic

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Multiple Myeloma : CK\(146\) : AC\(53\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Differences in Immunoreactivity Within Different Wheat Cultivars : CK\(11\) : AC\(2\)](#), [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **[Persons with schizophrenia have higher than expected titers of antibodies related to celiac disease and gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : Schizophr Bull. 2011 Jan;37(1):94-100. Epub 2009 Jun 3. PMID: [19494248](#)

**Article Published Date** : Jan 01, 2011

**Authors** : Nicola G Cascella, Debra Kryszak, Bushra Bhatti, Patricia Gregory, Deanna L Kelly, Joseph P Mc Evoy, Alessio Fasano, William W Eaton

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Schizophrenia : CK\(247\) : AC\(29\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions :** [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Sensory ganglionopathy may be a manifestation of gluten sensitivity.](#) - GMI Summary**

**Pubmed Data :** Neurology. 2010 Sep 14;75(11):1003-8. PMID: [20837968](#)

**Article Published Date :** Sep 14, 2010

**Authors :** M Hadjivassiliou, D G Rao, S B Wharton, D S Sanders, R A Grünewald, A G B Davies-Jones

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Peripheral Neuropathies : CK\(454\) : AC\(31\)](#), [Sensory Neuropathies : CK\(10\) : AC\(1\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions :** [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[The involvement of wheat intolerance in multiple sclerosis may be as high as 12% of patients.](#) - GMI Summary**

**Pubmed Data :** Neurology. 2004 Jun 22;62(12):2326-7. PMID: [15210909](#)

**Article Published Date :** Jun 22, 2004

**Authors :** Connie D S N A Pengiran Tengah, Robert J Lock, D Joseph Unsworth, Adrian J Wills

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Multiple Sclerosis : CK\(716\) : AC\(133\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[The majority of patients with Meniere's disease tested \(56.9%\) are sensitive to gliadin, as measured by a skin prick test.](#) - GMI Summary**

**Pubmed Data :** Laryngoscope. 2011 Dec 6. Epub 2011 Dec 6. PMID: [22253033](#)

**Article Published Date :** Dec 06, 2011

**Authors :** Federica Di Berardino, Antonio Cesarani

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Meniere's Disease : CK\(288\) : AC\(5\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[There is a prevalence of IgA-antigliadin antibodies and IgA-antiendomysium antibodies related to celiac disease in children with Down syndrome.](#) - GMI Summary**

**Pubmed Data :** Pediatrics. 1998 Feb;101(2):272-5. PMID: [9445503](#)

**Article Published Date :** Feb 01, 1998

**Authors :** A Carlsson, I Axelsson, S Borulf, A Bredberg, M Forslund, B Lindberg, K Sjöberg, S A Ivarsson

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Down Syndrome : CK\(50\) : AC\(5\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords :** [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Unexplained infertility in women may be due to celiac disease.](#) - GMI Summary**

**Pubmed Data :** Minerva Med. 2007 Jun;98(3):217-9. PMID: [17592443](#)

**Article Published Date :** Jun 01, 2007

**Authors :** R Pellicano, M Astegiano, M Bruno, S Fagoonee, M Rizzetto

**Study Type :** Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Infertility : CK\(443\) : AC\(94\)](#), [Infertility: Female : CK\(182\) : AC\(33\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Teratogenic : CK\(304\) : AC\(59\)](#)

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### **[Wheat intolerance is a common causative factor in atopic dermatitis.](#) - GMI Summary**

**Pubmed Data** : Allergy. 2000 Apr;55(4):386-91. PMID: [10782525](#)

**Article Published Date** : Apr 01, 2000

**Authors** : E Varjonen, E Vainio, K Kalimo

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Atopic Dermatitis : CK\(667\) : AC\(80\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Allergenic : CK\(25\) : AC\(5\)](#)

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### **[Celiac disease presenting as severe osteopenia has been reported.](#) - GMI Summary**

**Pubmed Data** : Hawaii Med J. 2011 Nov ;70(11):242-4. PMID: [22162604](#)

**Article Published Date** : Nov 01, 2011

**Authors** : Christopher J Mulder, Anthony P Cardile, Judith Dickert

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Osteopenia : CK\(207\) : AC\(41\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Gluten sensitivity has been mistaken for Systemic Lupus Erythematosus.](#) - GMI Summary**

**Pubmed Data** : Ann Rheum Dis. 2004 Nov ;63(11):1501-3. PMID: [15479903](#)

**Article Published Date** : Nov 01, 2004

**Authors** : M Hadjivassiliou, D S Sanders, R A Grünewald, M Akil

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Systemic Lupus Erythematosus : CK\(387\) : AC\(54\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[CLA reduces gliadin-induced intestinal toxicity in an animal model.](#) - GMI Summary**

**Pubmed Data** : Mol Nutr Food Res. 2011 Sep ;55 Suppl 2:S248-56. Epub 2011 Aug 31. PMID: [21954188](#)

**Article Published Date** : Sep 01, 2011

**Authors** : Paolo Bergamo, Marta Gogliettino, Gianna Palmieri, Ennio Cocca, Francesco Maurano, Rosita Stefanile, Marco Balestrieri, Giuseppe Mazzarella, Chella David, Mauro Rossi

**Study Type** : Animal Study

**Additional Links**

**Substances** : [CLA \(Conjugated Linoleic Acid\) : CK\(71\) : AC\(27\)](#)

**Diseases** : [Gastrointestinal Inflammation : CK\(41\) : AC\(7\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[Because anti-gliadin antibodies bind to neuronal synapsin I it is possible that molecular mimicry and antibody cross-reactivity are responsible for neurological symptoms associated with gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : J Immunol. 2007 May 15 ;178(10):6590-5. PMID: [17475890](#)

**Article Published Date** : May 15, 2007

**Authors** : Armin Alaedini, Haruka Okamoto, Chiara Briani, Kurt Wollenberg, Holly A Shill, Khalafalla O Bushara, Howard W Sander, Peter H R Green, Mark Hallett, Norman Latov

**Study Type** : Review

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Anti-Gliadin Antibodies : CK\(71\) : AC\(8\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **[Identification of gluten fractions and derived peptides involved in wheat allergy and intolerance, including celiac disease - GMI Summary](#)**

**Pubmed Data** : Expert Rev Proteomics. 2011 Feb ;8(1):95-115. PMID: [21329430](#)

**Article Published Date** : Jan 31, 2011

**Authors** : Gianfranco Mamone, Gianluca Picariello, Francesco Addeo, Pasquale Ferranti

**Study Type** : Review

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Barley : CK\(13\) : AC\(3\)](#), [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Rye : CK\(12\) : AC\(3\)](#)

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### **[The habitual consumption of wheat gluten may be a contributing factor in the pathogenesis of type 1 diabetes. - GMI Summary](#)**

**Pubmed Data** : Med Hypotheses. 2007;68(3):607-19. Epub 2006 Oct 11. PMID: [17045415](#)

**Article Published Date** : Jan 01, 2007

**Authors** : William E Barbeau, Josep Bassaganya-Riera, Raquel Hontecillas

**Study Type** : Commentary

**Additional Links**

**Diseases** : [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Zonulin : CK\(15\) : AC\(5\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[There are neurologic and psychiatric manifestations to gluten sensitivity. - GMI Summary](#)**

**Pubmed Data** : Psychiatr Q. 2011 Aug 30. Epub 2011 Aug 30. PMID: [21877216](#)

**Article Published Date** : Aug 30, 2011

**Authors** : Jessica R Jackson, William W Eaton, Nicola G Cascella, Alessio Fasano, Deanna L Kelly

**Study Type** : Review

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Psychiatric Disorders : CK\(71\) : AC\(10\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Wheat gliadin exhibits non-specific cytotoxicity to a variety of human cells. - GMI Summary](#)**

**Pubmed Data** : Lancet. 1976 Feb 14;1(7955):339-41. PMID: [54743](#)

**Article Published Date** : Feb 14, 1976

**Authors** : D A Hudson, H J Cornell, D R Purdham, C J Rolles

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Wheat Intolerance](#)

: [CK\(2213\)](#) : [AC\(231\)](#)

**Additional Keywords** : [Lectins](#) : [CK\(58\)](#) : [AC\(36\)](#)

**Problem Substances** : [Gliadin](#) : [CK\(2369\)](#) : [AC\(104\)](#)

**Adverse Pharmacological Actions** : [Cytotoxic](#) : [CK\(68\)](#) : [AC\(35\)](#)

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### **[Wheat gliadin may promote its pro-allergenic effects by upregulation of interleukin-4 induced IgE production.](#) - GMI Summary**

**Pubmed Data** : Cytokine. 2003 Mar 21;21(6):270-80. PMID: [12824000](#)

**Article Published Date** : Mar 21, 2003

**Authors** : Bernard Dugas, Nathalie Dugas, Marc Conti, Alphonse Calenda, Paco Pino, Yolène Thomas, Dominique Mazier, Ioannis Vouldoukis

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Food Allergies: Wheat](#) : [CK\(366\)](#) : [AC\(47\)](#), [Wheat Intolerance](#) : [CK\(2213\)](#) : [AC\(231\)](#)

**Problem Substances** : [Gliadin](#) : [CK\(2369\)](#) : [AC\(104\)](#)

**Adverse Pharmacological Actions** : [Allergenic](#) : [CK\(25\)](#) : [AC\(5\)](#), [Inflammatory](#) : [CK\(150\)](#) : [AC\(37\)](#), [Interleukin-4 Up-Regulation](#) : [CK\(1\)](#) : [AC\(1\)](#)

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### **[Wheat lectin may be responsible for aggravating celiac disease through secondary intolerances, as well as the occurrence of intestinal lesions in healthy subjects administered high levels of gluten.](#) - GMI Summary**

**Pubmed Data** : J Pediatr Gastroenterol Nutr. 1985 Dec;4(6):923-30. PMID: [3906076](#)

**Article Published Date** : Dec 01, 1985

**Authors** : S Auricchio, G De Ritis, M De Vincenzi, V Silano

**Study Type** : Commentary

**Additional Links**

**Diseases** : [Celiac Disease](#) : [CK\(1393\)](#) : [AC\(185\)](#), [Wheat Intolerance](#) : [CK\(2213\)](#) : [AC\(231\)](#)

**Additional Keywords** : [Lectins](#) : [CK\(58\)](#) : [AC\(36\)](#)

**Problem Substances** : [Wheat Germ Agglutinin \(WGA\)](#) : [CK\(821\)](#) : [AC\(39\)](#)

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## **Topic: [Gluten Sensitivity](#)**

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### **[A high prevalence of gluten sensitivity is found in sporadic and hereditary cerebellar ataxia.](#) - GMI Summary**

**Pubmed Data** : Ann Neurol. 2001 Apr;49(4):540-3. PMID: [11310636](#)

**Article Published Date** : Apr 01, 2001

**Authors** : K O Bushara, S U Goebel, H Shill, L G Goldfarb, M Hallett

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Ataxia: Cerebellar](#) : [CK\(67\)](#) : [AC\(3\)](#), [Food Allergies](#) : [CK\(390\)](#) : [AC\(53\)](#), [Gluten Sensitivity](#) : [CK\(2319\)](#) : [AC\(246\)](#)

**Problem Substances** : [Gluten](#) : [CK\(1610\)](#) : [AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : [CK\(1064\)](#) : [AC\(179\)](#)

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### **[Collagenous enterocolitis represents a diffuse manifestation of gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : J Clin Gastroenterol. 1992 Jul ;15(1):45-51. PMID: [1500661](#)

**Article Published Date** : Jul 01, 1992

**Authors** : T M McCashland, J P Donovan, R S Strobach, J Linder, E M Quigley

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Colitis: Collagenous](#) : [CK\(20\)](#) : [AC\(1\)](#), [Gluten Sensitivity](#) : [CK\(2319\)](#) : [AC\(246\)](#)

**Problem Substances** : [Gluten](#) : [CK\(1610\)](#) : [AC\(131\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive](#) : [CK\(127\)](#) : [AC\(17\)](#), [Inflammatory](#) : [CK\(150\)](#) : [AC\(37\)](#)

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## **Elevated IgA rheumatoid factor may result from wheat consumption. - GMI Summary**

**Pubmed Data** : Acta Derm Venereol. 1995 Mar ;75(2):130-2. PMID: [7604641](#)

**Article Published Date** : Mar 01, 1995

**Authors** : M Sökjer, T Jónsson, S Bödvarsson, I Jónsdóttir, H Valdimarsson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [IgA rheumatoid factor: elevated : CK\(20\) : AC\(2\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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## **Gluten causes gastrointestinal symptoms in subjects without celiac disease. - GMI Summary**

**Pubmed Data** : Am J Gastroenterol. 2011 Jan 11. Epub 2011 Jan 11. PMID: [21224837](#)

**Article Published Date** : Jan 11, 2011

**Authors** : Jessica R Biesiekierski, Evan D Newnham, Peter M Irving, Jacqueline S Barrett, Melissa Haines, James D Doecke, Susan J Shepherd, Jane G Muir, Peter R Gibson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Gluten sensitivity has been defined as an abnormal non-allergic sensibility to gluten. - GMI Summary**

**Pubmed Data** : Pediatr Med Chir. 2010 Sep-Oct;32(5):211-5. PMID: [21174642](#)

**Article Published Date** : Sep 01, 2010

**Authors** : G M Tronconi, B Parma, G Barera

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **Gluten sensitivity is a clinically confirmed problem in multiple sclerosis. - GMI Summary**

**Pubmed Data** : Ann N Y Acad Sci. 2009 Sep;1173:343-9. PMID: [19758171](#)

**Article Published Date** : Sep 01, 2009

**Authors** : Dana Ben-Ami Shor, Ori Barzilai, Maya Ram, David Izhaky, Bat Sheva Porat-Katz, Joab Chapman, Miri Blank, Juan-Manuel Anaya, Yehuda Shoenfeld

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Multiple Sclerosis : CK\(716\) : AC\(133\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **Gluten sensitivity is common in patients with neurological disease of unknown cause and may have etiological significance. - GMI Summary**

**Pubmed Data** : Lancet. 1996 Feb 10;347(8998):369-71. PMID: [8598704](#)

**Article Published Date** : Feb 10, 1996

**Authors** : M Hadjivassiliou, A Gibson, G A Davies-Jones, A J Lobo, T J Stephenson, A Milford-Ward

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Nervous System Diseases : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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## **Hippocampal sclerosis in refractory temporal lobe epilepsy is associated with gluten sensitivity. - GMI Summary**

**Pubmed Data** : J Neurol Neurosurg Psychiatry. 2009 Jun;80(6):626-30. Epub 2009 Feb 24. PMID: [19244266](#)

**Article Published Date** : Jun 01, 2009

**Authors** : M Peltola, K Kaukinen, P Dastidar, K Haimila, J Partanen, A-M Haapala, M Mäki, T Keränen, J Peltola

**Study Type** : Human Study

### **Additional Links**

**Diseases** : [Brain Injury: Hippocampal Damage : CK\(35\) : AC\(16\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Hippocampal Sclerosis : CK\(10\) : AC\(1\)](#), [Temporal Lobe Epilepsy \(TLE\) : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **Hypothesis confirmed that gluten elicits harmful IL-15 related immune response effect on all individuals. - GMI Summary**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Gut. 2007 Jun ;56(6):889-90. PMID: [17519496](#)

**Article Published Date** : May 31, 2007

**Authors** : D Bernardo, J A Garrote, L Fernández-Salazar, S Riestra, E Arranz

**Study Type** : Human Study

### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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## **Individuals with mania have significantly increased levels of IgG antibodies to gliadin. - GMI Summary**

**Pubmed Data** : Psychiatry Res. 2012 Mar 2. Epub 2012 Mar 2. PMID: [22386570](#)

**Article Published Date** : Mar 02, 2012

**Authors** : Faith Dickerson, Cassie Stallings, Andrea Origoni, Crystal Vaughan, Sunil Khushalani, Robert Yolken

**Study Type** : Human Study

### **Additional Links**

**Diseases** : [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Mania: Acute : CK\(10\) : AC\(1\)](#)

**Additional Keywords** : [Anti-Gliadin Antibodies : CK\(71\) : AC\(8\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **Markers of gluten sensitivity and celiac disease are increased in recent-onset psychosis and multi-episode schizophrenia. - GMI Summary**

**Pubmed Data** : Biol Psychiatry. 2010 Jul 1;68(1):100-4. Epub 2010 May 14. PMID: [20471632](#)

**Article Published Date** : Jul 01, 2010

**Authors** : Faith Dickerson, Cassie Stallings, Andrea Origoni, Crystal Vaughan, Sunil Khushalani, Flora Leister, Shuojia Yang, Bogdana Krivogorsky, Armin Alaedini, Robert Yolken

**Study Type** : Human Study

### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Psychoses : CK\(12\) : AC\(3\)](#), [Schizophrenia : CK\(247\) : AC\(29\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **Mortality from malignant neoplasms, non-Hodgkin's lymphoma and digestive system disorders were significantly higher in gluten sensitive patients compared to the Northern Ireland population. - GMI Summary**

**Pubmed Data** : World J Gastroenterol. 2007 Jan 7 ;13(1):146-51. PMID: [17206762](#)

**Article Published Date** : Jan 07, 2007

**Authors** : L A Anderson, S A McMillan, R G P Watson, P Monaghan, A T Gavin, C Fox, L J Murray

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Cancers: All : CK\(8580\) : AC\(2715\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Mortality: All-Cause : CK\(644\) : AC\(55\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Myopathy associated with gluten sensitivity has been demonstrated.](#) - GMI Summary**

**Pubmed Data** : Muscle Nerve. 2007 Apr;35(4):443-50. PMID: [17143894](#)

**Article Published Date** : Apr 01, 2007

**Authors** : Marios Hadjivassiliou, Arup K Chattopadhyay, Richard A Grünewald, John A Jarratt, Rosalind H Kandler, D G Rao, D S Sanders, S B Wharton, G A B Davies-Jones

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Myopathies : CK\(241\) : AC\(51\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Neurological symptoms occur in 6-10% of those with celiac disease, with cerebella ataxia being the most frequent symptom.](#) - GMI Summary**

**Pubmed Data** : Mov Disord. 2009 Dec 15;24(16):2358-62. PMID: [19845007](#)

**Article Published Date** : Dec 15, 2009

**Authors** : Katrin Bürk, Marie-Louise Farecki, Georg Lamprecht, Guenter Roth, Patrice Decker, Michael Weller, Hans-Georg Rammensee, Wolfgang Oertel

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Carpal Tunnel Syndrome : CK\(80\) : AC\(8\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cerebellar Ataxia : CK\(36\) : AC\(4\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Migraine Disorders : CK\(455\) : AC\(54\)](#), [Psychiatric Disorders : CK\(71\) : AC\(10\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Patients with psoriasis show elevated sensitivity to gluten.](#) - GMI Summary**

**Pubmed Data** : J Clin Lab Anal. 2010;24(4):269-72. PMID: [20626025](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Sangeeta Singh, Gyanendra Kumar Sonkar, Usha, Sanjay Singh

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Psoriasis : CK\(270\) : AC\(42\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Preparations of gliadin, extracted from wheat gluten, were shown to stimulate a proliferative response by lymphocytes of normal donors.](#) - GMI Summary**

**Pubmed Data** : Int Arch Allergy Appl Immunol. 1980;62(2):162-7. PMID: [7372365](#)

**Article Published Date** : Jan 01, 1980

**Authors** : A J Frew, S Bright, P R Shewry, A Munro

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Proliferative : CK\(13\) : AC\(3\)](#)

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## **[Sensory ganglionopathy may be a manifestation of gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : Neurology. 2010 Sep 14;75(11):1003-8. PMID: [20837968](#)

**Article Published Date** : Sep 14, 2010

**Authors** : M Hadjivassiliou, D G Rao, S B Wharton, D S Sanders, R A Grünewald, A G B Davies-Jones

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Gluten Sensitivity](#) : CK(2319) : AC(246), [Peripheral Neuropathies](#) : CK(454) : AC(31), [Sensory Neuropathies](#) : CK(10) : AC(1), [Wheat Intolerance](#) : CK(2213) : AC(231)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Gluten](#) : CK(1610) : AC(131)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1064) : AC(179)

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## **[There is a high prevalence of antibodies to gliadin in patients with inflammatory myopathies, indicating a higher prevalence of gluten sensitivity or celiac disease in this patient group.](#) - GMI Summary**

**Pubmed Data** : Ann N Y Acad Sci. 2009 Sep;1173:174-9. PMID: [19758147](#)

**Article Published Date** : Sep 01, 2009

**Authors** : Hedi Orbach, Nimrod Amitai, Ori Barzilai, Mona Boaz, Maya Ram, Gisele Zandman-Goddard, Yehuda Shoenfeld

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Gluten Sensitivity](#) : CK(2319) : AC(246), [Myopathies: Inflammatory](#) : CK(10) : AC(1)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104)

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## **[There is a high prevalence of gluten sensitivity in Japanese patients with adult-onset cerebellar ataxia.](#) - GMI Summary**

**Pubmed Data** : Intern Med. 2006;45(3):135-40. Epub 2006 Mar 1. PMID: [16508226](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Masafumi Ihara, Fumi Makino, Hideyuki Sawada, Takahiro Mezaki, Kotaro Mizutani, Hiroshi Nakase, Makoto Matsui, Hidekazu Tomimoto, Shun Shimohama

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Cerebellar Ataxia](#) : CK(36) : AC(4), [Gluten Sensitivity](#) : CK(2319) : AC(246)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Gluten](#) : CK(1610) : AC(131), [Wheat](#) : CK(2371) : AC(280)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1064) : AC(179)

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## **[There is a higher frequency of celiac disease associated antibodies in autoimmune hepatitis.](#) - GMI Summary**

**Pubmed Data** : Dig Dis Sci. 1998 Oct;43(10):2190-5. PMID: [9790453](#)

**Article Published Date** : Oct 01, 1998

**Authors** : U Volta, L De Franceschi, N Molinaro, F Cassani, L Muratori, M Lenzi, F B Bianchi, A J Czaja

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Gluten Sensitivity](#) : CK(2319) : AC(246), [Hepatitis: Autoimmune](#) : CK(41) : AC(8)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104)

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## **[There is a higher prevalence of celiac disease and gluten sensitivity in patients with Grave's hyperthyroidism.](#) - GMI Summary**

**Pubmed Data** : Clin Endocrinol (Oxf). 2005 Mar;62(3):303-6. PMID: [15730411](#)

**Article Published Date** : Mar 01, 2005

**Authors** : Chin Lye Ch'ng, Moushmi Biswas, Ann Benton, M Keston Jones, Jeremy G C Kingham

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Graves Disease : CK\(93\) : AC\(9\)](#), [Hyperthyroidism : CK\(189\) : AC\(33\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[There is a link between gluten sensitivity and GAD antibody-associated diseases, e.g. Stiff-Person Syndrome \(SPS\).](#) - GMI Summary**

**Pubmed Data** : Acta Neurol Scand. 2011 Mar;123(3):175-180. PMID: [20456245](#)

**Article Published Date** : Mar 01, 2011

**Authors** : M Hadjivassiliou, D Aeschlimann, R A Grünewald, D S Sanders, B Sharrack, N Woodroffe

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Neurological Illness: GAD antibody-associated : CK\(10\) : AC\(1\)](#), [Stiff-Person Syndrome : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[There is a weak but positive correlation with the presence of coronary heart disease and the presence of anti-gliadin antibodies.](#) - GMI Summary**

**Pubmed Data** : Pol Merkur Lekarski. 2007 Jul;23(133):9-14. PMID: [18051823](#)

**Article Published Date** : Jul 01, 2007

**Authors** : Elwira Stasiakowska-Badura, Marek Kochmański

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Atherosclerosis : CK\(512\) : AC\(77\)](#), [Coronary Artery Disease : CK\(1253\) : AC\(136\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Additional Keywords** : [Anti-Gliadin Antibodies : CK\(71\) : AC\(8\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Celiac disease presenting as severe osteopenia has been reported.](#) - GMI Summary**

**Pubmed Data** : Hawaii Med J. 2011 Nov ;70(11):242-4. PMID: [22162604](#)

**Article Published Date** : Nov 01, 2011

**Authors** : Christopher J Mulder, Anthony P Cardile, Judith Dickert

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Osteopenia : CK\(207\) : AC\(41\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Gluten sensitivity has been mistaken for Systemic Lupus Erythematosus.](#) - GMI Summary**

**Pubmed Data** : Ann Rheum Dis. 2004 Nov ;63(11):1501-3. PMID: [15479903](#)

**Article Published Date** : Nov 01, 2004

**Authors** : M Hadjivassiliou, D S Sanders, R A Grünewald, M Akil

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Systemic Lupus Erythematosus : CK\(387\) : AC\(54\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Gluten sensitivity presenting as neuromyelitis optica has been reported.](#) - GMI Summary**

**Pubmed Data** : J Neurol Neurosurg Psychiatry. 2005 Jul ;76(7):1028-30. PMID: [15965221](#)

**Article Published Date** : Jul 01, 2005

**Authors** : S Jacob, M Zarei, A Kenton, H Allroggen

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Neuromyelitis Optica : CK\(4\) : AC\(2\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Bifidobacterium longum administered to rats fed gliadins seemed to ameliorate the inflammation caused by gliadin feeding alone](#) - GMI Summary**

**Pubmed Data** : J Proteomics. 2012 Sep 27. Epub 2012 Sep 27. PMID: [23023000](#)

**Article Published Date** : Sep 26, 2012

**Authors** : Marta Olivares, Moisés Laparra, Yolanda Sanz

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Bifidobacterium Longum : CK\(66\) : AC\(8\)](#)

**Diseases** : [Bifidobacterium Longum : CK\(66\) : AC\(8\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[CLA reduces gliadin-induced intestinal toxicity in an animal model.](#) - GMI Summary**

**Pubmed Data** : Mol Nutr Food Res. 2011 Sep ;55 Suppl 2:S248-56. Epub 2011 Aug 31. PMID: [21954188](#)

**Article Published Date** : Sep 01, 2011

**Authors** : Paolo Bergamo, Marta Gogliettino, Gianna Palmieri, Ennio Cocca, Francesco Maurano, Rosita Stefanile, Marco Balestrieri, Giuseppe Mazzarella, Chella David, Mauro Rossi

**Study Type** : Animal Study

**Additional Links**

**Substances** : [CLA \(Conjugated Linoleic Acid\) : CK\(71\) : AC\(27\)](#)

**Diseases** : [Gastrointestinal Inflammation : CK\(41\) : AC\(7\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[Gluten and its lectin-like fraction gliadin contribute to experimental IgA glomerulopathy.](#) - GMI Summary**

**Pubmed Data** : Lab Invest. 1989 Apr;60(4):499-506. PMID: [2709812](#)

**Article Published Date** : Apr 01, 1989

**Authors** : R Coppo, G Mazzucco, G Martina, D Roccatello, A Amore, R Novara, A Bargoni, G Piccoli, L M Sena

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Glomerulonephritis : CK\(41\) : AC\(9\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [IgA Nephropathy : CK\(186\) : AC\(22\)](#), [Kidney Diseases : CK\(424\) : AC\(71\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Primates exhibit gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : PLoS One. 2008;3(2):e1614. Epub 2008 Feb 20. PMID: [18286171](#)

**Article Published Date** : Jan 01, 2008

**Authors** : Michael T Bethune, Juan T Borda, Erin Ribka, Michael-Xun Liu, Kathrine Phillippi-Falkenstein, Ronald J Jandacek, Gaby G M Doxiadis, Gary M Gray, Chaitan Khosla, Karol Sestak

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Because anti-gliadin antibodies bind to neuronal synapsin I it is possible that molecular mimicry and antibody cross-reactivity are responsible for neurological symptoms associated with gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : J Immunol. 2007 May 15 ;178(10):6590-5. PMID: [17475890](#)

**Article Published Date** : May 15, 2007

**Authors** : Armin Alaedini, Haruka Okamoto, Chiara Briani, Kurt Wollenberg, Holly A Shill, Khalafalla O Bushara, Howard W Sander, Peter H R Green, Mark Hallett, Norman Latov

**Study Type** : Review

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Anti-Gliadin Antibodies : CK\(71\) : AC\(8\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **[Gliadin has a direct cytotoxic effect on the cytoskeleton and tight junctions of epithelial cells.](#) - GMI Summary**

**Pubmed Data** : World J Gastroenterol. 2005 Dec 28 ;11(48):7597-601. PMID: [16437684](#)

**Article Published Date** : Dec 28, 2005

**Authors** : Ersilia Dolfini, Leda Roncoroni, Luca Elli, Chiara Fumagalli, Roberto Colombo, Simona Ramponi, Fabio Forlani, Maria Teresa Bardella

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Gastrointestinal Inflammation : CK\(41\) : AC\(7\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Intestinal Permeability : CK\(263\) : AC\(56\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Cytotoxic : CK\(68\) : AC\(35\)](#)

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### **[There are neurologic and psychiatric manifestations to gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : Psychiatr Q. 2011 Aug 30. Epub 2011 Aug 30. PMID: [21877216](#)

**Article Published Date** : Aug 30, 2011

**Authors** : Jessica R Jackson, William W Eaton, Nicola G Cascella, Alessio Fasano, Deanna L Kelly

**Study Type** : Review

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Psychiatric Disorders : CK\(71\) : AC\(10\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Topic: [Gluten Intolerance](#)**

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### **[Recurrent miscarriages may occur due to undiagnosed celiac disease, and may resolve after a gluten-free diet.](#) - GMI Summary**

**Pubmed Data** : Dig Dis Sci. 2008 Nov;53(11):2925-8. Epub 2008 Mar 27. PMID: [18368491](#)

**Article Published Date** : Nov 01, 2008

**Authors** : Antonio Tursi, Gianmarco Giorgetti, Giovanni Brandimarte, Walter Elisei

**Study Type** : Meta Analysis

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Teratogenic : CK\(304\) : AC\(59\)](#)

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### **[A Gluten-free diet in psoriasis patients with antibodies to gliadin results in significant clinical improvements.](#) - GMI Summary**

**Pubmed Data** : Acta Derm Venereol. 2003;83(6):425-9. PMID: [14690336](#)

**Article Published Date** : Jan 01, 2003

**Authors** : Gerd Michaëlsson, Stina Ahs, Ingrid Hammarström, Inger Pihl Lundin, Eva Hagforsen

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Psoriasis : CK\(270\) : AC\(42\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Anti-Gliadin Antibodies : CK\(71\) : AC\(8\)](#), [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[A subgroup of Irritable Bowel Syndrome patients have latent/potential celiac disease and respond to a gluten-free diet. - GMI Summary](#)**

**Pubmed Data** : Gastroenterology. 2001 Dec;121(6):1329-38. PMID: [11729112](#)

**Article Published Date** : Dec 01, 2001

**Authors** : U Wahnschaffe, R Ullrich, E O Riecken, J D Schulzke

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Irritable Bowel Syndrome : CK\(803\) : AC\(66\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Elevated IgA antibodies to gluten and gliadin proteins and to casein in milk have been found in patients with Rett syndrome. - GMI Summary](#)**

**Pubmed Data** : Autism. 2006 Mar;10(2):189-97. PMID: [16613867](#)

**Article Published Date** : Mar 01, 2006

**Authors** : K L Reichelt, O Skjeldal

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Casein Intolerance : CK\(44\) : AC\(7\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Rett Syndrome : CK\(20\) : AC\(2\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Casein : CK\(123\) : AC\(16\)](#), [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Gluten causes gastrointestinal symptoms in subjects without celiac disease. - GMI Summary](#)**

**Pubmed Data** : Am J Gastroenterol. 2011 Jan 11. Epub 2011 Jan 11. PMID: [21224837](#)

**Article Published Date** : Jan 11, 2011

**Authors** : Jessica R Biesiekierski, Evan D Newnham, Peter M Irving, Jacqueline S Barrett, Melissa Haines, James D Doecke, Susan J Shepherd, Jane G Muir, Peter R Gibson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Gluten sensitivity is prevalent in patients with IgA nephropathy. - GMI Summary](#)**

**Pubmed Data** : Nephrol Dial Transplant. 2009 Aug;24(8):2476-81. Epub 2009 Mar 30. PMID: [19332868](#)

**Article Published Date** : Aug 01, 2009

**Authors** : Hilde Kloster Smerud, Bengt Fellström, Roger Hällgren, Sonia Osagie, Per Venge, Gudjón Kristjánsson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [IgA Nephropathy : CK\(186\) : AC\(22\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Nephrotoxic : CK\(162\) : AC\(38\)](#)

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## **Gluten sensitivity may not be detectable with conventional light microscopy. - GMI Summary**

**Pubmed Data** : Dig Liver Dis. 2003 Nov;35(11):768-73. PMID: [14674666](#)

**Article Published Date** : Nov 01, 2003

**Authors** : A Sbarbati, E Valletta, M Bertini, M Cipolli, M Morroni, L Pinelli, L Tatò

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gastrointestinal Hemorrhage : CK\(33\) : AC\(4\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **Highly significant increases compared with controls were found in patients with multiple sclerosis for IgA and IgG antibodies against gliadin and gluten and IgA antibodies against casein. - GMI Summary**

**Pubmed Data** : Acta Neurol Scand. 2004 Oct;110(4):239-41. PMID: [15355487](#)

**Article Published Date** : Oct 01, 2004

**Authors** : K-L Reichelt, D Jensen

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Casein Intolerance : CK\(44\) : AC\(7\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Multiple Sclerosis : CK\(716\) : AC\(133\)](#)

**Problem Substances** : [Casein : CK\(123\) : AC\(16\)](#), [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **Hippocampal sclerosis in refractory temporal lobe epilepsy is associated with gluten sensitivity. - GMI Summary**

**Pubmed Data** : J Neurol Neurosurg Psychiatry. 2009 Jun;80(6):626-30. Epub 2009 Feb 24. PMID: [19244266](#)

**Article Published Date** : Jun 01, 2009

**Authors** : M Peltola, K Kaukinen, P Dastidar, K Haimila, J Partanen, A-M Haapala, M Mäki, T Keränen, J Peltola

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Brain Injury: Hippocampal Damage : CK\(35\) : AC\(16\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Hippocampal Sclerosis : CK\(10\) : AC\(1\)](#), [Temporal Lobe Epilepsy \(TLE\) : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **Palmoplantar pustulosis is a condition highly correlated to gluten sensitivity. - GMI Summary**

**Pubmed Data** : Br J Dermatol. 2007 Apr;156(4):659-66. Epub 2007 Jan 30. PMID: [17263812](#)

**Article Published Date** : Apr 01, 2007

**Authors** : G Michaëlsson, G Kristjánsson, I Pihl Lundin, E Hagforsen

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Palmoplantar Pustulosis : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Persons with schizophrenia have higher than expected titers of antibodies related to celiac disease and gluten sensitivity. - GMI Summary**

**Pubmed Data** : Schizophr Bull. 2011 Jan;37(1):94-100. Epub 2009 Jun 3. PMID: [19494248](#)

**Article Published Date** : Jan 01, 2011

**Authors** : Nicola G Cascella, Debra Kryszak, Bushra Bhatti, Patricia Gregory, Deanna L Kelly, Joseph P Mc Evoy, Alessio Fasano, William W Eaton

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Gluten Intolerance](#) : CK(236) : AC(33), [Schizophrenia](#) : CK(247) : AC(29), [Wheat Intolerance](#) : CK(2213) : AC(231)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131), [Wheat](#) : CK(2371) : AC(280)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1064) : AC(179)

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### **[Preparations of gliadin, extracted from wheat gluten, were shown to stimulate a proliferative response by lymphocytes of normal donors.](#) - GMI Summary**

**Pubmed Data** : Int Arch Allergy Appl Immunol. 1980;62(2):162-7. PMID: [7372365](#)

**Article Published Date** : Jan 01, 1980

**Authors** : A J Frew, S Bright, P R Shewry, A Munro

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Gluten Intolerance](#) : CK(236) : AC(33), [Gluten Sensitivity](#) : CK(2319) : AC(246)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Wheat](#) : CK(2371) : AC(280)

**Adverse Pharmacological Actions** : [Proliferative](#) : CK(13) : AC(3)

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### **[Schizophrenia prevalence is correlated with gluten grain consumption.](#) - GMI Summary**

**Pubmed Data** : Biol Psychiatry. 1984 Mar;19(3):385-99. PMID: [6609726](#)

**Article Published Date** : Mar 01, 1984

**Authors** : F C Dohan, E H Harper, M H Clark, R B Rodrigue, V Zigas

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Gluten Intolerance](#) : CK(236) : AC(33), [Schizophrenia](#) : CK(247) : AC(29)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131), [Gluten exorphins](#) : CK(26) : AC(10)

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### **[There is a weak but positive correlation with the presence of coronary heart disease and the presence of anti-gliadin antibodies.](#) - GMI Summary**

**Pubmed Data** : Pol Merkur Lekarski. 2007 Jul;23(133):9-14. PMID: [18051823](#)

**Article Published Date** : Jul 01, 2007

**Authors** : Elwira Stasiakowska-Badura, Marek Kochmański

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Atherosclerosis](#) : CK(512) : AC(77), [Coronary Artery Disease](#) : CK(1253) : AC(136), [Gluten Intolerance](#) : CK(236) : AC(33), [Gluten Sensitivity](#) : CK(2319) : AC(246)

**Additional Keywords** : [Anti-Gliadin Antibodies](#) : CK(71) : AC(8)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Wheat](#) : CK(2371) : AC(280)

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### **[There is an association between psoriasis and asymptomatic celiac disease/gluten intolerance.](#) - GMI Summary**

**Pubmed Data** : J Eur Acad Dermatol Venereol. 2008 Sep;22(9):1055-61. Epub 2008 Apr 1. PMID: [18384553](#)

**Article Published Date** : Sep 01, 2008

**Authors** : A Damasiewicz-Bodzek, T Wielkoszyński

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Gluten Intolerance](#) : CK(236) : AC(33), [Psoriasis](#) : CK(270) : AC(42)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Wheat](#) : CK(2371) : AC(280)

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### **[There is an increased frequency of gliadin antibodies in patients with Down syndrome, indicating the possibility of an increased incidence of celiac disease in this population.](#) - GMI Summary**

**Pubmed Data** : Eur J Pediatr. 1990 Sep;149(12):833-4. PMID: [2146127](#)

**Article Published Date** : Sep 01, 1990

**Authors** : W Storm

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Down Syndrome](#) : CK(50) : AC(5), [Gluten Intolerance](#) : CK(236) : AC(33)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104)

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## **[Gluten encephalopathy with psychiatric onset has been reported.](#) - GMI**

### **Summary**

**Pubmed Data** : Clin Pract Epidemiol Ment Health. 2009;5:16. Epub 2009 Jun 26. PMID: [19558661](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Nicola Poloni, Simone Vender, Emilio Bolla, Paola Bortolaso, Chiara Costantini, Camilla Callegari

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Encephalopathies](#) : CK(11) : AC(5), [Gluten Intolerance](#) : CK(236) : AC(33), [Polyneuropathies](#) : CK(38) : AC(7)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131), [Wheat](#) : CK(2371) : AC(280)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1064) : AC(179)

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## **[CLA reduces gliadin-induced intestinal toxicity in an animal model.](#) - GMI**

### **Summary**

**Pubmed Data** : Mol Nutr Food Res. 2011 Sep ;55 Suppl 2:S248-56. Epub 2011 Aug 31. PMID: [21954188](#)

**Article Published Date** : Sep 01, 2011

**Authors** : Paolo Bergamo, Marta Gogliettino, Gianna Palmieri, Ennio Cocca, Francesco Maurano, Rosita Stefanile, Marco Balestrieri, Giuseppe Mazzarella, Chella David, Mauro Rossi

**Study Type** : Animal Study

**Additional Links**

**Substances** : [CLA \(Conjugated Linoleic Acid\)](#) : CK(71) : AC(27)

**Diseases** : [Gastrointestinal Inflammation](#) : CK(41) : AC(7), [Gluten Intolerance](#) : CK(236) : AC(33), [Gluten Sensitivity](#) : CK(2319) : AC(246), [Wheat Intolerance](#) : CK(2213) : AC(231)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104)

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## **[Gluten and its lectin-like fraction gliadin contribute to experimental IgA glomerulopathy.](#) - GMI Summary**

**Pubmed Data** : Lab Invest. 1989 Apr;60(4):499-506. PMID: [2709812](#)

**Article Published Date** : Apr 01, 1989

**Authors** : R Coppo, G Mazzucco, G Martina, D Roccatello, A Amore, R Novara, A Bargoni, G Piccoli, L M Sena

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Glomerulonephritis](#) : CK(41) : AC(9), [Gluten Intolerance](#) : CK(236) : AC(33), [Gluten Sensitivity](#) : CK(2319) : AC(246), [IgA Nephropathy](#) : CK(186) : AC(22), [Kidney Diseases](#) : CK(424) : AC(71)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Gluten](#) : CK(1610) : AC(131), [Wheat](#) : CK(2371) : AC(280)

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## **[A large number of neurologic syndromes may result from gluten intolerance.](#) - GMI Summary**

**Pubmed Data** : Gastroenterology. 2005 Apr;128(4 Suppl 1):S92-7. PMID: [15825133](#)

**Article Published Date** : Apr 01, 2005

**Authors** : Khalafalla O Bushara

**Study Type** : Commentary

**Additional Links**

**Diseases** : [Ataxia: Cerebellar](#) : CK(67) : AC(3), [Autism Spectrum Disorders](#) : CK(1118) : AC(108), [Chorea](#) : CK(1) : AC(1), [Gluten Intolerance](#) : CK(236) : AC(33), [Guillain-Barre Syndrome](#) : CK(84) : AC(14),

Huntington Disease : [CK\(45\) : AC\(17\)](#), [Myelopathy : CK\(11\) : AC\(2\)](#), [Neuropathy : CK\(158\) : AC\(24\)](#)  
**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Because anti-gliadin antibodies bind to neuronal synapsin I it is possible that molecular mimicry and antibody cross-reactivity are responsible for neurological symptoms associated with gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : J Immunol. 2007 May 15 ;178(10):6590-5. PMID: [17475890](#)

**Article Published Date** : May 15, 2007

**Authors** : Armin Alaedini, Haruka Okamoto, Chiara Briani, Kurt Wollenberg, Holly A Shill, Khalafalla O Bushara, Howard W Sander, Peter H R Green, Mark Hallett, Norman Latov

**Study Type** : Review

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Anti-Gliadin Antibodies : CK\(71\) : AC\(8\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **[Bread wheat gliadin exhibits direct and significant cytotoxicity.](#) - GMI Summary**

**Pubmed Data** : Scand J Clin Lab Invest. 2003 ;63(2):135-41. PMID: [12751695](#)

**Article Published Date** : Jan 01, 2003

**Authors** : E Dolfini, L Elli, S Ferrero, P Braidotti, L Roncoroni, T Dasdia, M L Falini, F Forlani, M T Bardella

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Gluten Intolerance : CK\(236\) : AC\(33\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Cytotoxic : CK\(68\) : AC\(35\)](#)

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### **[Gluten intolerance gives rise to a variety of dermatological manifestations which may benefit from a gluten-free diet.](#) - GMI Summary**

**Pubmed Data** : Eur J Dermatol. 2006 Jan-Feb;16(1):4-11. PMID: [16436335](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Philippe Humbert, Fabien Pelletier, Brigitte Dreno, Eve Puzenat, François Aubin

**Study Type** : Commentary

**Additional Links**

**Diseases** : [Allergies : CK\(502\) : AC\(92\)](#), [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Psoriasis : CK\(270\) : AC\(42\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[The habitual consumption of wheat gluten may be a contributing factor in the pathogenesis of type 1 diabetes.](#) - GMI Summary**

**Pubmed Data** : Med Hypotheses. 2007;68(3):607-19. Epub 2006 Oct 11. PMID: [17045415](#)

**Article Published Date** : Jan 01, 2007

**Authors** : William E Barbeau, Josep Bassaganya-Riera, Raquel Hontecillas

**Study Type** : Commentary

**Additional Links**

**Diseases** : [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Zonulin : CK\(15\) : AC\(5\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[There are neurologic and psychiatric manifestations to gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : Psychiatr Q. 2011 Aug 30. Epub 2011 Aug 30. PMID: [21877216](#)

**Article Published Date** : Aug 30, 2011

**Authors** : Jessica R Jackson, William W Eaton, Nicola G Cascella, Alessio Fasano, Deanna L Kelly

**Study Type** : Review

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Psychiatric Disorders : CK\(71\) : AC\(10\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **[Wheat gliadin exhibits non-specific cytotoxicity to a variety of human cells. - GMI Summary](#)**

**Pubmed Data** : Lancet. 1976 Feb 14;1(7955):339-41. PMID: [54743](#)

**Article Published Date** : Feb 14, 1976

**Authors** : D A Hudson, H J Cornell, D R Purdham, C J Rolles

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Lectins : CK\(58\) : AC\(36\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Cytotoxic : CK\(68\) : AC\(35\)](#)

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## **Topic: Autoimmune Diseases**

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## **[Celiac disease has a high prevalence rate in autoimmune cholestatic liver disorders. - GMI Summary](#)**

**Pubmed Data** : Am J Gastroenterol. 2002 Oct;97(10):2609-13. PMID: [12385447](#)

**Article Published Date** : Oct 01, 2002

**Authors** : Umberto Volta, Luis Rodrigo, Alessandro Granito, Nunzio Petrolini, Paolo Muratori, Luigi Muratori, Antonio Linares, Lorenza Veronesi, Dolores Fuentes, Daniela Zauli, Francesco B Bianchi

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cholestasis : CK\(274\) : AC\(30\)](#), [Cholestasis: Autoimmune : CK\(10\) : AC\(1\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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## **[Celiac disease is far higher in those diagnosed with Grave's disease. - GMI Summary](#)**

**Pubmed Data** : Endocrine. 2006 Oct;30(2):175-83. PMID: [17322576](#)

**Article Published Date** : Oct 01, 2006

**Authors** : Cihangir Erem, Orhan Deger, Ercüment Ovali, Yasam Barlak

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Graves Disease : CK\(93\) : AC\(9\)](#), [Hyperthyroidism : CK\(189\) : AC\(33\)](#)

**Additional Keywords** : [Anti-Gliadin Antibodies : CK\(71\) : AC\(8\)](#), [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **[Celiac disease is found in a far higher percentage of patients with end-stage autoimmune liver disease. - GMI Summary](#)**

**Pubmed Data** : Liver Int. 2008 Apr;28(4):467-76. PMID: [18339073](#)

**Article Published Date** : Apr 01, 2008

**Authors** : Alberto Rubio-Tapia, Ahmad S Abdulkarim, Russell H Wiesner, S Breannan Moore, Patricia K

Krause, Joseph A Murray

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [End-Stage Autoimmune Liver Disease \(ESALD\) : CK\(10\) : AC\(1\)](#), [Liver Disease : CK\(114\) : AC\(30\)](#), [Organ Transplantation: Liver : CK\(202\) : AC\(24\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Children with autism show elevations against gliadin \(wheat protein\) and cerebellar proteins simultaneously. These proteins simulate antibodies that may cross-react, resulting in neurological damage.](#) - GMI Summary**

**Pubmed Data** : Nutr Neurosci. 2004 Jun;7(3):151-61. PMID: [15526989](#)

**Article Published Date** : Jun 01, 2004

**Authors** : A Vojdani, T O'Bryan, J A Green, J Mccandless, K N Woeller, E Vojdani, A A Nourian, E L Cooper

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autism : CK\(1340\) : AC\(65\)](#), [Autism Spectrum Disorders : CK\(1118\) : AC\(108\)](#), [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Molecular Mimicry : CK\(47\) : AC\(10\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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### **[Intolerance to wheat \(CD autoantibodies\) is higher than background rates in those with Turner syndrome.](#) - GMI Summary**

**Pubmed Data** : Clin Exp Immunol. 2009 May;156(2):205-10. Epub 2009 Feb 26. PMID: [19298606](#)

**Article Published Date** : May 01, 2009

**Authors** : K H Mortensen, L Cleemann, B E Hjerrild, E Nexø, H Locht, E M Jeppesen, C H Gravholt

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Hypothyroidism : CK\(525\) : AC\(78\)](#), [Turner Syndrome : CK\(10\) : AC\(1\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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### **[There is a high frequency of autoimmune thyroid disease among celiac disease patients.](#) - GMI Summary**

**Pubmed Data** : J Pediatr Gastroenterol Nutr. 2003 Jul;37(1):63-6. PMID: [12827007](#)

**Article Published Date** : Jul 01, 2003

**Authors** : Nicoletta Ansaldi, Tiziana Palmas, Andrea Corrias, Maria Barbato, Mario Rocco D'Altiglia, Angelo Campanozzi, Mariella Baldassarre, Francesco Rea, Rosanna Pluvio, Margherita Bonamico, Rosanna Lazzari, Giovanni Corrao

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Autoimmune Thyroiditis : CK\(134\) : AC\(17\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Hypothyroidism : CK\(525\) : AC\(78\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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### **[There is a higher prevalence of celiac disease and gluten sensitivity in patients with Grave's hyperthyroidism.](#) - GMI Summary**

**Pubmed Data** : Clin Endocrinol (Oxf). 2005 Mar;62(3):303-6. PMID: [15730411](#)

**Article Published Date** : Mar 01, 2005

**Authors** : Chin Lye Ch'ng, Moushmi Biswas, Ann Benton, M Keston Jones, Jeremy G C Kingham

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Graves Disease : CK\(93\) : AC\(9\)](#), [Hyperthyroidism : CK\(189\) : AC\(33\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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**[Thyroid autoimmunity is associated with celiac disease in children.](#) - GMI Summary**

**Pubmed Data** : J Pediatr. 2010 Feb;156(2):292-5. Epub 2009 Oct 20. PMID: [19846116](#)

**Article Published Date** : Feb 01, 2010

**Authors** : Alessandra Cassio, Giampaolo Ricci, Federico Baronio, Angela Miniaci, Milva Bal, Barbara Bigucci, Veronica Conti, Alessandro Cicognani

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Hypothyroidism : CK\(525\) : AC\(78\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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**[Dietary gluten influences the development of type 1 diabetes \(T1D\).](#) - GMI Summary**

**Pubmed Data** : PLoS One. 2012 ;7(3):e33315. Epub 2012 Mar 13. PMID: [22428018](#)

**Article Published Date** : Jan 01, 2012

**Authors** : Julie Christine Antvorskov, Petra Fundova, Karsten Buschard, David P Funda

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Diabetogenic : CK\(124\) : AC\(14\)](#), [Immunotoxic : CK\(230\) : AC\(38\)](#)

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**[Celiac disease: strong association to HLA and 39 nonHLA risk genes, mostly immune-related](#) - GMI Summary**

**Pubmed Data** : Trends Mol Med. 2010 Nov ;16(11):537-50. Epub 2010 Oct 12. PMID: [20947431](#)

**Article Published Date** : Oct 31, 2010

**Authors** : Gosia Trynka, Cisca Wijmenga, David A van Heel

**Study Type** : Review

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#), [HLA-DQ2/DQ8 : CK\(24\) : AC\(5\)](#), [HLA-DQ2/DQ8 : CK\(24\) : AC\(5\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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**[Gluten intolerance gives rise to a variety of dermatological manifestations which may benefit from a gluten-free diet.](#) - GMI Summary**

**Pubmed Data** : Eur J Dermatol. 2006 Jan-Feb;16(1):4-11. PMID: [16436335](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Philippe Humbert, Fabien Pelletier, Brigitte Dreno, Eve Puzenat, François Aubin

**Study Type** : Commentary

**Additional Links**

**Diseases** : [Allergies : CK\(502\) : AC\(92\)](#), [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Psoriasis : CK\(270\) : AC\(42\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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**[Wheat germ agglutinin \(WGA\) induces antibody anti-WGA formation, which may result in some cross-reactivity to other proteins.](#) - GMI Summary**

**Pubmed Data** : FEBS Lett. 1996 Nov 18;397(2-3):139-42. PMID: [8955334](#)

**Article Published Date** : Nov 18, 1996

**Authors** : B Tchernychev, M Wilchek

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#)

**Additional Keywords** : [Lectins : CK\(58\) : AC\(36\)](#)

**Problem Substances** : [Lectins : CK\(35\) : AC\(27\)](#), [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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## Topic: [Schizophrenia](#)

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### [Gluten restriction shows promise in the treatment of schizophrenia.](#) - GMI

#### Summary

**Pubmed Data** : Acta Psychiatr Scand. 2006 Feb;113(2):82-90. PMID: [16423158](#)

**Article Published Date** : Feb 01, 2006

**Authors** : A E Kalaydjian, W Eaton, N Cascella, A Fasano

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Schizophrenia : CK\(247\) : AC\(29\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### [Individuals with schizophrenia have a novel immune response to gluten.](#) - GMI

#### Summary

**Pubmed Data** : Schizophr Res. 2010 May;118(1-3):248-55. Epub 2009 Sep 11. PMID: [19748229](#)

**Article Published Date** : May 01, 2010

**Authors** : Diana Samaroo, Faith Dickerson, Donald D Kasarda, Peter H R Green, Chiara Briani, Robert H Yolken, Armin Alaedini

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Schizophrenia : CK\(247\) : AC\(29\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### [Markers of gluten sensitivity and celiac disease are increased in recent-onset psychosis and multi-episode schizophrenia.](#) - GMI Summary

**Pubmed Data** : Biol Psychiatry. 2010 Jul 1;68(1):100-4. Epub 2010 May 14. PMID: [20471632](#)

**Article Published Date** : Jul 01, 2010

**Authors** : Faith Dickerson, Cassie Stallings, Andrea Origoni, Crystal Vaughan, Sunil Khushalani, Flora Leister, Shuojia Yang, Bogdana Krivogorsky, Armin Alaedini, Robert Yolken

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Psychoses : CK\(12\) : AC\(3\)](#), [Schizophrenia : CK\(247\) : AC\(29\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### [Persons with schizophrenia have higher than expected titers of antibodies related to celiac disease and gluten sensitivity.](#) - GMI Summary

**Pubmed Data** : Schizophr Bull. 2011 Jan;37(1):94-100. Epub 2009 Jun 3. PMID: [19494248](#)

**Article Published Date** : Jan 01, 2011

**Authors** : Nicola G Cascella, Debra Kryszak, Bushra Bhatti, Patricia Gregory, Deanna L Kelly, Joseph P Mc Evoy, Alessio Fasano, William W Eaton

**Study Type** : Human Study



### Additional Links

**Diseases** : [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Schizophrenia : CK\(247\) : AC\(29\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## [Schizophrenia prevalence is correlated with gluten grain consumption.](#) - GMI Summary

**Pubmed Data** : Biol Psychiatry. 1984 Mar;19(3):385-99. PMID: [6609726](#)

**Article Published Date** : Mar 01, 1984

**Authors** : F C Dohan, E H Harper, M H Clark, R B Rodrigue, V Zigas

**Study Type** : Human Study

### Additional Links

**Diseases** : [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Schizophrenia : CK\(247\) : AC\(29\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Gluten exorphins : CK\(26\) : AC\(10\)](#)

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## [Wheat gluten may be a pathogenic factor in schizophrenia.](#) - GMI Summary

**Pubmed Data** : Science. 1976 Jan 30;191(4225):401-2. PMID: [1246624](#)

**Article Published Date** : Jan 30, 1976

**Authors** : M M Singh, S R Kay

**Study Type** : Human Study

### Additional Links

**Diseases** : [Schizophrenia : CK\(247\) : AC\(29\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## [There may be a schizophrenia-specific, genetically enhanced affinity for exorphins by opioid receptors influencing dopaminergic and other neurons.](#) - GMI Summary

**Pubmed Data** : Schizophr Bull. 1988 ;14(4):489-94. PMID: [2851166](#)

**Article Published Date** : Jan 01, 1988

**Authors** : F C Dohan

**Study Type** : Commentary

### Additional Links

**Diseases** : [Schizophrenia : CK\(247\) : AC\(29\)](#)

**Additional Keywords** : [Food Opioids : CK\(20\) : AC\(14\)](#)

**Problem Substances** : [Casomorphins : CK\(26\) : AC\(6\)](#), [Gluten exorphins : CK\(26\) : AC\(10\)](#)

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## Topic: [Food Allergies: Wheat](#)

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## [A novel wheat gliadin is the cause of exercise-induced anaphylaxis.](#) - GMI Summary

**Pubmed Data** : J Allergy Clin Immunol. 1999 May;103(5 Pt 1):912-7. PMID: [10329828](#)

**Article Published Date** : May 01, 1999

**Authors** : K Palosuo, H Alenius, E Varjonen, M Koivuluhta, J Mikkola, H Keskinen, N Kalkkinen, T Reunala

**Study Type** : Human Study

### Additional Links

**Diseases** : [Anaphylaxis : CK\(54\) : AC\(15\)](#), [Anaphylaxis: Exercise-Induced : CK\(27\) : AC\(3\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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## [Children with atopic dermatitis commonly have specif IgE to common food allergens.](#) - GMI Summary

**Pubmed Data** : Iran J Immunol. 2012 Mar ;9(1):32-8. PMID: [22426165](#)

**Article Published Date** : Mar 01, 2012

**Authors** : Mozghan Moghtaderi, Shirin Farjadian, Sara Kashef, Maryam Tavakoli, Soheila Alyasin, Maryam Afrasiab, Marzieh Orooj

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Allergy: Cow's Milk : CK\(92\) : AC\(18\)](#), [Atopic Dermatitis: Infant & Childhood : CK\(170\) : AC\(14\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [Food Allergies/Intolerances: Cereals/Grains : CK\(11\) : AC\(2\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Nightshade Foods Intolerance : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Cow Milk : CK\(368\) : AC\(46\)](#), [Egg : CK\(20\) : AC\(3\)](#), [Nuts : CK\(10\) : AC\(1\)](#), [Peanut : CK\(31\) : AC\(5\)](#), [Potato : CK\(43\) : AC\(11\)](#), [Tomato : CK\(10\) : AC\(1\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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**[Gluten causes gastrointestinal symptoms in subjects without celiac disease.](#) - GMI Summary**

**Pubmed Data** : Am J Gastroenterol. 2011 Jan 11. Epub 2011 Jan 11. PMID: [21224837](#)

**Article Published Date** : Jan 11, 2011

**Authors** : Jessica R Biesiekierski, Evan D Newnham, Peter M Irving, Jacqueline S Barrett, Melissa Haines, James D Doecke, Susan J Shepherd, Jane G Muir, Peter R Gibson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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**[Gluten sensitivity has been defined as an abnormal non-allergic sensibility to gluten.](#) - GMI Summary**

**Pubmed Data** : Pediatr Med Chir. 2010 Sep-Oct;32(5):211-5. PMID: [21174642](#)

**Article Published Date** : Sep 01, 2010

**Authors** : G M Tronconi, B Parma, G Barera

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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**[Rye and barley may elicit symptoms in patients with wheat-dependent, exercise-induced anaphylaxis.](#) - GMI Summary**

**Pubmed Data** : Clin Exp Allergy. 2001 Mar;31(3):466-73. PMID: [11260160](#)

**Article Published Date** : Mar 01, 2001

**Authors** : K Palosuo, H Alenius, E Varjonen, N Kalkkinen, T Reunala

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Anaphylaxis: Exercise-Induced : CK\(27\) : AC\(3\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#)

**Additional Keywords** : [Cross-Reactivity In Grain Intolerance : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Barley : CK\(13\) : AC\(3\)](#), [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Grains : CK\(27\) : AC\(8\)](#), [Rye : CK\(12\) : AC\(3\)](#)

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**[Wheat intolerance is a common causative factor in atopic dermatitis.](#) - GMI Summary**

**Pubmed Data** : Allergy. 2000 Apr;55(4):386-91. PMID: [10782525](#)

**Article Published Date** : Apr 01, 2000

**Authors** : E Varjonen, E Vainio, K Kalimo

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Atopic Dermatitis : CK\(667\) : AC\(80\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Wheat](#)

[Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Allergenic : CK\(25\) : AC\(5\)](#)

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### **[Differences in the IgE reactivity of sera towards the two genotypes were quantified by ELISA testing. 39 IgE-binding proteins, some of them unknown until now as wheat allergens were identified.](#)** - GMI Summary

**Pubmed Data** : J Proteomics. 2011 Aug 12 ;74(8):1279-89. Epub 2011 Apr 5. PMID: [21473946](#)

**Article Published Date** : Aug 11, 2011

**Authors** : C Larré, R Lupi, G Gombaud, C Brossard, G Branlard, D A Moneret-Vautrin, H Rogniaux, S Denery-Papini

**Study Type** : Human In Vitro

**Additional Links**

**Diseases** : [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[A case study of a 54-year-old Korean woman with a five-year history of wheat flour allergy resulting in a diagnosis of wheat-dependent exercise-induced anaphylaxis.](#)** - GMI Summary

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Ann Dermatol. 2009 Nov ;21(4):447-9. Epub 2009 Nov 30. PMID: [20523846](#)

**Article Published Date** : Oct 31, 2009

**Authors** : Hee Bong Lee, In Su Ahn, Ji Hoon Choi, Chun Wook Park, Cheol Heon Lee

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Anaphylaxis: Exercise-Induced : CK\(27\) : AC\(3\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[There are neurologic and psychiatric manifestations to gluten sensitivity.](#)** - GMI Summary

**Pubmed Data** : Psychiatr Q. 2011 Aug 30. Epub 2011 Aug 30. PMID: [21877216](#)

**Article Published Date** : Aug 30, 2011

**Authors** : Jessica R Jackson, William W Eaton, Nicola G Cascella, Alessio Fasano, Deanna L Kelly

**Study Type** : Review

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Psychiatric Disorders : CK\(71\) : AC\(10\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Wheat gliadin may promote its pro-allergenic effects by upregulation of interleukin-4 induced IgE production.](#)** - GMI Summary

**Pubmed Data** : Cytokine. 2003 Mar 21;21(6):270-80. PMID: [12824000](#)

**Article Published Date** : Mar 21, 2003

**Authors** : Bernard Dugas, Nathalie Dugas, Marc Conti, Alphonse Calenda, Paco Pino, Yolène Thomas, Dominique Mazier, Ioannis Vouldoukis

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Allergenic : CK\(25\) : AC\(5\)](#), [Inflammatory : CK\(150\) : AC\(37\)](#), [Interleukin-4 Up-Regulation : CK\(1\) : AC\(1\)](#)

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**Topic:** [Food Allergies](#)

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**[165 children with atopic dermatitis were studied, a higher number of sensitized food allergens was associated with negative effects on their growth and nutritional status.](#) - GMI Summary**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Allergy Asthma Immunol Res. 2011 Jan ;3(1):53-7. Epub 2010 Nov 23. PMID: [21217926](#)

**Article Published Date** : Dec 31, 2010

**Authors** : Ha-Na Cho, Soyoun Hong, Soo-Hyung Lee, Hye-Yung Yum

**Study Type** : Human Study

**Additional Links**

**Substances** : [Peanut : CK\(104\) : AC\(19\)](#)

**Diseases** : [Atopic Dermatitis : CK\(667\) : AC\(80\)](#), [Children: Impaired Growth : CK\(30\) : AC\(3\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [IgE-Mediated Hypersensitivity : CK\(108\) : AC\(2\)](#)

**Additional Keywords** : [Pediatric : CK\(30\) : AC\(3\)](#)

**Problem Substances** : [Peanut : CK\(31\) : AC\(5\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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**[54 children suffering from chronic constipation unresponsive to therapy, were prospectively evaluated; in this group food allergy seemed to be a significant etiologic factor. APT was found to be useful in evaluating non-IgE allergy-mediated constipation.](#) - GMI Summary**

**Pubmed Data** : Eur J Pediatr. 2011 Sep ;170(9):1173-8. Epub 2011 Feb 25. PMID: [21347849](#)

**Article Published Date** : Aug 31, 2011

**Authors** : Ekaterini I Syrigou, Constantinos Pitsios, Ioanna Panagiotou, Georgios Chouliaras, Sofia Kitsiou, Mary Kanariou, Eleftheria Roma-Giannikou

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Chronic Constipation, Children : CK\(10\) : AC\(1\)](#), [Constipation : CK\(326\) : AC\(37\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords** : [Atopy Patch Test : CK\(10\) : AC\(1\)](#), [Pediatric : CK\(30\) : AC\(3\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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**[A high prevalence of gluten sensitivity is found in sporadic and hereditary cerebellar ataxia.](#) - GMI Summary**

**Pubmed Data** : Ann Neurol. 2001 Apr;49(4):540-3. PMID: [11310636](#)

**Article Published Date** : Apr 01, 2001

**Authors** : K O Bushara, S U Goebel, H Shill, L G Goldfarb, M Hallett

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Ataxia: Cerebellar : CK\(67\) : AC\(3\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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**[A novel wheat gliadin is the cause of exercise-induced anaphylaxis.](#) - GMI Summary**

**Pubmed Data** : J Allergy Clin Immunol. 1999 May;103(5 Pt 1):912-7. PMID: [10329828](#)

**Article Published Date** : May 01, 1999

**Authors** : K Palosuo, H Alenius, E Varjonen, M Koivuluhta, J Mikkola, H Keskinen, N Kalkkinen, T Reunala

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Anaphylaxis : CK\(54\) : AC\(15\)](#), [Anaphylaxis: Exercise-Induced : CK\(27\) : AC\(3\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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**[A study of 53 pediatric patients with eosinophilic esophagitis found most were highly atopic with frequent allergic sensitivities; the overall prevalence of food](#)**

## **& inhalant sensitization was 80%, with higher total IgE levels in sensitized vs nonsensitized - GMI Summary**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Ann Allergy Asthma Immunol. 2010 Jun ;104(6):496-502. PMID: [20568382](#)

**Article Published Date** : May 31, 2010

**Authors** : Elizabeth A Erwin, Hayley R James, Heather M Gutekunst, John M Russo, Kelly J Kelleher, Thomas A E Platts-Mills

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Eosinophilic esophagitis : CK\(66\) : AC\(5\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [IgE-Mediated Hypersensitivity : CK\(108\) : AC\(2\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Cow Milk : CK\(368\) : AC\(46\)](#), [Rye : CK\(12\) : AC\(3\)](#), [Soy : CK\(56\) : AC\(8\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Children with atopic dermatitis commonly have specif IgE to common food allergens. - GMI Summary**

**Pubmed Data** : Iran J Immunol. 2012 Mar ;9(1):32-8. PMID: [22426165](#)

**Article Published Date** : Mar 01, 2012

**Authors** : Mozghan Moghtaderi, Shirin Farjadian, Sara Kashef, Maryam Tavakoli, Soheila Alyasin, Maryam Afrasiab, Marzieh Orooj

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Allergy: Cow's Milk : CK\(92\) : AC\(18\)](#), [Atopic Dermatitis: Infant & Childhood : CK\(170\) : AC\(14\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [Food Allergies/Intolerances: Cereals/Grains : CK\(11\) : AC\(2\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Nightshade Foods Intolerance : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Cow Milk : CK\(368\) : AC\(46\)](#), [Egg : CK\(20\) : AC\(3\)](#), [Nuts : CK\(10\) : AC\(1\)](#), [Peanut : CK\(31\) : AC\(5\)](#), [Potato : CK\(43\) : AC\(11\)](#), [Tomato : CK\(10\) : AC\(1\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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## **Rye and barley may elicit symptoms in patients with wheat-dependent, exercise-induced anaphylaxis. - GMI Summary**

**Pubmed Data** : Clin Exp Allergy. 2001 Mar;31(3):466-73. PMID: [11260160](#)

**Article Published Date** : Mar 01, 2001

**Authors** : K Palosuo, H Alenius, E Varjonen, N Kalkkinen, T Reunala

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Anaphylaxis: Exercise-Induced : CK\(27\) : AC\(3\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#)

**Additional Keywords** : [Cross-Reactivity In Grain Intolerance : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Barley : CK\(13\) : AC\(3\)](#), [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Grains : CK\(27\) : AC\(8\)](#), [Rye : CK\(12\) : AC\(3\)](#)

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## **Celiac disease, eosinophilic esophagitis, and immediate-type immunoglobulin E-mediated food allergy. - GMI Summary**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : J Investig Allergol Clin Immunol. 2011 ;21(1):73-5. PMID: [21370728](#)

**Article Published Date** : Dec 31, 2010

**Authors** : S Sánchez-García, M D Ibáñez, M J Martínez-Gómez, C Escudero, A Vereda, M Fernández-Rodríguez, P Rodríguez del Río

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Eosinophilic esophagitis : CK\(66\) : AC\(5\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [Food Allergy: Immunoglobulin E-mediated : CK\(3\) : AC\(1\)](#), [Urticaria : CK\(130\) : AC\(8\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **[Gliadin and alcohol may contribute to igA nephropathy.](#) - GMI Summary**

**Pubmed Data** : Minerva Urol Nefrol. 1991 Jul-Sep;43(3):171-4. PMID: [1817341](#)

**Article Published Date** : Jul 01, 1991

**Authors** : R Coppo, A Amore, D Roccatello, B Gianoglio, L Peruzzi, D Alessi, A Reyna, A Mesiti, G Piccoli, L M Sena

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Food Allergies : CK\(390\) : AC\(53\)](#)

**Problem Substances** : [Ethanol : CK\(20\) : AC\(6\)](#), [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Topic: [Psoriasis](#)**

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## **[A Gluten-free diet in psoriasis patients with antibodies to gliadin results in significant clinical improvements.](#) - GMI Summary**

**Pubmed Data** : Acta Derm Venereol. 2003;83(6):425-9. PMID: [14690336](#)

**Article Published Date** : Jan 01, 2003

**Authors** : Gerd Michaëlsson, Stina Ahs, Ingrid Hammarström, Inger Pihl Lundin, Eva Hagforsen

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Psoriasis : CK\(270\) : AC\(42\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Anti-Gliadin Antibodies : CK\(71\) : AC\(8\)](#), [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **[Patients with psoriasis show elevated sensitivity to gluten.](#) - GMI Summary**

**Pubmed Data** : J Clin Lab Anal. 2010;24(4):269-72. PMID: [20626025](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Sangeeta Singh, Gyanendra Kumar Sonkar, Usha, Sanjay Singh

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Psoriasis : CK\(270\) : AC\(42\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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## **[There is an association between psoriasis and asymptomatic celiac disease/gluten intolerance.](#) - GMI Summary**

**Pubmed Data** : J Eur Acad Dermatol Venereol. 2008 Sep;22(9):1055-61. Epub 2008 Apr 1. PMID: [18384553](#)

**Article Published Date** : Sep 01, 2008

**Authors** : A Damasiewicz-Bodzek, T Wielkoszyński

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Psoriasis : CK\(270\) : AC\(42\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **[Wheat protein antigens likely play a role in a subtype of psoriasis.](#) - GMI Summary**

**Pubmed Data** : Br J Dermatol. 2011 Sep 12. Epub 2011 Sep 12. PMID: [21910707](#)

**Article Published Date** : Sep 12, 2011

**Authors** : J Skavland, P R Shewry, J Marsh, B Geisner, J A Marcusson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Psoriasis](#) : CK(270) : AC(42)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131), [Wheat](#) : CK(2371) : AC(280)

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### **[Gluten intolerance gives rise to a variety of dermatological manifestations which may benefit from a gluten-free diet. - GMI Summary](#)**

**Pubmed Data** : Eur J Dermatol. 2006 Jan-Feb;16(1):4-11. PMID: [16436335](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Philippe Humbert, Fabien Pelletier, Brigitte Dreno, Eve Puzenat, François Aubin

**Study Type** : Commentary

**Additional Links**

**Diseases** : [Allergies](#) : CK(502) : AC(92), [Autoimmune Diseases](#) : CK(5084) : AC(779), [Gluten Intolerance](#) : CK(236) : AC(33), [Psoriasis](#) : CK(270) : AC(42)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131), [Wheat](#) : CK(2371) : AC(280)

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## **Topic: [Down Syndrome](#)**

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### **[Celiac disease is a common condition in Down syndrome. - GMI Summary](#)**

**Pubmed Data** : J Pediatr Gastroenterol Nutr. 1995 Nov;21(4):443-5. PMID: [8583297](#)

**Article Published Date** : Nov 01, 1995

**Authors** : U Jansson, C Johansson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Down Syndrome](#) : CK(50) : AC(5)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Gluten](#) : CK(1610) : AC(131), [Wheat](#) : CK(2371) : AC(280)

**Adverse Pharmacological Actions** : [Immunotoxic](#) : CK(230) : AC(38)

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### **[The prevalence of celiac disease in Down syndrome in the southeastern United States was 1 in 14 cases. - GMI Summary](#)**

**Pubmed Data** : J Pediatr Gastroenterol Nutr. 2000 Sep;31(3):275-9. PMID: [10997372](#)

**Article Published Date** : Sep 01, 2000

**Authors** : D A Zachor, E Mroczek-Musulman, P Brown

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Down Syndrome](#) : CK(50) : AC(5)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104)

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### **[There is a higher prevalence of celiac disease in patients with Down syndrome than background populations. - GMI Summary](#)**

**Pubmed Data** : Acta Paediatr. 1999 Sep;88(9):953-6. PMID: [10519335](#)

**Article Published Date** : Sep 01, 1999

**Authors** : S M Pueschel, C Romano, P Failla, C Barone, R Pettinato, A Castellano Chiodo, D L Plumari

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Down Syndrome](#) : CK(50) : AC(5)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104)

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### **[There is a prevalence of IgA-antigliadin antibodies and IgA-antiendomysium antibodies related to celiac disease in children with Down syndrome. - GMI Summary](#)**

**Pubmed Data** : Pediatrics. 1998 Feb;101(2):272-5. PMID: [9445503](#)

**Article Published Date** : Feb 01, 1998

**Authors** : A Carlsson, I Axelsson, S Borulf, A Bredberg, M Forslund, B Lindberg, K Sjöberg, S A Ivarsson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Down Syndrome : CK\(50\) : AC\(5\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[There is an increased frequency of gliadin antibodies in patients with Down syndrome, indicating the possibility of an increased incidence of celiac disease in this population.](#) - GMI Summary**

**Pubmed Data** : Eur J Pediatr. 1990 Sep;149(12):833-4. PMID: [2146127](#)

**Article Published Date** : Sep 01, 1990

**Authors** : W Storm

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Down Syndrome : CK\(50\) : AC\(5\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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## **[Topic: Diabetes Mellitus: Type 1](#)**

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### **[Adults with Type 1 diabetes have a higher prevalence of celiac disease associated antibodies.](#) - GMI Summary**

**Pubmed Data** : Diabetes Nutr Metab. 2001 Feb;14(1):37-42. PMID: [11345164](#)

**Article Published Date** : Feb 01, 2001

**Authors** : E Matteucci, V Cinapri, S Quilici, A Lucchetti, P Mugnaini, O Giampietro

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Diabetes Mellitus: Type 1: Prevention : CK\(163\) : AC\(24\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Celiac disease prevalence was found to be 3.5% in children with type 1 diabetes.](#) - GMI Summary**

**Pubmed Data** : J Pediatr Endocrinol Metab. 1996 Mar;9 Suppl 1:101-11. PMID: [8887160](#)

**Article Published Date** : Mar 01, 1996

**Authors** : R Lorini, A Scaramuzza, L Vitali, G d'Annunzio, M A Avanzini, C De Giacomo, F Severi

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Diabetes Mellitus: Type 1: Prevention : CK\(163\) : AC\(24\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[Intolerance to wheat \(CD autoantibodies\) is higher than background rates in those with Turner syndrome.](#) - GMI Summary**

**Pubmed Data** : Clin Exp Immunol. 2009 May;156(2):205-10. Epub 2009 Feb 26. PMID: [19298606](#)

**Article Published Date** : May 01, 2009

**Authors** : K H Mortensen, L Cleemann, B E Hjerrild, E Nexø, H Locht, E M Jeppesen, C H Gravholt

**Study Type** : Human Study

**Additional Links**



**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Hypothyroidism : CK\(525\) : AC\(78\)](#), [Turner Syndrome : CK\(10\) : AC\(1\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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### **[Prevalence of celiac among diabetic patients in comparison to normal population was 8.3% vs. 0.6%. - GMI Summary](#)**

**Pubmed Data** : J Res Med Sci. 2011 Mar ;16 Suppl 1:S401-6. PMID: [22247725](#)

**Article Published Date** : Mar 01, 2011

**Authors** : Homayoon Bashiri, Aliasghar Keshavarz, Hamid Madani, Ahmadreza Hooshmandi, Shahrzad Bazargan-Hejazi, Alireza Ahmadi

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#)

**Additional Keywords** : [Celiac Prevalence : CK\(121\) : AC\(13\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[The prevalence rate of celiac disease in Libyan children with type 1 diabetes was 10.3%. - GMI Summary](#)**

**Pubmed Data** : Diabetes Metab Res Rev. 2003 Jan-Feb;19(1):69-75. PMID: [12592646](#)

**Article Published Date** : Jan 01, 2003

**Authors** : Abdelhakim Ashabani, Umaima Abushofa, Suliman Abusrewill, Mahmoud Abdelazez, Ludmila Tucková, Helena Tlaskalová-Hogenová

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#),

[Diabetes Mellitus: Type 1: Prevention : CK\(163\) : AC\(24\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[Dietary gluten alters the balance of proinflammatory and anti-inflammatory cytokines in T cells of BALB/c mice, indicating that gluten may contribute to increased incidence of type 1 diabetes. - GMI Summary](#)**

**Pubmed Data** : Immunology. 2012 Aug 22. Epub 2012 Aug 22. PMID: [22913724](#)

**Article Published Date** : Aug 21, 2012

**Authors** : Julie C Antvorskov, Petra Fundova, Karsten Buschard, David P Funda

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Diabetes Mellitus: Type 1: Prevention :](#)

[CK\(163\) : AC\(24\)](#), [Inflammation : CK\(1014\) : AC\(348\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Inflammatory : CK\(150\) : AC\(37\)](#)

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### **[Dietary gluten influences the development of type 1 diabetes \(T1D\). - GMI Summary](#)**

**Pubmed Data** : PLoS One. 2012 ;7(3):e33315. Epub 2012 Mar 13. PMID: [22428018](#)

**Article Published Date** : Jan 01, 2012

**Authors** : Julie Christine Antvorskov, Petra Fundova, Karsten Buschard, David P Funda

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Diabetogenic : CK\(124\) : AC\(14\)](#), [Immunotoxic : CK\(230\) : AC\(38\)](#)

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### **[Dietary gluten reduces the number of intestinal regulatory T cells in mice which](#)**

## [may result in loss of self-tolerance and therefore increased risk of type 1 diabetes.](#) - GMI Summary

**Pubmed Data** : Scand J Immunol. 2008 Jun ;67(6):553-9. PMID: [18476878](#)

**Article Published Date** : Jun 01, 2008

**Authors** : M Ejsing-Duun, J Josephsen, B Aasted, K Buschard, A K Hansen

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#)

**Pharmacological Actions** : [Interleukin-10 downregulation : CK\(73\) : AC\(21\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Diabetogenic : CK\(124\) : AC\(14\)](#), [Immunotoxic : CK\(230\) : AC\(38\)](#)

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## [Gliadin triggered insulinitis in type 1 diabetes associated with celiac disease](#) - GMI Summary

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : J Immunol. 2011 Oct 15 ;187(8):4338-46. Epub 2011 Sep 12. PMID: [21911598](#)

**Article Published Date** : Oct 14, 2011

**Authors** : Heather J Galipeau, Nestor E Rulli, Jennifer Jury, Xianxi Huang, Romina Araya, Joseph A Murray, Chella S David, Fernando G Chirido, Kathy D McCoy, Elena F Verdu

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#),

[Enteropathy : CK\(28\) : AC\(4\)](#), [Insulinitis : CK\(2\) : AC\(1\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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## [The habitual consumption of wheat gluten may be a contributing factor in the pathogenesis of type 1 diabetes.](#) - GMI Summary

**Pubmed Data** : Med Hypotheses. 2007;68(3):607-19. Epub 2006 Oct 11. PMID: [17045415](#)

**Article Published Date** : Jan 01, 2007

**Authors** : William E Barbeau, Josep Bassaganya-Riera, Raquel Hontecillas

**Study Type** : Commentary

**Additional Links**

**Diseases** : [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Zonulin : CK\(15\) : AC\(5\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Topic: [Irritable Bowel Syndrome](#)**

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### ["Frequency of celiac disease and irritable bowel syndrome coexistence and its influence on the disease course"](#) - GMI Summary

**Pubmed Data** : Przegl Lek. 2009 ;66(3):126-9. PMID: [19689036](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Małgorzata Zwolińska-Wcisło, Danuta Galicka-Latała, Piotr Rozpondek, Lucyna Rudnicka-Sosin, Tomasz Mach

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Irritable Bowel Syndrome : CK\(803\) : AC\(66\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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### [A subgroup of Irritable Bowel Syndrome patients have latent/potential celiac disease and respond to a gluten-free diet.](#) - GMI Summary

**Pubmed Data** : Gastroenterology. 2001 Dec;121(6):1329-38. PMID: [11729112](#)

**Article Published Date** : Dec 01, 2001

**Authors** : U Wahnschaffe, R Ullrich, E O Riecken, J D Schulzke

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Irritable Bowel Syndrome : CK\(803\) : AC\(66\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Diarrhea-predominant irritable bowel syndrome is associated with celiac-disease associated serum IgG in many patients tested. A gluten-free diet results in significant improvements.](#) - GMI Summary**

**Pubmed Data** : Clin Gastroenterol Hepatol. 2007 Jul;5(7):844-50; quiz 769. Epub 2007 Jun 5. PMID: [17553753](#)

**Article Published Date** : Jul 01, 2007

**Authors** : Ulrich Wahnschaffe, Jörg-Dieter Schulzke, Martin Zeitz, Reiner Ullrich

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diarrhea: IBS associated : CK\(10\) : AC\(1\)](#), [Irritable Bowel Syndrome : CK\(803\) : AC\(66\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Topic: Autism Spectrum Disorders**

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### **[There is evidence supporting the beneficial effect of a gluten- and casein-free diet for autistic spectrum disorder.](#) - GMI Summary**

**Pubmed Data** : Cochrane Database Syst Rev. 2004(2):CD003498. PMID: [15106205](#)

**Article Published Date** : Jan 01, 2004

**Authors** : C Millward, M Ferriter, S Calver, G Connell-Jones

**Study Type** : Meta Analysis

**Additional Links**

**Diseases** : [Autism Spectrum Disorders : CK\(1118\) : AC\(108\)](#)

**Therapeutic Actions** : [Dietary Modification: Cow's Milk/Casein Free : CK\(43\) : AC\(2\)](#), [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Casein : CK\(123\) : AC\(16\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[A Gluten and casein-free diet may have a therapeutic effect in autism spectrum and attention deficit disorders.](#) - GMI Summary**

**Pubmed Data** : Nutr Neurosci. 2010 Apr;13(2):87-100. PMID: [20406576](#)

**Article Published Date** : Apr 01, 2010

**Authors** : Paul Whiteley, Demetrios Haracopos, Ann-Mari Knivsberg, Karl Ludvig Reichelt, Sarah Parlar, Judith Jacobsen, Anders Seim, Lennart Pedersen, Maja Schondel, Paul Shattock

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Attention Deficit Disorder : CK\(134\) : AC\(12\)](#), [Attention Deficit Disorder with Hyperactivity : CK\(230\) : AC\(32\)](#), [Autism Spectrum Disorders : CK\(1118\) : AC\(108\)](#)

**Additional Keywords** : [Gluten and ADHD : CK\(20\) : AC\(2\)](#)

**Problem Substances** : [Casein : CK\(123\) : AC\(16\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[A gluten-free, casein-free diet has therapeutic value in some children diagnosed with autism spectrum disorder.](#) - GMI Summary**

**Pubmed Data** : Nutr Neurosci. 2012 Mar ;15(2):85-91. PMID: [22564339](#)

**Article Published Date** : Mar 01, 2012

**Authors** : Christine M Pennesi, Laura Cousino Klein

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autism Spectrum Disorders : CK\(1118\) : AC\(108\)](#)

**Therapeutic Actions** : [Dietary Modification: Cow's Milk/Casein Free : CK\(43\) : AC\(2\)](#), [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Children with autism show elevations against gliadin \(wheat protein\) and cerebellar proteins simultaneously. These proteins simulate antibodies that may cross-react, resulting in neurological damage.](#) - GMI Summary**

**Pubmed Data** : Nutr Neurosci. 2004 Jun;7(3):151-61. PMID: [15526989](#)

**Article Published Date** : Jun 01, 2004

**Authors** : A Vojdani, T O'Bryan, J A Green, J Mccandless, K N Woeller, E Vojdani, A A Nourian, E L Cooper

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autism : CK\(1340\) : AC\(65\)](#), [Autism Spectrum Disorders : CK\(1118\) : AC\(108\)](#), [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Molecular Mimicry : CK\(47\) : AC\(10\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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### **[A large number of neurologic syndromes may result from gluten intolerance.](#) - GMI Summary**

**Pubmed Data** : Gastroenterology. 2005 Apr;128(4 Suppl 1):S92-7. PMID: [15825133](#)

**Article Published Date** : Apr 01, 2005

**Authors** : Khalafalla O Bushara

**Study Type** : Commentary

**Additional Links**

**Diseases** : [Ataxia: Cerebellar : CK\(67\) : AC\(3\)](#), [Autism Spectrum Disorders : CK\(1118\) : AC\(108\)](#), [Chorea : CK\(1\) : AC\(1\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Guillain-Barre Syndrome : CK\(84\) : AC\(14\)](#), [Huntington Disease : CK\(45\) : AC\(17\)](#), [Myelopathy : CK\(11\) : AC\(2\)](#), [Neuropathy : CK\(158\) : AC\(24\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **[Topic: Celiac Disease: Diagnostic Considerations](#)**

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### **[Clinically pertinent coeliac disease exists despite normal small-bowel mucosal villous architecture.](#) - GMI Summary**

**Pubmed Data** : Scand J Gastroenterol. 2005 May;40(5):564-72. PMID: [16036509](#)

**Article Published Date** : May 01, 2005

**Authors** : Katri Kaukinen, Markku Peräaho, Pekka Collin, Jukka Partanen, Nina Woolley, Tanja Kaartinen, Tuula Nuutinen, Tuula Halttunen, Markku Mäki, Ilma Korponay-Szabo

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease: Diagnostic Considerations : CK\(91\) : AC\(8\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Due to the fact that monozygotic twins share the same genotype but do not always both get celiac disease, other environmental and genetic factors might contribute to determining the disease.](#) - GMI Summary**

**Pubmed Data** : Arq Gastroenterol. 2010 Mar;47(1):56-60. PMID: [20520976](#)

**Article Published Date** : Mar 01, 2010

**Authors** : Magda Bahia, Francisco José Penna, Dora Mendez Del Castillo, Marina Guimarães Corrê Hasegawa, Aline Cristina Vieira, Vanessa Ribeiro Orlando

**Study Type** : Human Study

### Additional Links

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Celiac Disease: Diagnostic Considerations : CK\(91\) : AC\(8\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### [Positive serum antigliadin antibodies without celiac disease have been associated with rheumatoid arthritis and depression in the elderly.](#) - GMI Summary

**Pubmed Data** : Scand J Gastroenterol. 2010 Oct;45(10):1197-202. PMID: [20545470](#)

**Article Published Date** : Oct 01, 2010

**Authors** : Anitta Ruuskanen, Katri Kaukinen, Pekka Collin, Heini Huhtala, Raisa Valve, Markku Mäki, Liisa Luostarinen

**Study Type** : Human Study

### Additional Links

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Celiac Disease: Diagnostic Considerations : CK\(91\) : AC\(8\)](#), [Depression: Unipolar : CK\(662\) : AC\(84\)](#), [Rheumatoid Arthritis : CK\(414\) : AC\(64\)](#)

**Additional Keywords** : [Antigliadin Antibodies \(AGA\) : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### [Superiority of anti-deamidated gliadin antibodies for differential diagnosis of celiac disease](#) - GMI Summary

**Pubmed Data** : Ann Biol Clin (Paris). 2010 Mar-Apr;68(2):149-56. PMID: [20348047](#)

**Article Published Date** : Feb 28, 2010

**Authors** : Laurence Lutteri, Clémence Sagot, Jean-Paul Chapelle

**Study Type** : Human Study

### Additional Links

**Diseases** : [Celiac Disease: Diagnostic Considerations : CK\(91\) : AC\(8\)](#)

**Additional Keywords** : [Celiac Disease: Diagnostic Considerations : CK\(91\) : AC\(8\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### [Gluten epitope recognition in DQ2.3 molecule of a DQ8/DQ2.5 heterozygous celiac disease patient](#) - GMI Summary

**Pubmed Data** : J Biol Chem. 2012 Feb 23. Epub 2012 Feb 23. PMID: [22362761](#)

**Article Published Date** : Feb 22, 2012

**Authors** : Stig Tollefsen, Kinya Hotta, Xi Chen, Bjørg Simonsen, Kunchithapadam Swaminathan, Irimpan I Mathews, Ludvig M Sollid, Chu-Young Kim

**Study Type** : Review

### Additional Links

**Diseases** : [Celiac Disease: Diagnostic Considerations : CK\(91\) : AC\(8\)](#)

**Additional Keywords** : [Celiac Disease: Diagnostic Considerations : CK\(91\) : AC\(8\)](#), [Celiac Disease: Diagnostic Considerations : CK\(91\) : AC\(8\)](#), [Celiac Disease: Diagnostic Considerations : CK\(91\) : AC\(8\)](#), [Celiac Disease: Diagnostic Considerations : CK\(91\) : AC\(8\)](#), [Celiac Disease: Diagnostic Considerations : CK\(91\) : AC\(8\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [Diabetes Mellitus: Type 1: Prevention](#)

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### [A glutenfree diet showed short-term benefits by reducing GI symptoms and severe hypoglycaemia in T1D and CD](#) - GMI Summary

**Pubmed Data** : Pediatr Diabetes. 2011 Jun ;12(4 Pt 1):322-5. Epub 2011 Mar 29. PMID: [21615651](#)

**Article Published Date** : May 31, 2011

**Authors** : Noina Abid, Oonagh McGlone, Chris Cardwell, William McCallion, Dennis Carson

**Study Type** : Human Study

### Additional Links

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 1: Prevention : CK\(163\) : AC\(24\)](#)

**Additional Keywords** : [Autoantibodies](#) : CK(30) : AC(3), [Body Mass Index \(BMI\)](#) : CK(10) : AC(1), [Glycosylated Haemoglobin \(HbA1c\)](#) : CK(10) : AC(1), [Hypoglycemia](#) : CK(10) : AC(1)  
**Problem Substances** : [Gluten](#) : CK(1610) : AC(131), [Insulin](#) : CK(69) : AC(11)

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### **[Adults with Type 1 diabetes have a higher prevalence of celiac disease associated antibodies.](#) - GMI Summary**

**Pubmed Data** : Diabetes Nutr Metab. 2001 Feb;14(1):37-42. PMID: [11345164](#)

**Article Published Date** : Feb 01, 2001

**Authors** : E Matteucci, V Cinapri, S Quilici, A Lucchetti, P Mugnaini, O Giampietro

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Diabetes Mellitus: Type 1](#) : CK(1023) : AC(221), [Diabetes Mellitus: Type 1: Prevention](#) : CK(163) : AC(24)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Wheat](#) : CK(2371) : AC(280)

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### **[Celiac disease prevalence was found to be 3.5% in children with type 1 diabetes.](#) - GMI Summary**

**Pubmed Data** : J Pediatr Endocrinol Metab. 1996 Mar;9 Suppl 1:101-11. PMID: [8887160](#)

**Article Published Date** : Mar 01, 1996

**Authors** : R Lorini, A Scaramuzza, L Vitali, G d'Annunzio, M A Avanzini, C De Giacomo, F Severi

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Diabetes Mellitus: Type 1](#) : CK(1023) : AC(221), [Diabetes Mellitus: Type 1: Prevention](#) : CK(163) : AC(24)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104)

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### **[The prevalence rate of celiac disease in Libyan children with type 1 diabetes was 10.3%.](#) - GMI Summary**

**Pubmed Data** : Diabetes Metab Res Rev. 2003 Jan-Feb;19(1):69-75. PMID: [12592646](#)

**Article Published Date** : Jan 01, 2003

**Authors** : Abdelhakim Ashabani, Umaima Abushofa, Suliman Abusrewill, Mahmoud Abdelazez, Ludmila Tucková, Helena Tlaskalová-Hogenová

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Diabetes Mellitus: Type 1](#) : CK(1023) : AC(221), [Diabetes Mellitus: Type 1: Prevention](#) : CK(163) : AC(24)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104)

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### **[A casein- and wheat-free diet was associated with the lowest rate of autoimmune diabetes \(type 1\) development in mice.](#) - GMI Summary**

**Pubmed Data** : Ann Nutr Metab. 2009;54(3):208-17. Epub 2009 May 27. PMID: [19478481](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Daniela B Mueller, Kerstin Koczwarra, Andreas S Mueller, Josef Pallauf, Anette-G Ziegler, Ezio Bonifacio

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Diabetes Mellitus: Type 1: Prevention](#) : CK(163) : AC(24)

**Problem Substances** : [Casein](#) : CK(123) : AC(16), [Gluten](#) : CK(1610) : AC(131)

**Adverse Pharmacological Actions** : [Diabetogenic](#) : CK(124) : AC(14)

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### **[Delayed exposure to wheat and barley proteins reduces diabetes incidence in non-obese diabetic mice.](#) - GMI Summary**

**Pubmed Data** : Clin Immunol. 2004 Apr;111(1):108-18. PMID: [15093559](#)

**Article Published Date** : Apr 01, 2004

**Authors** : Sandra Schmid, Kerstin Koczwar, Susanne Schwinghammer, Vito Lampasona, Anette-G Ziegler, Ezio Bonifacio

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Diabetes Mellitus: Type 1: Prevention : CK\(163\) : AC\(24\)](#)

**Problem Substances** : [Barley : CK\(13\) : AC\(3\)](#), [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Grains : CK\(27\) : AC\(8\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Diabetogenic : CK\(124\) : AC\(14\)](#)

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### **[Dietary gluten alters the balance of proinflammatory and anti-inflammatory cytokines in T cells of BALB/c mice, indicating that gluten may contribute to increased incidence of type 1 diabetes. - GMI Summary](#)**

**Pubmed Data** : Immunology. 2012 Aug 22. Epub 2012 Aug 22. PMID: [22913724](#)

**Article Published Date** : Aug 21, 2012

**Authors** : Julie C Antvorskov, Petra Fundova, Karsten Buschard, David P Funda

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Diabetes Mellitus: Type 1: Prevention : CK\(163\) : AC\(24\)](#), [Inflammation : CK\(1014\) : AC\(348\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Inflammatory : CK\(150\) : AC\(37\)](#)

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## **Topic: [Sjogren's Syndrome](#)**

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### **[An adverse immune reaction to wheat proteins is more commonly apparent \(anti-tTG\) in Sjögren's syndrome. - GMI Summary](#)**

**Pubmed Data** : J Rheumatol. 2003 Dec ;30(12):2613-9. PMID: [14719202](#)

**Article Published Date** : Dec 01, 2003

**Authors** : Leeanne M Luft, Susan G Barr, Liam O Martin, Edward K L Chan, Marvin J Fritzler

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Sjogren's Syndrome : CK\(81\) : AC\(14\)](#)

**Additional Keywords** : [Sjogren's Syndrome : CK\(81\) : AC\(14\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **[Celiac disease prevalence is significantly higher in those diagnosed with Sjogren's syndrome. - GMI Summary](#)**

**Pubmed Data** : Rheumatol Int. 2004 Sep;24(5):278-82. Epub 2003 Sep 17. PMID: [13680146](#)

**Article Published Date** : Sep 01, 2004

**Authors** : Peter Szodoray, Zsolt Barta, Gabriella Lakos, Szabolcs Szakáll, Margit Zeher

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Sjogren's Syndrome : CK\(81\) : AC\(14\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[There is a close association between Sjögren's syndrome and celiac disease. Even among nonceliac patients with primary Sjögren's syndrome, an ongoing inflammation is often present in the small bowel mucosa. - GMI Summary](#)**

**Pubmed Data** : Am J Gastroenterol. 1999 Apr;94(4):1042-6. PMID: [10201480](#)

**Article Published Date** : Apr 01, 1999

**Authors** : S Iltanen, P Collin, M Korpela, K Holm, J Partanen, A Polvi, M Mäki

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Sjogren's Syndrome](#) : CK(81) : AC(14)  
**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)  
**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Wheat](#) : CK(2371) : AC(280)

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## **Topic: [Cerebellar Ataxia](#)**

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### **[Gluten sensitivity is associated with sporadic cerebellar ataxia in Taiwan.](#) - GMI Summary**

**Pubmed Data** : Acta Neurol Taiwan. 2010 Dec;19(4):263-9. PMID: [21210327](#)

**Article Published Date** : Dec 01, 2010

**Authors** : Chin-San Liu, Bing-Wen Soong, Yi-Chung Lee, Woan-Ling Chen, Chen-Ling Kuo, Wen-Ling Cheng, Ching-Shan Huang, Wei-Ting Lin

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Cerebellar Ataxia](#) : CK(36) : AC(4)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1064) : AC(179)

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### **[Neurological symptoms occur in 6-10% of those with celiac disease, with cerebella ataxia being the most frequent symptom.](#) - GMI Summary**

**Pubmed Data** : Mov Disord. 2009 Dec 15;24(16):2358-62. PMID: [19845007](#)

**Article Published Date** : Dec 15, 2009

**Authors** : Katrin Bürk, Marie-Louise Farecki, Georg Lamprecht, Guenter Roth, Patrice Decker, Michael Weller, Hans-Georg Rammensee, Wolfgang Oertel

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Carpal Tunnel Syndrome](#) : CK(80) : AC(8), [Celiac Disease](#) : CK(1393) : AC(185), [Cerebellar Ataxia](#) : CK(36) : AC(4), [Gluten Sensitivity](#) : CK(2319) : AC(246), [Migraine Disorders](#) : CK(455) : AC(54), [Psychiatric Disorders](#) : CK(71) : AC(10), [Wheat Intolerance](#) : CK(2213) : AC(231)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1064) : AC(179)

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### **[There is a high prevlance of gluten sensitivity in Japanese patients with adult-onset cerebellar ataxia.](#) - GMI Summary**

**Pubmed Data** : Intern Med. 2006;45(3):135-40. Epub 2006 Mar 1. PMID: [16508226](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Masafumi Ihara, Fumi Makino, Hideyuki Sawada, Takahiro Mezaki, Kotaro Mizutani, Hiroshi Nakase, Makoto Matsui, Hidekazu Tomimoto, Shun Shimohama

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Cerebellar Ataxia](#) : CK(36) : AC(4), [Gluten Sensitivity](#) : CK(2319) : AC(246)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Gluten](#) : CK(1610) : AC(131), [Wheat](#) : CK(2371) : AC(280)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1064) : AC(179)

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### **[At least 10% of sporadic cerebellar ataxia may be related to immune-mediated mechanisms which include gliadin intolerance.](#) - GMI Summary**

**Pubmed Data** : Eur Neurol. 2009 ;62(6):356-61. Epub 2009 Sep 26. PMID: [19786780](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Roberto Fancellu, Davide Pareyson, Elena Corsini, Ettore Salsano, Matilde Laurà, Gaetano Bernardi, Carlo Antozzi, Francesca Andreetta, Maurizio Colecchia, Stefano Di Donato, Caterina Mariotti

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Cerebellar Ataxia](#) : CK(36) : AC(4)



**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#)  
**Adverse Pharmacological Actions :** [Immunoreactive : CK\(127\) : AC\(17\)](#)

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## **Topic: [Dermatitis Herpetiformis](#)**

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### **[Lymphocytic infiltration of epithelium is a common problem in dermatitis herpetiformis.](#) - GMI Summary**

**Pubmed Data :** Br Med J. 1972 Aug 12 ;3(5823):371-4. PMID: [5070159](#)

**Article Published Date :** Aug 12, 1972

**Authors :** L Fry, P P Seah, R M McMinn, A V Hoffbrand

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Dermatitis Herpetiformis : CK\(40\) : AC\(4\)](#), [Epithelium Damage: Lymphocytic infiltration : CK\(10\) : AC\(1\)](#), [Gastrointestinal Inflammation : CK\(41\) : AC\(7\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Patients with dermatitis herpetiformis have antibodies to gliadin which may cross-react with dermal reticulin.](#) - GMI Summary**

**Pubmed Data :** Arch Dermatol Res. 1983;275(1):15-8. PMID: [6847240](#)

**Article Published Date :** Jan 01, 1983

**Authors :** E Vainio, K Kalimo, T Reunala, M Viander, T Palosuo

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Dermatitis Herpetiformis : CK\(40\) : AC\(4\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[Patients with dermatitis herpetiformis have serum antibodies to wheat germ agglutinin and gluten.](#) - GMI Summary**

**Pubmed Data :** Arch Dermatol Res. 1986;278(6):433-6. PMID: [3789802](#)

**Article Published Date :** Jan 01, 1986

**Authors :** L M Sollid, H Scott, J Kolberg, P Brandtzaeg

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Dermatitis Herpetiformis : CK\(40\) : AC\(4\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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### **[Wheat gluten may exert its adverse effects through activation of complement \(a cascade of proteins in the blood that form part of innate immunity\).](#) - GMI Summary**

**Pubmed Data :** Clin Exp Immunol. 1993 Dec;94(3):539-43. PMID: [8252813](#)

**Article Published Date :** Dec 01, 1993

**Authors :** D J Unsworth, R Würzner, D L Brown, P J Lachmann

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Acquired hypogammaglobulinemia : CK\(81\) : AC\(8\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Dermatitis Herpetiformis : CK\(40\) : AC\(4\)](#), [Hypogammaglobulinemia : CK\(10\) : AC\(1\)](#)

**Additional Keywords :** [Plant Extracts : CK\(3435\) : AC\(1172\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

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## **Topic: [Graves Disease](#)**

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### **[Celiac disease is far higher in those diagnosed with Grave's disease.](#) - GMI Summary**

**Pubmed Data** : Endocrine. 2006 Oct;30(2):175-83. PMID: [17322576](#)

**Article Published Date** : Oct 01, 2006

**Authors** : Cihangir Erem, Orhan Deger, Ercüment Ovali, Yasam Barlak

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Graves Disease : CK\(93\) : AC\(9\)](#), [Hyperthyroidism : CK\(189\) : AC\(33\)](#)

**Additional Keywords** : [Anti-Gliadin Antibodies : CK\(71\) : AC\(8\)](#), [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[There is a higher prevalence of celiac disease and gluten sensitivity in patients with Grave's hyperthyroidism.](#) - GMI Summary**

**Pubmed Data** : Clin Endocrinol (Oxf). 2005 Mar;62(3):303-6. PMID: [15730411](#)

**Article Published Date** : Mar 01, 2005

**Authors** : Chin Lye Ch'ng, Moushmi Biswas, Ann Benton, M Keston Jones, Jeremy G C Kingham

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Graves Disease : CK\(93\) : AC\(9\)](#), [Hyperthyroidism : CK\(189\) : AC\(33\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[There is evidence that intolerance to wheat \(measured by CD associated anti-endomysial antibodies\) may play a role in Graves' disease.](#) - GMI Summary**

**Pubmed Data** : Digestion. 1999 Jan-Feb;60(1):86-8. PMID: [9892805](#)

**Article Published Date** : Jan 01, 1999

**Authors** : A Carroccio, N Cустro, G Montalto, L Giannitrapani, M Soresi, A Notarbartolo

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Graves Disease : CK\(93\) : AC\(9\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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## **Topic: [Liver Disease](#)**

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### **[Celiac disease is found in a far higher percentage of patients with end-stage autoimmune liver disease.](#) - GMI Summary**

**Pubmed Data** : Liver Int. 2008 Apr;28(4):467-76. PMID: [18339073](#)

**Article Published Date** : Apr 01, 2008

**Authors** : Alberto Rubio-Tapia, Ahmad S Abdulkarim, Russell H Wiesner, S Breannan Moore, Patricia K Krause, Joseph A Murray

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [End-Stage Autoimmune Liver Disease \(ESALD\) : CK\(10\) : AC\(1\)](#), [Liver Disease : CK\(114\) : AC\(30\)](#), [Organ Transplantation: Liver : CK\(202\) : AC\(24\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Patients with chronic liver disease have a high prevalence of anti-tTg antibodies, similar to patients with celiac disease.](#) - GMI Summary**

**Pubmed Data** : Scand J Gastroenterol. 2003 Jan;38(1):50-4. PMID: [12608464](#)

**Article Published Date** : Jan 01, 2003

**Authors** : M Vecchi, C Folli, M F Donato, S Formenti, E Arosio, R de Franchis

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Cirrhosis: Liver : CK\(985\) : AC\(31\)](#), [Liver Disease : CK\(114\) : AC\(30\)](#)

**Additional Keywords** : [Anti-Endomysium Antibodies : CK\(10\) : AC\(1\)](#), [Anti-tTG : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: [Multiple Myeloma](#)

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### [Antibodies contained in "M" component of some patients with multiple myeloma may be directed to food antigens such as gliadin.](#) - GMI Summary

**Pubmed Data** : Leuk Res. 2006 Dec ;30(12):1585-6. Epub 2006 Mar 6. PMID: [16516966](#)

**Article Published Date** : Dec 01, 2006

**Authors** : Zorica Juranić, Jelena Radic, Aleksandra Konic-Ristic, Svetislav Jelic, Irina Besu, Biljana Mihaljevic

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Multiple Myeloma : CK\(146\) : AC\(53\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### [Multiple myeloma patients exhibit humoral immunoreactivity to gliadin and to tissue transglutaminase, not unlike those with celiac disease.](#) - GMI Summary

**Pubmed Data** : BMC Immunol. 2008;9:22. Epub 2008 May 28. PMID: [18507842](#)

**Article Published Date** : Jan 01, 2008

**Authors** : [No authors listed]

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Multiple Myeloma : CK\(146\) : AC\(53\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### [Patients with multiple myeloma have immunoreactivity to gliadin similar to those with celiac disease.](#) - GMI Summary

**Pubmed Data** : BMC Immunol. 2009;10:32. Epub 2009 May 31. PMID: [19480718](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Aleksandra Konic-Ristic, Dejan Dodig, Radmilo Krstic, Svetislav Jelic, Ivan Stankovic, Aleksandra Ninkovic, Jelena Radic, Irina Besu, Branka Bonaci-Nikolic, Njegica Jojic, Milica Djordjevic, Dragan Popovic, Zorica Juranic

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Multiple Myeloma : CK\(146\) : AC\(53\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Differences in Immunoreactivity Within Different Wheat Cultivars : CK\(11\) : AC\(2\)](#), [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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## Topic: [Multiple Sclerosis](#)

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### [Gluten sensitivity is a clinically confirmed problem in multiple sclerosis.](#) - GMI Summary

**Pubmed Data** : Ann N Y Acad Sci. 2009 Sep;1173:343-9. PMID: [19758171](#)

**Article Published Date** : Sep 01, 2009

**Authors** : Dana Ben-Ami Shor, Ori Barzilai, Maya Ram, David Izhaky, Bat Sheva Porat-Katz, Joab Chapman, Miri Blank, Juan-Manuel Anaya, Yehuda Shoenfeld

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Multiple Sclerosis : CK\(716\) : AC\(133\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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**[Highly significant increases compared with controls were found in patients with multiple sclerosis for IgA and IgG antibodies against gliadin and gluten and IgA antibodies against casein.](#)** - GMI Summary

**Pubmed Data** : Acta Neurol Scand. 2004 Oct;110(4):239-41. PMID: [15355487](#)

**Article Published Date** : Oct 01, 2004

**Authors** : K-L Reichelt, D Jensen

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Casein Intolerance : CK\(44\) : AC\(7\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Multiple Sclerosis : CK\(716\) : AC\(133\)](#)

**Problem Substances** : [Casein : CK\(123\) : AC\(16\)](#), [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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**[The involvement of wheat intolerance in multiple sclerosis may be as high as 12% of patients.](#)** - GMI Summary

**Pubmed Data** : Neurology. 2004 Jun 22;62(12):2326-7. PMID: [15210909](#)

**Article Published Date** : Jun 22, 2004

**Authors** : Connie D S N A Pengiran Tengah, Robert J Lock, D Joseph Unsworth, Adrian J Wills

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Multiple Sclerosis : CK\(716\) : AC\(133\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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## **Topic: Epilepsy**

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**[Epilepsy with cerebral calcifications of unexplained origin may likely be caused by undiagnosed celiac disease.](#)** - GMI Summary

**Pubmed Data** : Lancet. 1992 Aug 22;340(8817):439-43. PMID: [1354781](#)

**Article Published Date** : Aug 22, 1992

**Authors** : G Gobbi, F Bouquet, L Greco, A Lambertini, C A Tassinari, A Ventura, M G Zaniboni

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cerebral Calcifications : CK\(13\) : AC\(2\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#), [Epilepsy: With Cerebral Calcifications : CK\(24\) : AC\(3\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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**[Hippocampal sclerosis in refractory temporal lobe epilepsy is associated with gluten sensitivity.](#)** - GMI Summary

**Pubmed Data** : J Neurol Neurosurg Psychiatry. 2009 Jun;80(6):626-30. Epub 2009 Feb 24. PMID: [19244266](#)

**Article Published Date** : Jun 01, 2009

**Authors** : M Peltola, K Kaukinen, P Dastidar, K Haimila, J Partanen, A-M Haapala, M Mäki, T Keränen, J Peltola

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Brain Injury: Hippocampal Damage : CK\(35\) : AC\(16\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#),

[Epilepsy : CK\(128\) : AC\(27\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Hippocampal Sclerosis : CK\(10\) : AC\(1\)](#), [Temporal Lobe Epilepsy \(TLE\) : CK\(10\) : AC\(1\)](#)  
**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Individuals with celiac disease are at moderately increased risk of epilepsy - GMI Summary](#)**

**Pubmed Data :** Neurology. 2012 Apr 18. Epub 2012 Apr 18. PMID: [22517096](#)

**Article Published Date :** Apr 17, 2012

**Authors :** J F Ludvigsson, F Zingone, T Tomson, A Ekbom, C Ciacci

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#)

**Additional Keywords :** [Epilepsy : CK\(128\) : AC\(27\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Epilepsy with cerebral calcifications poorly responsive to antiepileptic treatment have been reported significantly improved with folic acid and a gluten-free diet. - GMI Summary](#)**

**Pubmed Data :** Acta Paediatr Scand. 1991 May;80(5):559-62. PMID: [1908173](#)

**Article Published Date :** May 01, 1991

**Authors :** A Ventura, F Bouquet, C Sartorelli, E Barbi, G Torre, G Tommasini

**Study Type :** Human: Case Report

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cerebral Calcifications : CK\(13\) : AC\(2\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#), [Epilepsy: With Cerebral Calcifications : CK\(24\) : AC\(3\)](#), [Folic Acid/Folate Deficiency : CK\(13\) : AC\(2\)](#)

**Additional Keywords :** [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Celiac disease should be ruled out in the differential diagnosis of neurological dysfunction of unknown cause, including ataxia, epilepsy and dementia. - GMI Summary](#)**

**Pubmed Data :** Arq Neuropsiquiatr. 2004 Dec ;62(4):969-72. Epub 2004 Dec 15. PMID: [15608953](#)

**Article Published Date :** Dec 01, 2004

**Authors :** José Ibiapina Siqueira Neto, Ana Carolina Leite Vieira Costa, Francisco George Magalhães, Gisele Sampaio Silva

**Study Type :** Review

**Additional Links**

**Diseases :** [Ataxia : CK\(96\) : AC\(14\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Dementia : CK\(225\) : AC\(31\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions :** [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **Topic: [Migraine Disorders](#)**

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### **[A significant proportion of patients with migraine may have celiac disease, and that a gluten free diet may lead to a improvement in the migraine in these patients. - GMI Summary](#)**

**Pubmed Data :** Am J Gastroenterol. 2003 Mar;98(3):625-9. PMID: [12650798](#)

**Article Published Date :** Mar 01, 2003

**Authors :** Maurizio Gabrielli, Filippo Cremonini, Giuseppe Fiore, Giovanni Addolorato, Cristiano Padalino, Marcello Candelli, Maria Elena De Leo, Luca Santarelli, Mario Giacobazzo, Antonio Gasbarrini, Paolo Pola, Antonio Gasbarrini

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Migraine Disorders : CK\(455\) : AC\(54\)](#), [Wheat](#)

[Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords :** [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **[Food allergies and migraine. - GMI Summary](#)**

**Pubmed Data :** Lancet. 1979 May 5 ;1(8123):966-9. PMID: [87628](#)

**Authors :** Grant EC.

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Migraine Disorders : CK\(455\) : AC\(54\)](#)

**Therapeutic Actions :** [Dietary Modification: Elimination Diet : CK\(33\) : AC\(4\)](#)

**Problem Substances :** [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions :** [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **[Neurological symptoms occur in 6-10% of those with celiac disease, with cerebella ataxia being the most frequent symptom. - GMI Summary](#)**

**Pubmed Data :** Mov Disord. 2009 Dec 15;24(16):2358-62. PMID: [19845007](#)

**Article Published Date :** Dec 15, 2009

**Authors :** Katrin Bürk, Marie-Louise Farecki, Georg Lamprecht, Guenter Roth, Patrice Decker, Michael Weller, Hans-Georg Rammensee, Wolfgang Oertel

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Carpal Tunnel Syndrome : CK\(80\) : AC\(8\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cerebellar Ataxia : CK\(36\) : AC\(4\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Migraine Disorders : CK\(455\) : AC\(54\)](#), [Psychiatric Disorders : CK\(71\) : AC\(10\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords :** [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions :** [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **[Case study: a migraine as initial presentation of celiac disease. - GMI Summary](#)**

**Pubmed Data :** Rev Neurol (Paris). 2012 Mar 7. Epub 2012 Mar 7. PMID: [22405455](#)

**Article Published Date :** Mar 07, 2012

**Authors :** L Benjilali, M Zahlane, L Essaadouni

**Study Type :** Human: Case Report

**Additional Links**

**Diseases :** [Migraine Disorders : CK\(455\) : AC\(54\)](#)

**Problem Substances :** [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions :** [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **[Topic: Casein Intolerance](#)**

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### **[Elevated IgA antibodies to gluten and gliadin proteins and to casein in milk have been found in patients with Rett syndrome. - GMI Summary](#)**

**Pubmed Data :** Autism. 2006 Mar;10(2):189-97. PMID: [16613867](#)

**Article Published Date :** Mar 01, 2006

**Authors :** K L Reichelt, O Skjeldal

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Casein Intolerance : CK\(44\) : AC\(7\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Rett Syndrome : CK\(20\) : AC\(2\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances :** [Casein : CK\(123\) : AC\(16\)](#), [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Highly significant increases compared with controls were found in patients with multiple sclerosis for IgA and IgG antibodies against gliadin and gluten and IgA antibodies against casein. - GMI Summary](#)**

**Pubmed Data** : Acta Neurol Scand. 2004 Oct;110(4):239-41. PMID: [15355487](#)

**Article Published Date** : Oct 01, 2004

**Authors** : K-L Reichelt, D Jensen

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Casein Intolerance : CK\(44\) : AC\(7\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Multiple Sclerosis : CK\(716\) : AC\(133\)](#)

**Problem Substances** : [Casein : CK\(123\) : AC\(16\)](#), [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## Topic: [Gastroesophageal Reflux](#)

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### [A gluten free diet could be a useful approach in reducing GERD symptoms in adult celiac patients.](#) - GMI Summary

**Pubmed Data** : J Gastroenterol Hepatol. 2008 Sep ;23(9):1368-72. PMID: [18853995](#)

**Article Published Date** : Sep 01, 2008

**Authors** : Paolo Usai, Roberto Manca, Rosario Cuomo, Maria Antonia Lai, Luigi Russo, Maria Francesca Boi

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gastroesophageal Reflux : CK\(278\) : AC\(41\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### [The GFD is associated with a rapid and persistent improvement in reflux symptoms in classically untreated celiac disease patients that resembles the healthy population.](#) - GMI Summary

**Pubmed Data** : Clin Gastroenterol Hepatol. 2011 Mar ;9(3):214-9. Epub 2010 Jun 30. PMID: [20601132](#)

**Article Published Date** : Mar 01, 2011

**Authors** : Fabio Nachman, Horacio Vázquez, Andrea González, Paola Andrenacci, Liliana Compagni, Hugo Reyes, Emilia Sugai, María Laura Moreno, Edgardo Smecuol, Hui Jer Hwang, Inés Pinto Sánchez, Eduardo Mauriño, Julio César Bai

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gastroesophageal Reflux : CK\(278\) : AC\(41\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: [Hyperthyroidism](#)

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### [Celiac disease is far higher in those diagnosed with Grave's disease.](#) - GMI Summary

**Pubmed Data** : Endocrine. 2006 Oct;30(2):175-83. PMID: [17322576](#)

**Article Published Date** : Oct 01, 2006

**Authors** : Cihangir Erem, Orhan Deger, Ercüment Ovali, Yasam Barlak

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Graves Disease : CK\(93\) : AC\(9\)](#), [Hyperthyroidism : CK\(189\) : AC\(33\)](#)

**Additional Keywords** : [Anti-Gliadin Antibodies : CK\(71\) : AC\(8\)](#), [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **[There is a higher prevalence of celiac disease and gluten sensitivity in patients with Grave's hyperthyroidism.](#) - GMI Summary**

**Pubmed Data** : Clin Endocrinol (Oxf). 2005 Mar;62(3):303-6. PMID: [15730411](#)

**Article Published Date** : Mar 01, 2005

**Authors** : Chin Lye Ch'ng, Moushmi Biswas, Ann Benton, M Keston Jones, Jeremy G C Kingham

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Graves Disease : CK\(93\) : AC\(9\)](#), [Hyperthyroidism : CK\(189\) : AC\(33\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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## **[Topic: Anaphylaxis: Exercise-Induced](#)**

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### **[A novel wheat gliadin is the cause of exercise-induced anaphylaxis.](#) - GMI Summary**

**Pubmed Data** : J Allergy Clin Immunol. 1999 May;103(5 Pt 1):912-7. PMID: [10329828](#)

**Article Published Date** : May 01, 1999

**Authors** : K Palosuo, H Alenius, E Varjonen, M Koivuluhta, J Mikkola, H Keskinen, N Kalkkinen, T Reunala

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Anaphylaxis : CK\(54\) : AC\(15\)](#), [Anaphylaxis: Exercise-Induced : CK\(27\) : AC\(3\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[Rye and barley may elicit symptoms in patients with wheat-dependent, exercise-induced anaphylaxis.](#) - GMI Summary**

**Pubmed Data** : Clin Exp Allergy. 2001 Mar;31(3):466-73. PMID: [11260160](#)

**Article Published Date** : Mar 01, 2001

**Authors** : K Palosuo, H Alenius, E Varjonen, N Kalkkinen, T Reunala

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Anaphylaxis: Exercise-Induced : CK\(27\) : AC\(3\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#)

**Additional Keywords** : [Cross-Reactivity In Grain Intolerance : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Barley : CK\(13\) : AC\(3\)](#), [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Grains : CK\(27\) : AC\(8\)](#), [Rye : CK\(12\) : AC\(3\)](#)

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### **[A case study of a 54-year-old Korean woman with a five-year history of wheat flour allergy resulting in a diagnosis of wheat-dependent exercise-induced anaphylaxis.](#) - GMI Summary**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Ann Dermatol. 2009 Nov ;21(4):447-9. Epub 2009 Nov 30. PMID: [20523846](#)

**Article Published Date** : Oct 31, 2009

**Authors** : Hee Bong Lee, In Su Ahn, Ji Hoon Choi, Chun Wook Park, Cheol Heon Lee

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Anaphylaxis: Exercise-Induced : CK\(27\) : AC\(3\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Omega-5 gliadin anaphylaxis has been reported.](#) - GMI Summary**

**Pubmed Data** : Eur Ann Allergy Clin Immunol. 2011 Jun ;43(3):92-4. PMID: [21789971](#)

**Article Published Date** : Jun 01, 2011

**Authors** : M R Yacoub, E Savi, S E Burastero, S Dal Farra, C Mason, S Pecora, G Colombo



**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Anaphylaxis: Exercise-Induced : CK\(27\) : AC\(3\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **["Wheat dependent exercise induced anaphylaxis possibly sensitized by the hydrolyzed wheat proteins in a facial cleansing soap" - GMI Summary](#)**

**Pubmed Data** : J UOEH. 2012 Mar 1 ;34(1):85-9. PMID: [22428462](#)

**Article Published Date** : Mar 01, 2012

**Authors** : Miwa Kobayashi, Risa Okura, Haruna Yoshioka, Kana Hiromasa, Manabu Yoshioka, Motonobu Nakamura

**Study Type** : Review

**Additional Links**

**Diseases** : [Anaphylaxis: Exercise-Induced : CK\(27\) : AC\(3\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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## **[Topic: IgA Nephropathy](#)**

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### **[A gluten-free diet improves primary IgA nephropathy in 75% of patients. - GMI Summary](#)**

**Pubmed Data** : Clin Nephrol. 1990 Feb;33(2):72-86. PMID: [2311308](#)

**Article Published Date** : Feb 01, 1990

**Authors** : R Coppo, D Roccatello, A Amore, G Quattrocchio, A Molino, B Gianoglio, A Amoroso, P Bajardi, G Piccoli

**Study Type** : Human Study

**Additional Links**

**Diseases** : [IgA Nephropathy : CK\(186\) : AC\(22\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Gluten sensitivity is prevalent in patients with IgA nephropathy. - GMI Summary](#)**

**Pubmed Data** : Nephrol Dial Transplant. 2009 Aug;24(8):2476-81. Epub 2009 Mar 30. PMID: [19332868](#)

**Article Published Date** : Aug 01, 2009

**Authors** : Hilde Kloster Smerud, Bengt Fellström, Roger Hällgren, Sonia Osagie, Per Venge, Gudjón Kristjánsson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [IgA Nephropathy : CK\(186\) : AC\(22\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Nephrotoxic : CK\(162\) : AC\(38\)](#)

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### **[Gluten and its lectin-like fraction gliadin contribute to experimental IgA glomerulopathy. - GMI Summary](#)**

**Pubmed Data** : Lab Invest. 1989 Apr;60(4):499-506. PMID: [2709812](#)

**Article Published Date** : Apr 01, 1989

**Authors** : R Coppo, G Mazzucco, G Martina, D Roccatello, A Amore, R Novara, A Bargoni, G Piccoli, L M Sena

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Glomerulonephritis : CK\(41\) : AC\(9\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [IgA Nephropathy : CK\(186\) : AC\(22\)](#), [Kidney Diseases : CK\(424\) : AC\(71\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: Gastrointestinal Inflammation

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### Gluten elicits its harmful effect, throughout an IL15 innate immune response, on all the individuals. - GMI Summary

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Gut. 2007 Jun;56(6):889-90. PMID: [17519496](#)

**Article Published Date** : Oct 21, 1976

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gastrointestinal Inflammation : CK\(41\) : AC\(7\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Inflammatory : CK\(150\) : AC\(37\)](#), [Interleukin-15 downregulation : CK\(10\) : AC\(1\)](#)

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### Lymphocytic infiltration of epithelium is a common problem in dermatitis herpetiformis. - GMI Summary

**Pubmed Data** : Br Med J. 1972 Aug 12 ;3(5823):371-4. PMID: [5070159](#)

**Article Published Date** : Aug 12, 1972

**Authors** : L Fry, P P Seah, R M McMinn, A V Hoffbrand

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Dermatitis Herpetiformis : CK\(40\) : AC\(4\)](#), [Epithelium Damage: Lymphocytic infiltration : CK\(10\) : AC\(1\)](#), [Gastrointestinal Inflammation : CK\(41\) : AC\(7\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### CLA reduces gliadin-induced intestinal toxicity in an animal model. - GMI Summary

**Pubmed Data** : Mol Nutr Food Res. 2011 Sep ;55 Suppl 2:S248-56. Epub 2011 Aug 31. PMID: [21954188](#)

**Article Published Date** : Sep 01, 2011

**Authors** : Paolo Bergamo, Marta Gogliettino, Gianna Palmieri, Ennio Cocca, Francesco Maurano, Rosita Stefanile, Marco Balestrieri, Giuseppe Mazzarella, Chella David, Mauro Rossi

**Study Type** : Animal Study

**Additional Links**

**Substances** : [CLA \(Conjugated Linoleic Acid\) : CK\(71\) : AC\(27\)](#)

**Diseases** : [Gastrointestinal Inflammation : CK\(41\) : AC\(7\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### Despite the belief that immune-mediation is required for gliadin to damage to the body, gliadin appears to directly damage the cells exposed to it; i - GMI Summary

**Pubmed Data** : World J Gastroenterol. 2005 Oct 14 ;11(38):5973-7. PMID: [16273608](#)

**Article Published Date** : Oct 14, 2005

**Authors** : Ersilia Dolfini, Luca Elli, Leda Roncoroni, Barbara Costa, Maria-Pia Colleoni, Vito Lorusso, Simona Ramponi, Paola Braidotti, Stefano Ferrero, Maria-Letizia Falini, Maria-Teresa Bardella

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Gastrointestinal Inflammation : CK\(41\) : AC\(7\)](#), [Oxidative Stress : CK\(1880\) : AC\(710\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Cytotoxic : CK\(68\) : AC\(35\)](#), [Oxidant : CK\(104\) : AC\(37\)](#)

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### Gliadin has a direct cytotoxic effect on the cytoskeleton and tight junctions of epithelial cells. - GMI Summary

**Pubmed Data** : World J Gastroenterol. 2005 Dec 28 ;11(48):7597-601. PMID: [16437684](#)

**Article Published Date** : Dec 28, 2005

**Authors** : Ersilia Dolfini, Leda Roncoroni, Luca Elli, Chiara Fumagalli, Roberto Colombo, Simona Ramponi, Fabio Forlani, Maria Teresa Bardella

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Gastrointestinal Inflammation : CK\(41\) : AC\(7\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Intestinal Permeability : CK\(263\) : AC\(56\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Cytotoxic : CK\(68\) : AC\(35\)](#)

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## Topic: [Infertility](#)

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### [Unexplained infertility in women may be due to celiac disease.](#) - GMI Summary

**Pubmed Data** : Minerva Med. 2007 Jun;98(3):217-9. PMID: [17592443](#)

**Article Published Date** : Jun 01, 2007

**Authors** : R Pellicano, M Astegiano, M Bruno, S Fagoonee, M Rizzetto

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Infertility : CK\(443\) : AC\(94\)](#), [Infertility: Female : CK\(182\) : AC\(33\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Teratogenic : CK\(304\) : AC\(59\)](#)

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### [Recognizing women with unexplained infertility and previous adverse pregnancy outcomes as at risk of celiac disease.](#) - GMI Summary

**Pubmed Data** : Womens Health (Lond Engl). 2010 Sep ;6(5):753-66. PMID: [20887172](#)

**Article Published Date** : Aug 31, 2010

**Authors** : Sveta Shah, Daniel Leffler

**Study Type** : Review

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Infertility : CK\(443\) : AC\(94\)](#)

**Additional Keywords** : [Enteropathy : CK\(3\) : AC\(2\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [Atopic Dermatitis](#)

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### [165 children with atopic dermatitis were studied, a higher number of sensitized food allergens was associated with negative effects on their growth and nutritional status.](#) - GMI Summary

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Allergy Asthma Immunol Res. 2011 Jan ;3(1):53-7. Epub 2010 Nov 23. PMID: [21217926](#)

**Article Published Date** : Dec 31, 2010

**Authors** : Ha-Na Cho, Soyoung Hong, Soo-Hyung Lee, Hye-Yung Yum

**Study Type** : Human Study

**Additional Links**

**Substances** : [Peanut : CK\(104\) : AC\(19\)](#)

**Diseases** : [Atopic Dermatitis : CK\(667\) : AC\(80\)](#), [Children: Impaired Growth : CK\(30\) : AC\(3\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [IgE-Mediated Hypersensitivity : CK\(108\) : AC\(2\)](#)

**Additional Keywords** : [Pediatric : CK\(30\) : AC\(3\)](#)

**Problem Substances** : [Peanut : CK\(31\) : AC\(5\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### [Approximately 1 in every 3 patients with atopic eczema are positive for anti-gliadin and/or anti-milk antibodies, indicating they may play a causitive role in the disease.](#) - GMI Summary

**Pubmed Data** : Clin Exp Dermatol. 1985 May;10(3):222-8. PMID: [4006283](#)

**Article Published Date** : May 01, 1985

**Authors** : R Finn, M M Harvey, P M Johnson, J L Verbov, R M Barnes

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Atopic Dermatitis](#) : CK(667) : AC(80)

**Problem Substances** : [Cow Milk](#) : CK(368) : AC(46), [Gliadin](#) : CK(2369) : AC(104)

**Adverse Pharmacological Actions** : [Immunoreactive](#) : CK(127) : AC(17)

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## **[Wheat intolerance is a common causative factor in atopic dermatitis.](#) - GMI Summary**

**Pubmed Data** : Allergy. 2000 Apr;55(4):386-91. PMID: [10782525](#)

**Article Published Date** : Apr 01, 2000

**Authors** : E Varjonen, E Vainio, K Kalimo

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Atopic Dermatitis](#) : CK(667) : AC(80), [Food Allergies: Wheat](#) : CK(366) : AC(47), [Wheat Intolerance](#) : CK(2213) : AC(231)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104)

**Adverse Pharmacological Actions** : [Allergenic](#) : CK(25) : AC(5)

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## **[Topic: Autoimmune Thyroiditis](#)**

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## **[Celiac disease has a far higher prevalence in autoimmune thyroid disorders.](#) - GMI Summary**

**Pubmed Data** : Ital J Gastroenterol Hepatol. 1999 May;31(4):283-7. PMID: [10425571](#)

**Article Published Date** : May 01, 1999

**Authors** : L Cuoco, M Certo, R A Jorizzo, I De Vitis, A Tursi, A Papa, L De Marinis, P Fedeli, G Fedeli, G Gasbarrini

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Thyroiditis](#) : CK(134) : AC(17), [Celiac Disease](#) : CK(1393) : AC(185), [Hashimoto's thyroiditis](#) : CK(265) : AC(10), [Thyroid Nodule](#) : CK(92) : AC(11)

**Additional Keywords** : [Wheat Intolerance](#) : CK(21) : AC(2)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Wheat](#) : CK(2371) : AC(280)

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## **[There is a high frequency of autoimmune thyroid disease among celiac disease patients.](#) - GMI Summary**

**Pubmed Data** : J Pediatr Gastroenterol Nutr. 2003 Jul;37(1):63-6. PMID: [12827007](#)

**Article Published Date** : Jul 01, 2003

**Authors** : Nicoletta Ansalidi, Tiziana Palmas, Andrea Corrias, Maria Barbato, Mario Rocco D'Altiglia, Angelo Campanozzi, Mariella Baldassarre, Francesco Rea, Rosanna Pluvio, Margherita Bonamico, Rosanna Lazzari, Giovanni Corrao

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases](#) : CK(5084) : AC(779), [Autoimmune Thyroiditis](#) : CK(134) : AC(17), [Celiac Disease](#) : CK(1393) : AC(185), [Hypothyroidism](#) : CK(525) : AC(78)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Wheat](#) : CK(2371) : AC(280)

**Adverse Pharmacological Actions** : [Immunotoxic](#) : CK(230) : AC(38)

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## **[Topic: Cirrhosis: Liver](#)**

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## **[Patients with chronic liver disease have a high prevalence of anti-tTg antibodies, similar to patients with celiac disease.](#) - GMI Summary**

**Pubmed Data** : Scand J Gastroenterol. 2003 Jan;38(1):50-4. PMID: [12608464](#)

**Article Published Date** : Jan 01, 2003

**Authors** : M Vecchi, C Folli, M F Donato, S Formenti, E Arosio, R de Franchis

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Cirrhosis: Liver : CK\(985\) : AC\(31\)](#), [Liver Disease : CK\(114\) : AC\(30\)](#)

**Additional Keywords** : [Anti-Endomysium Antibodies : CK\(10\) : AC\(1\)](#), [Anti-tTG : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Topic: [Diarrhea: IBS associated](#)**

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**[Diarrhea-predominant irritable bowel syndrome is associated with celiac-disease associated serum IgG in many patients tested. A gluten-free diet results in significant improvements.](#) - GMI Summary**

**Pubmed Data** : Clin Gastroenterol Hepatol. 2007 Jul;5(7):844-50; quiz 769. Epub 2007 Jun 5. PMID: [17553753](#)

**Article Published Date** : Jul 01, 2007

**Authors** : Ulrich Wahnschaffe, Jörg-Dieter Schulzke, Martin Zeitz, Reiner Ullrich

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diarrhea: IBS associated : CK\(10\) : AC\(1\)](#), [Irritable Bowel Syndrome : CK\(803\) : AC\(66\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Topic: [Hypothyroidism](#)**

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**[Intolerance to wheat \(CD autoantibodies\) is higher than background rates in those with Turner syndrome.](#) - GMI Summary**

**Pubmed Data** : Clin Exp Immunol. 2009 May;156(2):205-10. Epub 2009 Feb 26. PMID: [19298606](#)

**Article Published Date** : May 01, 2009

**Authors** : K H Mortensen, L Cleemann, B E Hjerrild, E Nexø, H Locht, E M Jeppesen, C H Gravholt

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Hypothyroidism: CK\(525\) : AC\(78\)](#), [Turner Syndrome : CK\(10\) : AC\(1\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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**[There is a high frequency of autoimmune thyroid disease among celiac disease patients.](#) - GMI Summary**

**Pubmed Data** : J Pediatr Gastroenterol Nutr. 2003 Jul;37(1):63-6. PMID: [12827007](#)

**Article Published Date** : Jul 01, 2003

**Authors** : Nicoletta Ansaldi, Tiziana Palmas, Andrea Corrias, Maria Barbato, Mario Rocco D'Altiglia, Angelo Campanozzi, Mariella Baldassarre, Francesco Rea, Rosanna Pluvio, Margherita Bonamico, Rosanna Lazzari, Giovanni Corrao

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Autoimmune Thyroiditis : CK\(134\) : AC\(17\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Hypothyroidism : CK\(525\) : AC\(78\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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## **Thyroid autoimmunity is associated with celiac disease in children. - GMI Summary**

**Pubmed Data** : J Pediatr. 2010 Feb;156(2):292-5. Epub 2009 Oct 20. PMID: [19846116](#)

**Article Published Date** : Feb 01, 2010

**Authors** : Alessandra Cassio, Giampaolo Ricci, Federico Baronio, Angela Miniaci, Milva Bal, Barbara Bigucci, Veronica Conti, Alessandro Cicognani

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases](#) : CK(5084) : AC(779), [Celiac Disease](#) : CK(1393) : AC(185), [Hypothyroidism](#) : CK(525) : AC(78)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Wheat](#) : CK(2371) : AC(280)

**Adverse Pharmacological Actions** : [Immunotoxic](#) : CK(230) : AC(38)

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## **Topic: IgA rheumatoid factor: elevated**

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## **Elevated IgA rheumatoid factor may result from wheat consumption. - GMI Summary**

**Pubmed Data** : Acta Derm Venereol. 1995 Mar ;75(2):130-2. PMID: [7604641](#)

**Article Published Date** : Mar 01, 1995

**Authors** : M Sökjer, T Jónsson, S Bödvarsson, I Jónsdóttir, H Valdimarsson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Sensitivity](#) : CK(2319) : AC(246), [IgA rheumatoid factor: elevated](#) : CK(20) : AC(2)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

**Adverse Pharmacological Actions** : [Immunoreactive](#) : CK(127) : AC(17)

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## **Gluten may induce an immune response that elicits mucosal rheumatoid factor synthesis. - GMI Summary**

**Pubmed Data** : Clin Exp Immunol. 1996 Jan ;103(1):94-8. PMID: [8565295](#)

**Article Published Date** : Jan 01, 1996

**Authors** : J Hällgren, F Knutson, B Lavö, R Hällgren

**Study Type** : Human Study

**Additional Links**

**Diseases** : [IgA rheumatoid factor: elevated](#) : CK(20) : AC(2)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Wheat](#) : CK(2371) : AC(280)

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## **Topic: Infertility: Female**

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## **Unexplained infertility in women may be due to celiac disease. - GMI Summary**

**Pubmed Data** : Minerva Med. 2007 Jun;98(3):217-9. PMID: [17592443](#)

**Article Published Date** : Jun 01, 2007

**Authors** : R Pellicano, M Astegiano, M Bruno, S Fagoonee, M Rizzetto

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Infertility](#) : CK(443) : AC(94), [Infertility: Female](#) : CK(182) : AC(33), [Wheat Intolerance](#) : CK(2213) : AC(231)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Gluten](#) : CK(1610) : AC(131), [Wheat](#) : CK(2371) : AC(280)

**Adverse Pharmacological Actions** : [Teratogenic](#) : CK(304) : AC(59)

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## **Topic: Non-Hodgkin Lymphoma**

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## **[A high frequency of celiac disease was found in patients with lymphoma in the southeast region of Turkey. - GMI Summary](#)**

**Pubmed Data** : Turk J Gastroenterol. 2009 Jun ;20(2):87-92. PMID: [19530040](#)

**Article Published Date** : Jun 01, 2009

**Authors** : Timuçin Cil, Abdullah Altıntaş, Abdurrahman Işikdoğan, Semir Paşa, Kadim Bayan, Sabri Batun, Hüseyin Büyükbayram

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Lymphoma : CK\(225\) : AC\(68\)](#), [Non-Hodgkin Lymphoma : CK\(515\) : AC\(67\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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## **[Some patients with NHL possessed immunoreactivity to gliadin , indicating this protein may contribute to immune imbalance in the condition. - GMI Summary](#)**

**Pubmed Data** : Int J Hematol. 2009 Sep ;90(2):212-6. Epub 2009 Jul 17. PMID: [19609644](#)

**Article Published Date** : Sep 01, 2009

**Authors** : Zorica D Juranić, Irina Besu, Svetislav Jelić, Aleksandra Konić-Ristić, Suzana Matković, Ljiljana Janković, Dusica Gavrilović, Branka Radojčić, Ivana Minić

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Non-Hodgkin Lymphoma : CK\(515\) : AC\(67\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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## **[The incidence of non-Hodgkin's lymphoma was significantly increased in patients with dermatitis herpetiformis, indicating the potential that wheat/gluten may contribute to malignancies. - GMI Summary](#)**

**Pubmed Data** : Gut. 1996 Apr ;38(4):528-30. PMID: [8707082](#)

**Article Published Date** : Mar 31, 1996

**Authors** : P Collin, E Pukkala, T Reunala

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Non-Hodgkin Lymphoma : CK\(515\) : AC\(67\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **[Topic: Polyarthriti](#)**

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## **[Celiac disease should be considered among the differential diagnoses in a patient with poly-arthritis. - GMI Summary](#)**

**Pubmed Data** : Reumatol Clin. 2011 Jan-Feb;7(1):27-9. Epub 2010 Jun 23. PMID: [21794776](#)

**Article Published Date** : Jan 01, 2011

**Authors** : José Dionisio Castillo-Ortiz, Sergio Durán-Barragán, Adriana Sánchez-Ortíz, Cesar Ramos-Remus

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Polyarthriti : CK\(134\) : AC\(1\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **[Topic: Psychoses](#)**

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## **[Markers of gluten sensitivity and celiac disease are increased in recent-onset psychosis and multi-episode schizophrenia. - GMI Summary](#)**

**Pubmed Data** : Biol Psychiatry. 2010 Jul 1;68(1):100-4. Epub 2010 May 14. PMID: [20471632](#)

**Article Published Date** : Jul 01, 2010

**Authors** : Faith Dickerson, Cassie Stallings, Andrea Origoni, Crystal Vaughan, Sunil Khushalani, Flora Leister, Shuojia Yang, Bogdana Krivogorsky, Armin Alaedini, Robert Yolken

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Psychoses : CK\(12\) : AC\(3\)](#), [Schizophrenia : CK\(247\) : AC\(29\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **Topic: [Eosinophilic esophagitis](#)**

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### **["A 6-food elimination diet \(SFED\) excluding cow's milk, soy, wheat, egg, peanuts/tree nuts, and seafood has been shown to induce remission in a majority of children with EoE." - GMI Summary](#)**

**Pubmed Data** : J Pediatr Gastroenterol Nutr. 2011 Aug ;53(2):145-9. PMID: [21788754](#)

**Article Published Date** : Aug 01, 2011

**Authors** : Amir F Kagalwalla, Ameesh Shah, B U K Li, Timothy A Sentongo, Sally Ritz, Maria Manuel-Rubio, Katie Jacques, Deli Wang, Hector Melin-Aldana, Suzanne P Nelson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Eosinophilic esophagitis : CK\(66\) : AC\(5\)](#)

**Problem Substances** : [Cow Milk : CK\(368\) : AC\(46\)](#), [Egg : CK\(20\) : AC\(3\)](#), [Peanut : CK\(31\) : AC\(5\)](#), [Soy : CK\(56\) : AC\(8\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[A study of 53 pediatric patients with eosinophilic esophagitis found most were highly atopic with frequent allergic sensitivities; the overall prevalence of food & inhalant sensitization was 80%, with higher total IgE levels in sensitized vs nonsensitized - GMI Summary](#)**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Ann Allergy Asthma Immunol. 2010 Jun ;104(6):496-502. PMID: [20568382](#)

**Article Published Date** : May 31, 2010

**Authors** : Elizabeth A Erwin, Hayley R James, Heather M Gutekunst, John M Russo, Kelly J Kelleher, Thomas A E Platts-Mills

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Eosinophilic esophagitis : CK\(66\) : AC\(5\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [IgE-Mediated Hypersensitivity : CK\(108\) : AC\(2\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Cow Milk : CK\(368\) : AC\(46\)](#), [Rye : CK\(12\) : AC\(3\)](#), [Soy : CK\(56\) : AC\(8\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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### **[Celiac disease, eosinophilic esophagitis, and immediate-type immunoglobulin E-mediated food allergy. - GMI Summary](#)**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : J Investig Allergol Clin Immunol. 2011 ;21(1):73-5. PMID: [21370728](#)

**Article Published Date** : Dec 31, 2010

**Authors** : S Sánchez-García, M D Ibáñez, M J Martínez-Gómez, C Escudero, A Vereda, M Fernández-Rodríguez, P Rodríguez del Río

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Eosinophilic esophagitis : CK\(66\) : AC\(5\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [Food Allergy: Immunoglobulin E-mediated : CK\(3\) : AC\(1\)](#), [Urticaria : CK\(130\) : AC\(8\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)



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## **Food elimination may have value in treating adult eosinophilic esophagitis. -**

### **GMI Summary**

**Pubmed Data** : J Clin Gastroenterol. 2012 Feb 13. Epub 2012 Feb 13. PMID: [22334220](#)

**Article Published Date** : Feb 13, 2012

**Authors** : Jesús González-Cervera, Teresa Angueira, Benito Rodriguez-Domínguez, Angel Arias, José Luis Yagüe-Compadre, Alfredo J Lucendo

**Study Type** : Human: Case Report

#### **Additional Links**

**Diseases** : [Eosinophilic esophagitis](#) : CK(66) : AC(5)

**Problem Substances** : [Cow Milk](#) : CK(368) : AC(46), [Wheat](#) : CK(2371) : AC(280)

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## **Topic: Epilepsy: With Cerebral Calcifications**

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## **Epilepsy with cerebral calcifications of unexplained origin may likely be caused by undiagnosed celiac disease. - GMI Summary**

**Pubmed Data** : Lancet. 1992 Aug 22;340(8817):439-43. PMID: [1354781](#)

**Article Published Date** : Aug 22, 1992

**Authors** : G Gobbi, F Bouquet, L Greco, A Lambertini, C A Tassinari, A Ventura, M G Zaniboni

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Cerebral Calcifications](#) : CK(13) : AC(2), [Epilepsy](#) : CK(128) : AC(27), [Epilepsy: With Cerebral Calcifications](#) : CK(24) : AC(3)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131), [Wheat](#) : CK(2371) : AC(280)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1064) : AC(179)

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## **Epilepsy with cerebral calcifications poorly responsive to antiepileptic treatment have been reported significantly improved with folic acid and a gluten-free diet. - GMI Summary**

**Pubmed Data** : Acta Paediatr Scand. 1991 May;80(5):559-62. PMID: [1908173](#)

**Article Published Date** : May 01, 1991

**Authors** : A Ventura, F Bouquet, C Sartorelli, E Barbi, G Torre, G Tommasini

**Study Type** : Human: Case Report

#### **Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Cerebral Calcifications](#) : CK(13) : AC(2), [Epilepsy](#) : CK(128) : AC(27), [Epilepsy: With Cerebral Calcifications](#) : CK(24) : AC(3), [Folic Acid/Folate Deficiency](#) : CK(13) : AC(2)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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## **GFD beneficial in HLA-related celiac disease with epilepsy and cerebral calcifications - GMI Summary**

**Pubmed Data** : Brain Dev. 2005 Apr ;27(3):189-200. PMID: [15737700](#)

**Article Published Date** : Mar 31, 2005

**Authors** : Giuseppe Gobbi

**Study Type** : Review

#### **Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Epilepsy: With Cerebral Calcifications](#) : CK(24) : AC(3)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free](#) : CK(208) : AC(29)

**Additional Keywords** : [HLA-DQ2/DQ8](#) : CK(24) : AC(5), [HLA-DQ2/DQ8](#) : CK(24) : AC(5)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Gluten](#) : CK(1610) : AC(131)

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## **Topic: Cerebral Calcifications**

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## **[Epilepsy with cerebral calcifications of unexplained origin may likely be caused by undiagnosed celiac disease.](#) - GMI Summary**

**Pubmed Data** : Lancet. 1992 Aug 22;340(8817):439-43. PMID: [1354781](#)

**Article Published Date** : Aug 22, 1992

**Authors** : G Gobbi, F Bouquet, L Greco, A Lambertini, C A Tassinari, A Ventura, M G Zaniboni

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cerebral Calcifications : CK\(13\) : AC\(2\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#), [Epilepsy: With Cerebral Calcifications : CK\(24\) : AC\(3\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **[Epilepsy with cerebral calcifications poorly responsive to antiepileptic treatment have been reported significantly improved with folic acid and a gluten-free diet.](#) - GMI Summary**

**Pubmed Data** : Acta Paediatr Scand. 1991 May;80(5):559-62. PMID: [1908173](#)

**Article Published Date** : May 01, 1991

**Authors** : A Ventura, F Bouquet, C Sartorelli, E Barbi, G Torre, G Tommasini

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cerebral Calcifications : CK\(13\) : AC\(2\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#), [Epilepsy: With Cerebral Calcifications : CK\(24\) : AC\(3\)](#), [Folic Acid/Folate Deficiency : CK\(13\) : AC\(2\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **Topic: [Diarrhea](#)**

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### **["Gluten-sensitive diarrhea without evidence of celiac disease."](#) - GMI Summary**

**Pubmed Data** : Gastroenterology. 1980 Nov ;79(5 Pt 1):801-6. PMID: [7419003](#)

**Article Published Date** : Nov 01, 1980

**Authors** : B T Cooper, G K Holmes, R Ferguson, R A Thompson, R N Allan, W T Cooke

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Diarrhea : CK\(549\) : AC\(72\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[High serum levels of anti-deamidated gliadin peptides may predict celiac disease in children younger than 2 years](#) - GMI Summary**

**Pubmed Data** : Dig Liver Dis. 2011 Jun ;43(6):465-9. Epub 2011 Jan 22. PMID: [21257356](#)

**Article Published Date** : May 31, 2011

**Authors** : Maria Barbato, Giulia Maiella, Chiara Di Camillo, Sofia Guida, Francesco Valitutti, Ginevra Lastrucci, Fabrizio Mainiero, Salvatore Cucchiara

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diarrhea : CK\(549\) : AC\(72\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[A Glutenfree diet improves osteogenesis imperfecta associated with celiac disease and type II diabetes](#) - GMI Summary**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Case Report Med. 2012 ;2012:813461. Epub 2012 Mar 5. PMID: [22481956](#)

**Article Published Date** : Dec 31, 2011

**Authors** : Luis Rodrigo, Isabel Pérez-Martinez

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 2 : CK\(3229\) : AC\(328\)](#), [Diarrhea : CK\(549\) : AC\(72\)](#), [Osteogenesis Imperfecta : CK\(3\) : AC\(1\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords** : [Multiple Fractures : CK\(3\) : AC\(1\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [Celiac Disease: Prevention](#)

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### [Breastfeeding seems to offer a protection against the development of CD in predisposed infants.](#) - GMI Summary

**Pubmed Data** : Evid Based Med. 2012 Aug 4. Epub 2012 Aug 4. PMID: [22864373](#)

**Article Published Date** : Aug 03, 2012

**Authors** : Camilla Henriksson, Anne-Marie Boström, Ingela E Wiklund

**Study Type** : Meta Analysis

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Celiac Disease: Prevention : CK\(32\) : AC\(3\)](#), [Infant Nutrition : CK\(70\) : AC\(13\)](#)

**Therapeutic Actions** : [Breastfeeding : CK\(657\) : AC\(67\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### [Gluten induces coeliac-like disease in sensitised mice that is prevented by probiotics.](#) - GMI Summary

**Pubmed Data** : Lab Invest. 2012 Feb 13. Epub 2012 Feb 13. PMID: [22330344](#)

**Article Published Date** : Feb 13, 2012

**Authors** : Christina Papista, Vassilis Gerakopoulos, Andreas Kourelis, Maria Sounidaki, Anastasia Kontana, Laureline Berthelot, Ivan C Moura, Renato C Monteiro, Minas Yiangou

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Probiotics : CK\(2370\) : AC\(235\)](#), [Saccharomyces Boulardii : CK\(137\) : AC\(23\)](#)

**Diseases** : [Celiac Disease: Prevention : CK\(32\) : AC\(3\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [Abortion: Spontaneous](#)

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### [Celiac disease associated antibodies are higher in Argentine women with recurrent pregnancy loss.](#) - GMI Summary

**Pubmed Data** : Am J Reprod Immunol. 2006 Mar;55(3):201-7. PMID: [16451354](#)

**Article Published Date** : Mar 01, 2006

**Authors** : Daniel Bustos, Ana Moret, Monica Tambutti, Sebastian Gogorza, Roberto Testa, Amanda Ascione, Norma Prigoshin

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Abortion: Spontaneous : CK\(204\) : AC\(29\)](#), [Miscarriage: Recurrent : CK\(21\) : AC\(3\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Teratogenic : CK\(304\) : AC\(59\)](#)

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### [Recurrent miscarriages may be due to undiagnosed celiac disease.](#) - GMI Summary

**Pubmed Data** : Recent Prog Med. 2000 Feb;91(2):72-5. PMID: [10748651](#)

**Article Published Date** : Feb 01, 2000

**Authors** : P Caramaschi, D Biasi, A Carletto, M Randon, M L Pacor, L M Bambara

**Study Type** : Review

**Additional Links**

**Diseases** : [Abortion: Spontaneous : CK\(204\) : AC\(29\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Miscarriage : CK\(516\) : AC\(35\)](#), [Miscarriage: Recurrent : CK\(21\) : AC\(3\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Teratogenic : CK\(304\) : AC\(59\)](#)

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## Topic: [Ataxia: Cerebellar](#)

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### [A high prevalence of gluten sensitivity is found in sporadic and hereditary cerebellar ataxia.](#) - GMI Summary

**Pubmed Data** : Ann Neurol. 2001 Apr;49(4):540-3. PMID: [11310636](#)

**Article Published Date** : Apr 01, 2001

**Authors** : K O Bushara, S U Goebel, H Shill, L G Goldfarb, M Hallett

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Ataxia: Cerebellar : CK\(67\) : AC\(3\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### [Celiac disease is associated with ataxic syndromes without definite diagnosis, suggesting that it plays a part in the pathogenesis of some ataxic syndromes.](#) - GMI Summary

**Pubmed Data** : J Neurol Neurosurg Psychiatry. 1999 Jan ;66(1):32-5. PMID: [9886447](#)

**Article Published Date** : Jan 01, 1999

**Authors** : M T Pellecchia, R Scala, A Filla, G De Michele, C Ciacci, P Barone

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Ataxia: Cerebellar : CK\(67\) : AC\(3\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### [A large number of neurologic syndromes may result from gluten intolerance.](#) - GMI Summary

**Pubmed Data** : Gastroenterology. 2005 Apr;128(4 Suppl 1):S92-7. PMID: [15825133](#)

**Article Published Date** : Apr 01, 2005

**Authors** : Khalafalla O Bushara

**Study Type** : Commentary

**Additional Links**

**Diseases** : [Ataxia: Cerebellar : CK\(67\) : AC\(3\)](#), [Autism Spectrum Disorders : CK\(1118\) : AC\(108\)](#), [Chorea : CK\(1\) : AC\(1\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Guillain-Barre Syndrome : CK\(84\) : AC\(14\)](#), [Huntington Disease : CK\(45\) : AC\(17\)](#), [Myelopathy : CK\(11\) : AC\(2\)](#), [Neuropathy : CK\(158\) : AC\(24\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [Miscarriage: Recurrent](#)

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### [Celiac disease associated antibodies are higher in Argentine women with recurrent pregnancy loss.](#) - GMI Summary

**Pubmed Data** : Am J Reprod Immunol. 2006 Mar;55(3):201-7. PMID: [16451354](#)

**Article Published Date** : Mar 01, 2006

**Authors** : Daniel Bustos, Ana Moret, Monica Tambutti, Sebastian Gogorza, Roberto Testa, Amanda Ascione, Norma Prigoshin

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Abortion: Spontaneous : CK\(204\) : AC\(29\)](#), [Miscarriage: Recurrent : CK\(21\) : AC\(3\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Teratogenic : CK\(304\) : AC\(59\)](#)

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**[Recurrent miscarriages may be due to undiagnosed celiac disease.](#) - GMI Summary**

**Pubmed Data** : Recent Prog Med. 2000 Feb;91(2):72-5. PMID: [10748651](#)

**Article Published Date** : Feb 01, 2000

**Authors** : P Caramaschi, D Biasi, A Carletto, M Randon, M L Pacor, L M Bambara

**Study Type** : Review

**Additional Links**

**Diseases** : [Abortion: Spontaneous : CK\(204\) : AC\(29\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Miscarriage : CK\(516\) : AC\(35\)](#), [Miscarriage: Recurrent : CK\(21\) : AC\(3\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Teratogenic : CK\(304\) : AC\(59\)](#)

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**Topic: [Thyroid Nodule](#)**

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**[Celiac disease has a far higher prevalence in autoimmune thyroid disorders.](#) - GMI Summary**

**Pubmed Data** : Ital J Gastroenterol Hepatol. 1999 May;31(4):283-7. PMID: [10425571](#)

**Article Published Date** : May 01, 1999

**Authors** : L Cuoco, M Certo, R A Jorizzo, I De Vitis, A Tursi, A Papa, L De Marinis, P Fedeli, G Fedeli, G Gasbarrini

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Thyroiditis : CK\(134\) : AC\(17\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Hashimoto's thyroiditis : CK\(265\) : AC\(10\)](#), [Thyroid Nodule : CK\(92\) : AC\(11\)](#)

**Additional Keywords** : [Wheat Intolerance : CK\(21\) : AC\(2\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

---

**[Pathologic follicular epithelium \(thyroid gland\) have an increased expression of WGA receptors, indicating that this lectin may play a role in pathogenesis.](#) - GMI Summary**

**Pubmed Data** : Cancer. 1988 Dec 1;62(11):2354-62. PMID: [3179951](#)

**Article Published Date** : Dec 01, 1988

**Authors** : R González-Cámpora, F Sanchez Gallego, I Martin Lacave, J Mora Marin, C Montero Linares, H Galera-Davidson

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Thyroid Cancer : CK\(162\) : AC\(32\)](#), [Thyroid Nodule : CK\(92\) : AC\(11\)](#)

**Additional Keywords** : [Lectins : CK\(58\) : AC\(36\)](#)

**Problem Substances** : [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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**Topic: [Atherosclerosis](#)**

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**[There is a weak but positive correlation with the presence of coronary heart disease and the presence of anti-gliadin antibodies.](#) - GMI Summary**

**Pubmed Data** : Pol Merkur Lekarski. 2007 Jul;23(133):9-14. PMID: [18051823](#)

**Article Published Date** : Jul 01, 2007

**Authors** : Elwira Stasiakowska-Badura, Marek Kochmański

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Atherosclerosis](#) : CK(512) : AC(77), [Coronary Artery Disease](#) : CK(1253) : AC(136), [Gluten Intolerance](#) : CK(236) : AC(33), [Gluten Sensitivity](#) : CK(2319) : AC(246)

**Additional Keywords** : [Anti-Gliadin Antibodies](#) : CK(71) : AC(8)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Wheat](#) : CK(2371) : AC(280)

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## **Topic: [Attention Deficit Disorder with Hyperactivity](#)**

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### **[A Gluten and casein-free diet may have a therapeutic effect in autism spectrum and attention deficit disorders.](#) - GMI Summary**

**Pubmed Data** : Nutr Neurosci. 2010 Apr;13(2):87-100. PMID: [20406576](#)

**Article Published Date** : Apr 01, 2010

**Authors** : Paul Whiteley, Demetrious Haracopos, Ann-Mari Knivsberg, Karl Ludvig Reichelt, Sarah Parlar, Judith Jacobsen, Anders Seim, Lennart Pedersen, Maja Schondel, Paul Shattock

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Attention Deficit Disorder](#) : CK(134) : AC(12), [Attention Deficit Disorder with Hyperactivity](#) : CK(230) : AC(32), [Autism Spectrum Disorders](#) : CK(1118) : AC(108)

**Additional Keywords** : [Gluten and ADHD](#) : CK(20) : AC(2)

**Problem Substances** : [Casein](#) : CK(123) : AC(16), [Gluten](#) : CK(1610) : AC(131)

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### **[ADHD symptomatology is markedly over represented among untreated CD patients and that a gluten-free diet may improve symptoms significantly within a short period of time.](#) - GMI Summary**

**Pubmed Data** : J Atten Disord. 2006 Nov;10(2):200-4. PMID: [17085630](#)

**Article Published Date** : Nov 01, 2006

**Authors** : Helmut Niederhofer, Klaus Pittschieler

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Attention Deficit Disorder with Hyperactivity](#) : CK(230) : AC(32), [Celiac Disease](#) : CK(1393) : AC(185)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269), [Gluten and ADHD](#) : CK(20) : AC(2)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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## **Topic: [Attention Deficit Hyperactivity Disorder](#)**

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### **[Celiac disease is markedly overrepresented among patients presenting with ADHD.](#) - GMI Summary**

**Pubmed Data** : Prim Care Companion CNS Disord. 2011 ;13(3). PMID: [21977364](#)

**Article Published Date** : Jan 01, 2011

**Authors** : Helmut Niederhofer

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Attention Deficit Hyperactivity Disorder](#) : CK(160) : AC(14), [Celiac Disease](#) : CK(1393) : AC(185), [Wheat Intolerance](#) : CK(2213) : AC(231)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free](#) : CK(208) : AC(29)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131), [Wheat](#) : CK(2371) : AC(280)

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## **Topic: [Autism](#)**

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### **[Children with autism show elevations against gliadin \(wheat protein\) and cerebellar proteins simultaneously. These proteins simulate antibodies that may cross-react, resulting in neurological damage.](#) - GMI Summary**

**Pubmed Data** : Nutr Neurosci. 2004 Jun;7(3):151-61. PMID: [15526989](#)

**Article Published Date** : Jun 01, 2004

**Authors** : A Vojdani, T O'Bryan, J A Green, J Mccandless, K N Woeller, E Vojdani, A A Nourian, E L Cooper

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autism : CK\(1340\) : AC\(65\)](#), [Autism Spectrum Disorders : CK\(1118\) : AC\(108\)](#), [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Molecular Mimicry : CK\(47\) : AC\(10\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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## Topic: [Cardiomyopathy](#)

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### [Cardiomyopathy in patients with celiac disease may be completely reversible with a gluten-free diet.](#) - GMI Summary

**Pubmed Data** : Mayo Clin Proc. 2005 May;80(5):674-6. PMID: [15887437](#)

**Article Published Date** : May 01, 2005

**Authors** : Nisheeth K Goel, Robert D McBane, Patrick S Kamath

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Cardiomyopathy : CK\(77\) : AC\(15\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: [Cholestasis](#)

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### [Celiac disease has a high prevalance rate in autoimmune cholestatic liver disorders.](#) - GMI Summary

**Pubmed Data** : AmJ Gastroenterol. 2002 Oct;97(10):2609-13. PMID: [12385447](#)

**Article Published Date** : Oct 01, 2002

**Authors** : Umberto Volta, Luis Rodrigo, Alessandro Granito, Nunzio Petrolini, Paolo Muratori, Luigi Muratori, Antonio Linares, Lorenza Veronesi, Dolores Fuentes, Daniela Zauli, Francesco B Bianchi

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cholestasis : CK\(274\) : AC\(30\)](#), [Cholestasis: Autoimmune : CK\(10\) : AC\(1\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [Cholestasis: Autoimmune](#)

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### [Celiac disease has a high prevalance rate in autoimmune cholestatic liver disorders.](#) - GMI Summary

**Pubmed Data** : AmJ Gastroenterol. 2002 Oct;97(10):2609-13. PMID: [12385447](#)

**Article Published Date** : Oct 01, 2002

**Authors** : Umberto Volta, Luis Rodrigo, Alessandro Granito, Nunzio Petrolini, Paolo Muratori, Luigi Muratori, Antonio Linares, Lorenza Veronesi, Dolores Fuentes, Daniela Zauli, Francesco B Bianchi

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cholestasis : CK\(274\) : AC\(30\)](#), [Cholestasis: Autoimmune : CK\(10\) : AC\(1\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [Coronary Artery Disease](#)

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## **[There is a weak but positive correlation with the presence of coronary heart disease and the presence of anti-gliadin antibodies.](#) - GMI Summary**

**Pubmed Data** : Pol Merkur Lekarski. 2007 Jul;23(133):9-14. PMID: [18051823](#)

**Article Published Date** : Jul 01, 2007

**Authors** : Elwira Stasiakowska-Badura, Marek Kochmański

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Atherosclerosis](#) : CK(512) : AC(77), [Coronary Artery Disease](#) : CK(1253) : AC(136), [Gluten Intolerance](#) : CK(236) : AC(33), [Gluten Sensitivity](#) : CK(2319) : AC(246)

**Additional Keywords** : [Anti-Gliadin Antibodies](#) : CK(71) : AC(8)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Wheat](#) : CK(2371) : AC(280)

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## **Topic: End-Stage Autoimmune Liver Disease (ESALD)**

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### **[Celiac disease is found in a far higher percentage of patients with end-stage autoimmune liver disease.](#) - GMI Summary**

**Pubmed Data** : Liver Int. 2008 Apr;28(4):467-76. PMID: [18339073](#)

**Article Published Date** : Apr 01, 2008

**Authors** : Alberto Rubio-Tapia, Ahmad S Abdulkarim, Russell H Wiesner, S Breannan Moore, Patricia K Krause, Joseph A Murray

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases](#) : CK(5084) : AC(779), [Celiac Disease](#) : CK(1393) : AC(185), [End-Stage Autoimmune Liver Disease \(ESALD\)](#) : CK(10) : AC(1), [Liver Disease](#) : CK(114) : AC(30), [Organ Transplantation: Liver](#) : CK(202) : AC(24)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131), [Wheat](#) : CK(2371) : AC(280)

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## **Topic: Hashimoto's thyroiditis**

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### **[Celiac disease has a far higher prevalence in autoimmune thyroid disorders.](#) - GMI Summary**

**Pubmed Data** : Ital J Gastroenterol Hepatol. 1999 May;31(4):283-7. PMID: [10425571](#)

**Article Published Date** : May 01, 1999

**Authors** : L Cuoco, M Certo, R A Jorizzo, I De Vitis, A Tursi, A Papa, L De Marinis, P Fedeli, G Fedeli, G Gasbarrini

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Thyroiditis](#) : CK(134) : AC(17), [Celiac Disease](#) : CK(1393) : AC(185), [Hashimoto's thyroiditis](#) : CK(265) : AC(10), [Thyroid Nodule](#) : CK(92) : AC(11)

**Additional Keywords** : [Wheat Intolerance](#) : CK(21) : AC(2)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Wheat](#) : CK(2371) : AC(280)

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## **Topic: IgE-Mediated Hypersensitivity**

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### **[165 children with atopic dermatitis were studied, a higher number of sensitized food allergens was associated with negative effects on their growth and nutritional status.](#) - GMI Summary**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Allergy Asthma Immunol Res. 2011 Jan ;3(1):53-7. Epub 2010 Nov 23. PMID: [21217926](#)

**Article Published Date** : Dec 31, 2010

**Authors** : Ha-Na Cho, Soyoun Hong, Soo-Hyung Lee, Hye-Yung Yum



**Study Type** : Human Study

**Additional Links**

**Substances** : [Peanut : CK\(104\) : AC\(19\)](#)

**Diseases** : [Atopic Dermatitis : CK\(667\) : AC\(80\)](#), [Children: Impaired Growth : CK\(30\) : AC\(3\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [IgE-Mediated Hypersensitivity : CK\(108\) : AC\(2\)](#)

**Additional Keywords** : [Pediatric : CK\(30\) : AC\(3\)](#)

**Problem Substances** : [Peanut : CK\(31\) : AC\(5\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## [\*\*A study of 53 pediatric patients with eosinophilic esophagitis found most were highly atopic with frequent allergic sensitivities; the overall prevalence of food & inhalant sensitization was 80%, with higher total IgE levels in sensitized vs nonsensitized - GMI Summary\*\*](#)

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Ann Allergy Asthma Immunol. 2010 Jun ;104(6):496-502. PMID: [20568382](#)

**Article Published Date** : May 31, 2010

**Authors** : Elizabeth A Erwin, Hayley R James, Heather M Gutekunst, John M Russo, Kelly J Kelleher, Thomas A E Platts-Mills

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Eosinophilic esophagitis : CK\(66\) : AC\(5\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [IgE-Mediated Hypersensitivity : CK\(108\) : AC\(2\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Cow Milk : CK\(368\) : AC\(46\)](#), [Rye : CK\(12\) : AC\(3\)](#), [Soy : CK\(56\) : AC\(8\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Topic: Infant Nutrition**

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### [\*\*Breastfeeding seems to offer a protection against the development of CD in predisposed infants. - GMI Summary\*\*](#)

**Pubmed Data** : Evid Based Med. 2012 Aug 4. Epub 2012 Aug 4. PMID: [22864373](#)

**Article Published Date** : Aug 03, 2012

**Authors** : Camilla Henriksson, Anne-Marie Boström, Ingela E Wiklund

**Study Type** : Meta Analysis

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Celiac Disease: Prevention : CK\(32\) : AC\(3\)](#), [Infant Nutrition : CK\(70\) : AC\(13\)](#)

**Therapeutic Actions** : [Breastfeeding : CK\(657\) : AC\(67\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **Topic: Meniere's Disease**

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### [\*\*The majority of patients with Meniere's disease tested \(56.9%\) are sensitive to gliadin, as measured by a skin prick test. - GMI Summary\*\*](#)

**Pubmed Data** : Laryngoscope. 2011 Dec 6. Epub 2011 Dec 6. PMID: [22253033](#)

**Article Published Date** : Dec 06, 2011

**Authors** : Federica Di Berardino, Antonio Cesarani

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Meniere's Disease : CK\(288\) : AC\(5\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Topic: Organ Transplantation: Liver**

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### [\*\*Celiac disease is found in a far higher percentage of patients with end-stage\*\*](#)

## **[autoimmune liver disease.](#) - GMI Summary**

**Pubmed Data** : Liver Int. 2008 Apr;28(4):467-76. PMID: [18339073](#)

**Article Published Date** : Apr 01, 2008

**Authors** : Alberto Rubio-Tapia, Ahmad S Abdulkarim, Russell H Wiesner, S Breannan Moore, Patricia K Krause, Joseph A Murray

**Study Type** : Human Study

### **Additional Links**

**Diseases** : [Autoimmune Diseases](#) : CK(5084) : AC(779), [Celiac Disease](#) : CK(1393) : AC(185), [End-Stage Autoimmune Liver Disease \(ESALD\)](#) : CK(10) : AC(1), [Liver Disease](#) : CK(114) : AC(30), [Organ Transplantation: Liver](#) : CK(202) : AC(24)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131), [Wheat](#) : CK(2371) : AC(280)

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## **Topic: [Palmoplantar Pustulosis](#)**

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### **[Palmoplantar pustulosis is a condition highly correlated to gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : Br J Dermatol. 2007 Apr;156(4):659-66. Epub 2007 Jan 30. PMID: [17263812](#)

**Article Published Date** : Apr 01, 2007

**Authors** : G Michaëlsson, G Kristjánsson, I Pihl Lundin, E Hagforsen

**Study Type** : Human Study

### **Additional Links**

**Diseases** : [Gluten Intolerance](#) : CK(236) : AC(33), [Palmoplantar Pustulosis](#) : CK(10) : AC(1)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Wheat](#) : CK(2371) : AC(280)

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## **Topic: [Peripheral Neuropathies](#)**

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### **[Sensory ganglionopathy may be a manifestation of gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : Neurology. 2010 Sep 14;75(11):1003-8. PMID: [20837968](#)

**Article Published Date** : Sep 14, 2010

**Authors** : M Hadjivassiliou, D G Rao, S B Wharton, D S Sanders, R A Grünewald, A G B Davies-Jones

**Study Type** : Human Study

### **Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Gluten Sensitivity](#) : CK(2319) : AC(246), [Peripheral Neuropathies](#) : CK(454) : AC(31), [Sensory Neuropathies](#) : CK(10) : AC(1), [Wheat Intolerance](#) : CK(2213) : AC(231)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104), [Gluten](#) : CK(1610) : AC(131)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1064) : AC(179)

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## **Topic: [Restless Legs Syndrome](#)**

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### **[Celiac disease is associated with restless legs syndrome.](#) - GMI Summary**

**Pubmed Data** : Dig Dis Sci. 2010 Jun ;55(6):1667-73. PMID: [19731029](#)

**Article Published Date** : Jun 01, 2010

**Authors** : Leonard B Weinstock, Arthur S Walters, Gerard E Mullin, Stephen P Duntley

**Study Type** : Human Study

### **Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Restless Legs Syndrome](#) : CK(91) : AC(8)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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**[There was a 31% prevalence of RLS in the CD population that was significantly higher than the prevalence in the control population \(4%; P<0.001\).](#) 6 - GMI**

## Summary

**Pubmed Data** : Mov Disord. 2010 May 15 ;25(7):877-81. PMID: [20461805](#)

**Article Published Date** : May 15, 2010

**Authors** : Marcello Moccia, Maria Teresa Pellecchia, Roberto Erro, Fabiana Zingone, Sara Marelli, Damiano Giuseppe Barone, Carolina Ciacci, Luigi Ferini Strambi, Paolo Barone

**Study Type** : Human Study

### Additional Links

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Restless Legs Syndrome : CK\(91\) : AC\(8\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [Rett Syndrome](#)

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### [Elevated IgA antibodies to gluten and gliadin proteins and to casein in milk have been found in patients with Rett syndrome.](#) - GMI Summary

**Pubmed Data** : Autism. 2006 Mar;10(2):189-97. PMID: [16613867](#)

**Article Published Date** : Mar 01, 2006

**Authors** : K L Reichelt, O Skjeldal

**Study Type** : Human Study

### Additional Links

**Diseases** : [Casein Intolerance : CK\(44\) : AC\(7\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Rett Syndrome : CK\(20\) : AC\(2\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Casein : CK\(123\) : AC\(16\)](#), [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [Sensory Neuropathies](#)

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### [Sensory ganglionopathy may be a manifestation of gluten sensitivity.](#) - GMI Summary

**Pubmed Data** : Neurology. 2010 Sep 14;75(11):1003-8. PMID: [20837968](#)

**Article Published Date** : Sep 14, 2010

**Authors** : M Hadjivassiliou, D G Rao, S B Wharton, D S Sanders, R A Grunewald, A G B Davies-Jones

**Study Type** : Human Study

### Additional Links

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Peripheral Neuropathies : CK\(454\) : AC\(31\)](#), [Sensory Neuropathies : CK\(10\) : AC\(1\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## Topic: [Macroamylasemia](#)

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### [A significant percentage of the newly diagnosed patients with CD have macroamylasemia.](#) - GMI Summary

**Pubmed Data** : Am J Gastroenterol. 2001 Apr ;96(4):1096-100. PMID: [11316153](#)

**Article Published Date** : Apr 01, 2001

**Authors** : A Rabsztyn, P H Green, I Berti, A Fasano, J A Perman, K Horvath

**Study Type** : Human Study

### Additional Links

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Macroamylasemia : CK\(19\) : AC\(1\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### [A case of malabsorption and macroamylasemia reponding positvely to gluten withdrawal has been reported.](#) - GMI Summary

**Pubmed Data** : Am J Med. 1980 Sep ;69(3):451-7. PMID: [6158266](#)

**Article Published Date** : Sep 01, 1980

**Authors** : H J Hodgson, K B Whitaker, B T Cooper, J H Baron, H G Freeman, D W Moss, V S Chadwick

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Macroamylasemia : CK\(19\) : AC\(1\)](#), [Malabsorption Syndrome : CK\(34\) : AC\(11\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### **[Hyperamylasemia due to macroamylasemia in adult gluten enteropathy has been reported.](#) - GMI Summary**

**Pubmed Data** : Scand J Clin Lab Invest. 1997 May ;57(3):271-3. PMID: [9238763](#)

**Article Published Date** : May 01, 1997

**Authors** : G Bonetti, G Serricchio, A Giudici, M Bettonagli, G B Vadamca, R Bruno, E Coslovich, R Moratti

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Hyperamylasemia : CK\(3\) : AC\(1\)](#), [Macroamylasemia : CK\(19\) : AC\(1\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[Macroamylasemia attributable to gluten-related amylase autoantibodies has been reported.](#) - GMI Summary**

**Pubmed Data** : Pediatrics. 2001 Jun ;107(6):E93. PMID: [11389291](#)

**Article Published Date** : Jun 01, 2001

**Authors** : G Barera, E Bazzigaluppi, M Viscardi, F Renzetti, C Bianchi, G Chiumello, E Bosi

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Macroamylasemia : CK\(19\) : AC\(1\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **Topic: [Intestinal Permeability](#)**

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### **[Gliadin causes intestinal permeability in both celiac and non-celiac intestinal mucosa.](#) - GMI Summary**

**Pubmed Data** : Scand J Gastroenterol. 2006 Apr;41(4):408-19. PMID: [16635908](#)

**Article Published Date** : Apr 01, 2006

**Authors** : Sandro Drago, Ramzi El Asmar, Mariarosaria Di Pierro, Maria Grazia Clemente, Amit Tripathi, Anna Sapone, Manjusha Thakar, Giuseppe Iacono, Antonio Carroccio, Cinzia D'Agate, Tarcisio Not, Lucia Zampini, Carlo Catassi, Alessio Fasano

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Intestinal Permeability : CK\(263\) : AC\(56\)](#)

**Additional Keywords** : [Zonulin : CK\(15\) : AC\(5\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### **[Dietary cereals contribute to intestinal permeability in experimental enteropathy in rats.](#) - GMI Summary**

**Pubmed Data** : Gut. 1983 Sep ;24(9):825-30. PMID: [6411526](#)

**Article Published Date** : Sep 01, 1983

**Authors** : J S Sandhu, D R Fraser

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Drug Toxicity: Methotrexate : CK\(30\) : AC\(13\)](#), [Intestinal Permeability : CK\(263\) : AC\(56\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Grains : CK\(27\) : AC\(8\)](#)

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## **[Gliadin has a direct cytotoxic effect on the cytoskeleton and tight junctions of epithelial cells.](#) - GMI Summary**

**Pubmed Data** : World J Gastroenterol. 2005 Dec 28 ;11(48):7597-601. PMID: [16437684](#)

**Article Published Date** : Dec 28, 2005

**Authors** : Ersilia Dolfini, Leda Roncoroni, Luca Elli, Chiara Fumagalli, Roberto Colombo, Simona Ramponi, Fabio Forlani, Maria Teresa Bardella

**Study Type** : In Vitro Study

### **Additional Links**

**Diseases** : [Gastrointestinal Inflammation : CK\(41\) : AC\(7\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Intestinal Permeability : CK\(263\) : AC\(56\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Cytotoxic : CK\(68\) : AC\(35\)](#)

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## **[Gliadin induces an increase in intestinal permeability - Article 2.](#) - GMI Summary**

**Pubmed Data** : Gut. 2003 Feb;52(2):218-23. PMID: [12524403](#)

**Article Published Date** : Feb 01, 2003

**Authors** : M G Clemente, S De Virgiliis, J S Kang, R Macatagney, M P Musu, M R Di Pierro, S Drago, M Congia, A Fasano

**Study Type** : In Vitro Study

### **Additional Links**

**Diseases** : [Intestinal Permeability : CK\(263\) : AC\(56\)](#)

**Additional Keywords** : [Zonulin : CK\(15\) : AC\(5\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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## **[Gliadin induces an increase in intestinal permeability.](#) - GMI Summary**

**Pubmed Data** : Gastroenterology. 2008 Jul;135(1):194-204.e3. Epub 2008 Mar 21. PMID: [18485912](#)

**Article Published Date** : Jul 01, 2008

**Authors** : Karen M Lammers, Ruliang Lu, Julie Brownley, Bao Lu, Craig Gerard, Karen Thomas, Prasad Rallabhandi, Terez Shea-Donohue, Amir Tamiz, Sefik Alkan, Sarah Netzel-Arnett, Toni Antalıs, Stefanie N Vogel, Alessio Fasano

**Study Type** : In Vitro Study

### **Additional Links**

**Diseases** : [Intestinal Permeability : CK\(263\) : AC\(56\)](#)

**Additional Keywords** : [Zonulin : CK\(15\) : AC\(5\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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## **[Wheat, rye, and barley proteins may act as aids to carcinogens.](#) - GMI Summary**

**Pubmed Data** : Med Hypotheses. 1997 Sep;49(3):285-8. PMID: [9293475](#)

**Article Published Date** : Sep 01, 1997

**Authors** : R Hoggan

**Study Type** : Commentary

### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [HPA Axis Dysregulation : CK\(69\) : AC\(11\)](#), [Intestinal Permeability : CK\(263\) : AC\(56\)](#), [Lymphoma : CK\(225\) : AC\(68\)](#)

**Problem Substances** : [Barley : CK\(13\) : AC\(3\)](#), [Gluten exorphins : CK\(26\) : AC\(10\)](#), [Grains : CK\(27\) : AC\(8\)](#), [Rye : CK\(12\) : AC\(3\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Topic: Ataxia**

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## **["Whereas the development of anti-transglutaminase 2 IgA is linked with gastrointestinal disease, an anti-transglutaminase 6 IgG and IgA response is prevalent in gluten ataxia."](#) - GMI Summary**

**Pubmed Data** : Ann Neurol. 2008 Sep ;64(3):332-43. PMID: [18825674](#)

**Article Published Date** : Sep 01, 2008

**Authors** : Marios Hadjivassiliou, Pascale Aeschlimann, Alexander Strigun, David S Sanders, Nicola Woodroffe, Daniel Aeschlimann

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Ataxia : CK\(96\) : AC\(14\)](#), [Gluten Ataxia : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **[Progressive ataxia with palatal tremor due to gluten sensitivity has been reported.](#) - GMI Summary**

**Pubmed Data** : Mov Disord. 2012 Jan ;27(1):62-3. PMID: [22252893](#)

**Article Published Date** : Jan 01, 2012

**Authors** : Ammar Kheder, Stuart Currie, Charles Romanowski, Marios Hadjivassiliou

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Ataxia : CK\(96\) : AC\(14\)](#), [Tremor : CK\(39\) : AC\(8\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Celiac disease should be ruled out in the differential diagnosis of neurological dysfunction of unknown cause, including ataxia, epilepsy and dementia.](#) - GMI Summary**

**Pubmed Data** : Arq Neuropsiquiatr. 2004 Dec ;62(4):969-72. Epub 2004 Dec 15. PMID: [15608953](#)

**Article Published Date** : Dec 01, 2004

**Authors** : José Ibiapina Siqueira Neto, Ana Carolina Leite Vieira Costa, Francisco George Magalhães, Gisele Sampaio Silva

**Study Type** : Review

**Additional Links**

**Diseases** : [Ataxia : CK\(96\) : AC\(14\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Dementia : CK\(225\) : AC\(31\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **Topic: Headache**

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### **[Headache and CNS white matter abnormalities may be associated with gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : Neurology. 2001 Feb 13 ;56(3):385-8. PMID: [11171906](#)

**Article Published Date** : Feb 13, 2001

**Authors** : M Hadjivassiliou, R A Grünewald, M Lawden, G A Davies-Jones, T Powell, C M Smith

**Study Type** : Human Study

**Additional Links**

**Diseases** : [CNS White Matter Abnormalities : CK\(10\) : AC\(1\)](#), [Headache : CK\(657\) : AC\(72\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[A woman with daily headaches caused by wheat consumption has been reported.](#) - GMI Summary**

**Pubmed Data** : J Headache Pain. 2005 Apr ;6(2):91-2. Epub 2005 Apr 8. PMID: [16362649](#)

**Article Published Date** : Apr 01, 2005

**Authors** : Julio Pascual, Carlos Leno

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Headache : CK\(657\) : AC\(72\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## Topic: Pancreatitis

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### [The glutenfree diet described as only effective therapy to prevent acute pancreatitis relapses associated with gluten enteropathy](#) - GMI Summary

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Rev Esp Enferm Dig. 2008 Dec ;100(12):746-51. PMID: [19222332](#)

**Article Published Date** : Nov 30, 2008

**Authors** : L Rodrigo, N Alvarez, S Riestra, R de Francisco, O González Bernardo, L García Isidro, A López Vázquez, C López Larrea

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Pancreatitis : CK\(163\) : AC\(40\)](#)

**Additional Keywords** : [Pancreatitis : CK\(163\) : AC\(40\)](#), [Pancreatitis : CK\(163\) : AC\(40\)](#), [Pancreatitis : CK\(163\) : AC\(40\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### [Celiac disease and autoimmune pancreatitis: a case report.](#) - GMI Summary

**Pubmed Data** : Eur J Gastroenterol Hepatol. 2011 Nov ;23(12):1270-2. PMID: [21946127](#)

**Article Published Date** : Oct 31, 2011

**Authors** : Ibrahim Masoodi, Hamidullah Wani, Khalid Alsayari, Tarek Sulaiman, Nadeem Syed Hassan, Adel Nazmi Alqutub, Ahmed Al Omair, Abed H Al-Lehibi

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Pancreatitis : CK\(163\) : AC\(40\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Inflammatory : CK\(150\) : AC\(37\)](#)

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## Topic: Lymphoma

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### [A high frequency of celiac disease was found in patients with lymphoma in the southeast region of Turkey.](#) - GMI Summary

**Pubmed Data** : Turk J Gastroenterol. 2009 Jun ;20(2):87-92. PMID: [19530040](#)

**Article Published Date** : Jun 01, 2009

**Authors** : Timuçin Cil, Abdullah Altıntaş, Abdurrahman Işikdoğan, Semir Paşa, Kadim Bayan, Sabri Batun, Hüseyin Büyükbayram

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Lymphoma : CK\(225\) : AC\(68\)](#), [Non-Hodgkin Lymphoma : CK\(515\) : AC\(67\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### [Wheat, rye, and barley proteins may act as aids to carcinogens.](#) - GMI Summary

**Pubmed Data** : Med Hypotheses. 1997 Sep;49(3):285-8. PMID: [9293475](#)

**Article Published Date** : Sep 01, 1997

**Authors** : R Hoggan

**Study Type** : Commentary

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [HPA Axis Dysregulation : CK\(69\) : AC\(11\)](#), [Intestinal Permeability : CK\(263\) : AC\(56\)](#), [Lymphoma : CK\(225\) : AC\(68\)](#)

**Problem Substances** : [Barley : CK\(13\) : AC\(3\)](#), [Gluten exorphins : CK\(26\) : AC\(10\)](#), [Grains : CK\(27\) : AC\(8\)](#), [Rye : CK\(12\) : AC\(3\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: Psychiatric Disorders

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### Neurological symptoms occur in 6-10% of those with celiac disease, with cerebella ataxia being the most frequent symptom. - GMI Summary

**Pubmed Data** : Mov Disord. 2009 Dec 15;24(16):2358-62. PMID: [19845007](#)

**Article Published Date** : Dec 15, 2009

**Authors** : Katrin Bürk, Marie-Louise Farecki, Georg Lamprecht, Guenter Roth, Patrice Decker, Michael Weller, Hans-Georg Rammensee, Wolfgang Oertel

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Carpal Tunnel Syndrome : CK\(80\) : AC\(8\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cerebellar Ataxia : CK\(36\) : AC\(4\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Migraine Disorders : CK\(455\) : AC\(54\)](#), [Psychiatric Disorders : CK\(71\) : AC\(10\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### There are neurologic and psychiatric manifestations to gluten sensitivity. - GMI Summary

**Pubmed Data** : Psychiatr Q. 2011 Aug 30. Epub 2011 Aug 30. PMID: [21877216](#)

**Article Published Date** : Aug 30, 2011

**Authors** : Jessica R Jackson, William W Eaton, Nicola G Cascella, Alessio Fasano, Deanna L Kelly

**Study Type** : Review

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Psychiatric Disorders : CK\(71\) : AC\(10\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: Rheumatoid Arthritis

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### Positive serum antigliadin antibodies without celiac disease have been associated with rheumatoid arthritis and depression in the elderly. - GMI Summary

**Pubmed Data** : Scand J Gastroenterol. 2010 Oct;45(10):1197-202. PMID: [20545470](#)

**Article Published Date** : Oct 01, 2010

**Authors** : Anitta Ruuskanen, Katri Kaukinen, Pekka Collin, Heini Huhtala, Raisa Valve, Markku Mäki, Liisa Luostarinen

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Celiac Disease: Diagnostic Considerations : CK\(91\) : AC\(8\)](#), [Depression: Unipolar : CK\(662\) : AC\(84\)](#), [Rheumatoid Arthritis : CK\(414\) : AC\(64\)](#)

**Additional Keywords** : [Antigliadin Antibodies \(AGA\) : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### Do dietary lectins cause disease? - GMI Summary

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : BMJ. 1999 Apr 17 ;318(7190):1023-4. PMID: [10205084](#)

**Article Published Date** : Apr 16, 1999

**Authors** : D L Freed

**Study Type** : Review

**Additional Links**

**Diseases** : [Rheumatoid Arthritis : CK\(414\) : AC\(64\)](#)

**Additional Keywords** : [Lectins : CK\(58\) : AC\(36\)](#)

**Problem Substances** : [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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## **Lectins bind to inflamed synovial tissue of patients with osteoarthritis and rheumatoid arthritis. - GMI Summary**

**Pubmed Data** : Acta Histochem Suppl. 1988;36:277-83. PMID: [3150561](#)

**Article Published Date** : Jan 01, 1988

**Authors** : P Fritz, H V Tuzcek, J Hoenes, A Mischlinski, A Grau, C Hage, A Koenig, G Wegner

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Osteoarthritis : CK\(615\) : AC\(91\)](#), [Rheumatoid Arthritis : CK\(414\) : AC\(64\)](#)

**Problem Substances** : [Lectins : CK\(35\) : AC\(27\)](#), [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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## **Topic: Cancers: All**

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## **Mortality from malignant neoplasms, non-Hodgkin's lymphoma and digestive system disorders were significantly higher in gluten sensitive patients compared to the Northern Ireland population. - GMI Summary**

**Pubmed Data** : World J Gastroenterol. 2007 Jan 7 ;13(1):146-51. PMID: [17206762](#)

**Article Published Date** : Jan 07, 2007

**Authors** : L A Anderson, S A McMillan, R G P Watson, P Monaghan, A T Gavin, C Fox, L J Murray

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Cancers: All : CK\(8580\) : AC\(2715\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Mortality: All-Cause : CK\(644\) : AC\(55\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **Plant sprouts within the Gramineae family such as wheat, maize and rye contain potentially carcinogenic compounds known as benzoxinoids (BAs). - GMI Summary**

**Pubmed Data** : Cancer Lett. 2007 Feb 8;246(1-2):290-9. Epub 2006 Apr 27. PMID: [16644106](#)

**Article Published Date** : Feb 08, 2007

**Authors** : Christoph A Buchmann, Armen Nersesyan, Brigitte Kopp, Doris Schauburger, Firouz Darroudi, Tamara Grummt, Georg Krupitza, Michael Kundi, Rolf Schulte-Hermann, Siegfried Knasmueller

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Cancers: All : CK\(8580\) : AC\(2715\)](#)

**Problem Substances** : [Benzoxazinoids \(BAs\) : CK\(1\) : AC\(1\)](#), [Corn : CK\(14\) : AC\(4\)](#), [Grains : CK\(27\) : AC\(8\)](#), [Rye : CK\(12\) : AC\(3\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Topic: Thyroid Cancer**

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## **Wheat germ agglutinin (WGA) and concanavalin A bind to benign and malignant thyroid nodules. - GMI Summary**

**Pubmed Data** : Arch Pathol Lab Med. 1989 Feb;113(2):186-9. PMID: [2916907](#)

**Article Published Date** : Feb 01, 1989

**Authors** : H Sasano, M Rojas, S G Silverberg

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Thyroid Cancer : CK\(162\) : AC\(32\)](#), [Thyroid Neoplasms : CK\(11\) : AC\(2\)](#)

**Additional Keywords** : [Lectins : CK\(58\) : AC\(36\)](#)

**Problem Substances** : [Concanavalin A : CK\(17\) : AC\(6\)](#), [Lectins : CK\(35\) : AC\(27\)](#), [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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## **Pathologic follicular epithelium (thyroid gland) have an increased expression of WGA receptors, indicating that this lectin may play a role in pathogenesis. -**

## GMI Summary

**Pubmed Data** : Cancer. 1988 Dec 1;62(11):2354-62. PMID: [3179951](#)

**Article Published Date** : Dec 01, 1988

**Authors** : R González-Cámpora, F Sanchez Gallego, I Martin Lacave, J Mora Marin, C Montero Linares, H Galera-Davidson

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Thyroid Cancer : CK\(162\) : AC\(32\)](#), [Thyroid Nodule : CK\(92\) : AC\(11\)](#)

**Additional Keywords** : [Lectins : CK\(58\) : AC\(36\)](#)

**Problem Substances** : [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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## Topic: [Acquired hypogammaglobulinemia](#)

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### [Wheat gluten may exert its adverse effects through activation of complement \(a cascade of proteins in the blood that form part of innate immunity\).](#) - GMI Summary

**Pubmed Data** : Clin Exp Immunol. 1993 Dec;94(3):539-43. PMID: [8252813](#)

**Article Published Date** : Dec 01, 1993

**Authors** : D J Unsworth, R Würzner, D L Brown, P J Lachmann

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Acquired hypogammaglobulinemia : CK\(81\) : AC\(8\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Dermatitis Herpetiformis : CK\(40\) : AC\(4\)](#), [Hypogammaglobulinemia : CK\(10\) : AC\(1\)](#)

**Additional Keywords** : [Plant Extracts : CK\(3435\) : AC\(1172\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [Allergy: Cow's Milk](#)

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### [Children with atopic dermatitis commonly have specif IgE to common food allergens.](#) - GMI Summary

**Pubmed Data** : Iran J Immunol. 2012 Mar ;9(1):32-8. PMID: [22426165](#)

**Article Published Date** : Mar 01, 2012

**Authors** : Mozghan Moghtaderi, Shirin Farjadian, Sara Kashef, Maryam Tavakoli, Soheila Alyasin, Maryam Afrasiab, Marzieh Orooj

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Allergy: Cow's Milk : CK\(92\) : AC\(18\)](#), [Atopic Dermatitis: Infant & Childhood : CK\(170\) : AC\(14\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [Food Allergies/Intolerances: Cereals/Grains : CK\(11\) : AC\(2\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Nightshade Foods Intolerance : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Cow Milk : CK\(368\) : AC\(46\)](#), [Egg : CK\(20\) : AC\(3\)](#), [Nuts : CK\(10\) : AC\(1\)](#), [Peanut : CK\(31\) : AC\(5\)](#), [Potato : CK\(43\) : AC\(11\)](#), [Tomato : CK\(10\) : AC\(1\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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## Topic: [Anaphylaxis](#)

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### [A novel wheat gliadin is the cause of exercise-induced anaphylaxis.](#) - GMI Summary

**Pubmed Data** : J Allergy Clin Immunol. 1999 May;103(5 Pt 1):912-7. PMID: [10329828](#)

**Article Published Date** : May 01, 1999

**Authors** : K Palosuo, H Alenius, E Varjonen, M Koivuluhta, J Mikkola, H Keskinen, N Kalkkinen, T Reunala

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Anaphylaxis : CK\(54\) : AC\(15\)](#), [Anaphylaxis: Exercise-Induced : CK\(27\) : AC\(3\)](#), [Food Allergies](#)

: CK(390) : AC(53), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#)  
**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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## **Topic: [Apthous Ulcer](#)**

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### **[Recurrent apthous ulceration responds favorably to a gluten free diet, and may reflect undiagnosed celiac disease.](#) - GMI Summary**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Br Med J. 1976 Jan 3 ;1(6000):11-13. PMID: [1247715](#)

**Article Published Date** : Jan 03, 1976

**Authors** : R Ferguson, M K Basu, P Asquith, W T Cooke

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Apthous Ulcer : CK\(131\) : AC\(14\)](#), [Mucosa: Flattened : CK\(10\) : AC\(1\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **Topic: [Ataxia: Dominant](#)**

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### **[There is a trend toward a higher prevalence of antigliadin antibodies in patients with sporadic ataxia and dominant ataxia.](#) - GMI Summary**

**Pubmed Data** : Neurology. 2003 May 27 ;60(10):1674-5. PMID: [12771263](#)

**Article Published Date** : May 27, 2003

**Authors** : M Abele, L Schöls, S Schwartz, T Klockgether

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Ataxia: Dominant : CK\(10\) : AC\(1\)](#), [Ataxia: Sporadic : CK\(10\) : AC\(1\)](#)

**Additional Keywords** : [Anti-Gliadin Antibodies : CK\(71\) : AC\(8\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **Topic: [Ataxia: Sporadic](#)**

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### **[There is a trend toward a higher prevalence of antigliadin antibodies in patients with sporadic ataxia and dominant ataxia.](#) - GMI Summary**

**Pubmed Data** : Neurology. 2003 May 27 ;60(10):1674-5. PMID: [12771263](#)

**Article Published Date** : May 27, 2003

**Authors** : M Abele, L Schöls, S Schwartz, T Klockgether

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Ataxia: Dominant : CK\(10\) : AC\(1\)](#), [Ataxia: Sporadic : CK\(10\) : AC\(1\)](#)

**Additional Keywords** : [Anti-Gliadin Antibodies : CK\(71\) : AC\(8\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **Topic: [Atopic Dermatitis: Infant & Childhood](#)**

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### **[Children with atopic dermatitis commonly have specif IgE to common food allergens.](#) - GMI Summary**

**Pubmed Data** : Iran J Immunol. 2012 Mar ;9(1):32-8. PMID: [22426165](#)

**Article Published Date** : Mar 01, 2012

**Authors** : Mozghan Moghtaderi, Shirin Farjadian, Sara Kashef, Maryam Tavakoli, Soheila Alyasin,

Maryam Afrasiab, Marzieh Orooj

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Allergy: Cow's Milk : CK\(92\) : AC\(18\)](#), [Atopic Dermatitis: Infant & Childhood : CK\(170\) : AC\(14\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [Food Allergies/Intolerances: Cereals/Grains : CK\(11\) : AC\(2\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Nightshade Foods Intolerance : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Cow Milk : CK\(368\) : AC\(46\)](#), [Egg : CK\(20\) : AC\(3\)](#), [Nuts : CK\(10\) : AC\(1\)](#), [Peanut : CK\(31\) : AC\(5\)](#), [Potato : CK\(43\) : AC\(11\)](#), [Tomato : CK\(10\) : AC\(1\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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## Topic: [Attention Deficit Disorder](#)

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### [A Gluten and casein-free diet may have a therapeutic effect in autism spectrum and attention deficit disorders.](#) - GMI Summary

**Pubmed Data** : Nutr Neurosci. 2010 Apr;13(2):87-100. PMID: [20406576](#)

**Article Published Date** : Apr 01, 2010

**Authors** : Paul Whiteley, Demetrious Haracopos, Ann-Mari Knivsberg, Karl Ludvig Reichelt, Sarah Parlar, Judith Jacobsen, Anders Seim, Lennart Pedersen, Maja Schondel, Paul Shattock

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Attention Deficit Disorder : CK\(134\) : AC\(12\)](#), [Attention Deficit Disorder with Hyperactivity : CK\(230\) : AC\(32\)](#), [Autism Spectrum Disorders : CK\(1118\) : AC\(108\)](#)

**Additional Keywords** : [Gluten and ADHD : CK\(20\) : AC\(2\)](#)

**Problem Substances** : [Casein : CK\(123\) : AC\(16\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [Brain Injury: Hippocampal Damage](#)

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### [Hippocampal sclerosis in refractory temporal lobe epilepsy is associated with gluten sensitivity.](#) - GMI Summary

**Pubmed Data** : J Neurol Neurosurg Psychiatry. 2009 Jun;80(6):626-30. Epub 2009 Feb 24. PMID: [19244266](#)

**Article Published Date** : Jun 01, 2009

**Authors** : M Peltola, K Kaukinen, P Dastidar, K Haimila, J Partanen, A-M Haapala, M Mäki, T Keränen, J Peltola

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Brain Injury: Hippocampal Damage : CK\(35\) : AC\(16\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Hippocampal Sclerosis : CK\(10\) : AC\(1\)](#), [Temporal Lobe Epilepsy \(TLE\) : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [CNS White Matter Abnormalities](#)

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### [Headache and CNS white matter abnormalities may be associated with gluten sensitivity.](#) - GMI Summary

**Pubmed Data** : Neurology. 2001 Feb 13 ;56(3):385-8. PMID: [11171906](#)

**Article Published Date** : Feb 13, 2001

**Authors** : M Hadjivassiliou, R A Grünewald, M Lawden, G A Davies-Jones, T Powell, C M Smith

**Study Type** : Human Study

**Additional Links**

**Diseases** : [CNS White Matter Abnormalities : CK\(10\) : AC\(1\)](#), [Headache : CK\(657\) : AC\(72\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## Topic: Carpal Tunnel Syndrome

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### Neurological symptoms occur in 6-10% of those with celiac disease, with cerebella ataxia being the most frequent symptom. - GMI Summary

**Pubmed Data** : Mov Disord. 2009 Dec 15;24(16):2358-62. PMID: [19845007](#)

**Article Published Date** : Dec 15, 2009

**Authors** : Katrin Bürk, Marie-Louise Farecki, Georg Lamprecht, Guenter Roth, Patrice Decker, Michael Weller, Hans-Georg Rammensee, Wolfgang Oertel

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Carpal Tunnel Syndrome : CK\(80\) : AC\(8\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cerebellar Ataxia : CK\(36\) : AC\(4\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Migraine Disorders : CK\(455\) : AC\(54\)](#), [Psychiatric Disorders : CK\(71\) : AC\(10\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## Topic: Celiac Disease: Early Onset

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### "Infants genetically susceptible to CD who are exposed to gluten early mount an immune response against gluten and develop CD autoimmunity more frequently than at-risk infants in which gluten exposure is delayed until 12 months of age." - GMI Summary

**Pubmed Data** : PLoS One. 2012 ;7(3):e33387. Epub 2012 Mar 14. PMID: [22432018](#)

**Article Published Date** : Jan 01, 2012

**Authors** : Maria Sellitto, Guoyun Bai, Gloria Serena, W Florian Fricke, Craig Sturgeon, Pawel Gajer, James R White, Sara S K Koenig, Joyce Sakamoto, Dustin Boothe, Rachel Gicquelais, Deborah Kryszak, Elaine Puppa, Carlo Catassi, Jacques Ravel, Alessio Fasano

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Celiac Disease: Early Onset : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: Child Mortality

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### The global burden of childhood coeliac disease is likely a neglected component of diarrhoeal mortality. - GMI Summary

**Pubmed Data** : PLoS One. 2011 ;6(7):e22774. Epub 2011 Jul 26. PMID: [21818388](#)

**Article Published Date** : Jan 01, 2011

**Authors** : Peter Byass, Kathleen Kahn, Anneli Ivarsson

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Child Mortality : CK\(64\) : AC\(8\)](#), [Diarrhea: in Children : CK\(213\) : AC\(21\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: Children: Impaired Growth

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### 165 children with atopic dermatitis were studied, a higher number of sensitized food allergens was associated with negative effects on their growth and nutritional status. - GMI Summary

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Allergy Asthma Immunol Res. 2011 Jan ;3(1):53-7. Epub 2010 Nov 23. PMID: [21217926](#)

**Article Published Date** : Dec 31, 2010

**Authors** : Ha-Na Cho, Soyoun Hong, Soo-Hyung Lee, Hye-Yung Yum

**Study Type** : Human Study

**Additional Links**

**Substances** : [Peanut : CK\(104\) : AC\(19\)](#)

**Diseases** : [Atopic Dermatitis : CK\(667\) : AC\(80\)](#), [Children: Impaired Growth : CK\(30\) : AC\(3\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [IgE-Mediated Hypersensitivity : CK\(108\) : AC\(2\)](#)

**Additional Keywords** : [Pediatric : CK\(30\) : AC\(3\)](#)

**Problem Substances** : [Peanut : CK\(31\) : AC\(5\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: [Chronic Constipation, Children](#)

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**[54 children suffering from chronic constipation unresponsive to therapy, were prospectively evaluated; in this group food allergy seemed to be a significant etiologic factor. APT was found to be useful in evaluating non-IgE allergy-mediated constipation.](#) - GMI Summary**

**Pubmed Data** : Eur J Pediatr. 2011 Sep ;170(9):1173-8. Epub 2011 Feb 25. PMID: [21347849](#)

**Article Published Date** : Aug 31, 2011

**Authors** : Ekaterini I Syrigou, Constantinos Pitsios, Ioanna Panagiotou, Georgios Chouliaras, Sofia Kitsiou, Mary Kanariou, Eleftheria Roma-Giannikou

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Chronic Constipation, Children : CK\(10\) : AC\(1\)](#), [Constipation : CK\(326\) : AC\(37\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords** : [Atopy Patch Test : CK\(10\) : AC\(1\)](#), [Pediatric : CK\(30\) : AC\(3\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: [Colitis: Collagenous](#)

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**[Collagenous enterocolitis represents a diffuse manifestation of gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : J Clin Gastroenterol. 1992 Jul ;15(1):45-51. PMID: [1500661](#)

**Article Published Date** : Jul 01, 1992

**Authors** : T M McCashland, J P Donovan, R S Strobach, J Linder, E M Quigley

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Colitis: Collagenous : CK\(20\) : AC\(1\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#), [Inflammatory : CK\(150\) : AC\(37\)](#)

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## Topic: [Constipation](#)

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**[54 children suffering from chronic constipation unresponsive to therapy, were prospectively evaluated; in this group food allergy seemed to be a significant etiologic factor. APT was found to be useful in evaluating non-IgE allergy-mediated constipation.](#) - GMI Summary**

**Pubmed Data** : Eur J Pediatr. 2011 Sep ;170(9):1173-8. Epub 2011 Feb 25. PMID: [21347849](#)

**Article Published Date** : Aug 31, 2011

**Authors** : Ekaterini I Syrigou, Constantinos Pitsios, Ioanna Panagiotou, Georgios Chouliaras, Sofia Kitsiou, Mary Kanariou, Eleftheria Roma-Giannikou

**Study Type** : Human Study

### **Additional Links**

**Diseases** : [Chronic Constipation, Children](#) : CK(10) : AC(1), [Constipation](#) : CK(326) : AC(37), [Food Allergies](#) : CK(390) : AC(53)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free](#) : CK(208) : AC(29)

**Additional Keywords** : [Atopy Patch Test](#) : CK(10) : AC(1), [Pediatric](#) : CK(30) : AC(3)

**Problem Substances** : [Wheat](#) : CK(2371) : AC(280)

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## **Topic: [Depression: Unipolar](#)**

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### **[Positive serum antigliadin antibodies without celiac disease have been associated with rheumatoid arthritis and depression in the elderly.](#) - GMI**

#### **Summary**

**Pubmed Data** : Scand J Gastroenterol. 2010 Oct;45(10):1197-202. PMID: [20545470](#)

**Article Published Date** : Oct 01, 2010

**Authors** : Anitta Ruuskanen, Katri Kaukinen, Pekka Collin, Heini Huhtala, Raisa Valve, Markku Mäki, Liisa Luostarinen

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Celiac Disease: Diagnostic Considerations](#) : CK(91) : AC(8), [Depression: Unipolar](#) : CK(662) : AC(84), [Rheumatoid Arthritis](#) : CK(414) : AC(64)

**Additional Keywords** : [Antigliadin Antibodies \(AGA\)](#) : CK(10) : AC(1)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104)

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## **Topic: [Diarrhea: in Children](#)**

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### **[The global burden of childhood coeliac disease is likely a neglected component of diarrhoeal mortality.](#) - GMI Summary**

**Pubmed Data** : PLoS One. 2011 ;6(7):e22774. Epub 2011 Jul 26. PMID: [21818388](#)

**Article Published Date** : Jan 01, 2011

**Authors** : Peter Byass, Kathleen Kahn, Anneli Ivarsson

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Child Mortality](#) : CK(64) : AC(8), [Diarrhea: in Children](#) : CK(213) : AC(21)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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## **Topic: [Enamel Defects](#)**

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### **[Enamel defects associated with coeliac disease may be due to anti-gliadin antibodies cross-reacting with tooth enamel.](#) - GMI Summary**

**Pubmed Data** : Eur J Oral Sci. 2012 Apr ;120(2):104-12. PMID: [22409216](#)

**Article Published Date** : Apr 01, 2012

**Authors** : Florencia Muñoz, Natalia Del Río, Cecilia Sónora, Inés Tiscornia, Alicia Marco, Ana Hernández

**Study Type** : Human Study

#### **Additional Links**

**Diseases** : [Enamel Defects](#) : CK(10) : AC(1)

**Additional Keywords** : [Anti-Gliadin Antibodies](#) : CK(71) : AC(8)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104)

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## **Topic: [Epithelium Damage: Lymphocytic infiltration](#)**

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### **[Lymphocytic infiltration of epithelium is a common problem in dermatitis](#)**

## **[herpetiformis.](#) - GMI Summary**

**Pubmed Data** : Br Med J. 1972 Aug 12 ;3(5823):371-4. PMID: [5070159](#)

**Article Published Date** : Aug 12, 1972

**Authors** : L Fry, P P Seah, R M McMinn, A V Hoffbrand

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Dermatitis Herpetiformis : CK\(40\) : AC\(4\)](#), [Epithelium Damage: Lymphocytic infiltration : CK\(10\) : AC\(1\)](#), [Gastrointestinal Inflammation : CK\(41\) : AC\(7\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **Topic: Food Allergies/Intolerances: Cereals/Grains**

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### **Children with atopic dermatitis commonly have specif IgE to common food allergens.** - GMI Summary

**Pubmed Data** : Iran J Immunol. 2012 Mar ;9(1):32-8. PMID: [22426165](#)

**Article Published Date** : Mar 01, 2012

**Authors** : Mozghan Moghtaderi, Shirin Farjadian, Sara Kashef, Maryam Tavakoli, Soheila Alyasin, Maryam Afrasiab, Marzieh Orooj

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Allergy: Cow's Milk : CK\(92\) : AC\(18\)](#), [Atopic Dermatitis: Infant & Childhood : CK\(170\) : AC\(14\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [Food Allergies/Intolerances: Cereals/Grains : CK\(11\) : AC\(2\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Nightshade Foods Intolerance : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Cow Milk : CK\(368\) : AC\(46\)](#), [Egg : CK\(20\) : AC\(3\)](#), [Nuts : CK\(10\) : AC\(1\)](#), [Peanut : CK\(31\) : AC\(5\)](#), [Potato : CK\(43\) : AC\(11\)](#), [Tomato : CK\(10\) : AC\(1\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

---

## **Topic: Gastrointestinal Hemorrhage**

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### **Gluten sensivity may not be detectable with conventional light microscopy.** - GMI Summary

**Pubmed Data** : Dig Liver Dis. 2003 Nov;35(11):768-73. PMID: [14674666](#)

**Article Published Date** : Nov 01, 2003

**Authors** : A Sbarbati, E Valletta, M Bertini, M Cipolli, M Morroni, L Pinelli, L Tatò

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gastrointestinal Hemorrhage : CK\(33\) : AC\(4\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **Topic: Gluten Ataxia**

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### **"Whereas the development of anti-transglutaminase 2 IgA is linked with gastrointestinal disease, an anti-transglutaminase 6 IgG and IgA response is prevalent in gluten ataxia."** - GMI Summary

**Pubmed Data** : Ann Neurol. 2008 Sep ;64(3):332-43. PMID: [18825674](#)

**Article Published Date** : Sep 01, 2008

**Authors** : Marios Hadjivassiliou, Pascale Aeschlimann, Alexander Strigun, David S Sanders, Nicola Woodrooffe, Daniel Aeschlimann

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Ataxia : CK\(96\) : AC\(14\)](#), [Gluten Ataxia : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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## Topic: Hepatitis: Autoimmune

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### There is a higher frequency of celiac disease associated antibodies in autoimmune hepatitis. - GMI Summary

**Pubmed Data** : Dig Dis Sci. 1998 Oct;43(10):2190-5. PMID: [9790453](#)

**Article Published Date** : Oct 01, 1998

**Authors** : U Volta, L De Franceschi, N Molinaro, F Cassani, L Muratori, M Lenzi, F B Bianchi, A J Czaja

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Hepatitis: Autoimmune : CK\(41\) : AC\(8\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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## Topic: Hippocampal Sclerosis

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### Hippocampal sclerosis in refractory temporal lobe epilepsy is associated with gluten sensitivity. - GMI Summary

**Pubmed Data** : J Neurol Neurosurg Psychiatry. 2009 Jun;80(6):626-30. Epub 2009 Feb 24. PMID: [19244266](#)

**Article Published Date** : Jun 01, 2009

**Authors** : M Peltola, K Kaukinen, P Dastidar, K Haimila, J Partanen, A-M Haapala, M Mäki, T Keränen, J Peltola

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Brain Injury: Hippocampal Damage : CK\(35\) : AC\(16\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Hippocampal Sclerosis : CK\(10\) : AC\(1\)](#), [Temporal Lobe Epilepsy \(TLE\) : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: Hypertransaminasemia

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### 6 months of a gluten free diet result in improvements in celiac disease patients with hypertransaminasemia liver involvement - GMI Summary

**Pubmed Data** : Scand J Gastroenterol. 2012 Apr 19. Epub 2012 Apr 19. PMID: [22512436](#)

**Article Published Date** : Apr 18, 2012

**Authors** : Sara Massironi, Roberta Elisa Rossi, Mirella Fraquelli, Maria Teresa Bardella, Luca Elli, Marco Maggioni, Serena Della Valle, Matilde Pia Spampatti, Massimo Colombo, Dario Conte

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Hypertransaminasemia : CK\(10\) : AC\(1\)](#), [Liver Fibrosis : CK\(341\) : AC\(74\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords** : [Transient Elastography \(TE\) : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: Hypogammaglobulinemia

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### Wheat gluten may exert its adverse effects through activation of complement (a cascade of proteins in the blood that form part of innate immunity). - GMI Summary

**Pubmed Data** : Clin Exp Immunol. 1993 Dec;94(3):539-43. PMID: [8252813](#)

**Article Published Date** : Dec 01, 1993

**Authors** : D J Unsworth, R Würzner, D L Brown, P J Lachmann

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Acquired hypogammaglobulinemia](#) : CK(81) : AC(8), [Celiac Disease](#) : CK(1393) : AC(185), [Dermatitis Herpetiformis](#) : CK(40) : AC(4), [Hypogammaglobulinemia](#) : CK(10) : AC(1)

**Additional Keywords** : [Plant Extracts](#) : CK(3435) : AC(1172)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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## Topic: [Kidney Cancer](#)

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### [Bread and pasta consumption \(two main sources of wheat\) are associated with increased risk for kidney cancer.](#) - GMI Summary

**Pubmed Data** : Int J Cancer. 2007 Feb 1;120(3):681-5. PMID: [17058282](#)

**Article Published Date** : Feb 01, 2007

**Authors** : Francesca Bravi, Cristina Bosetti, Lorenza Scotti, Renato Talamini, Maurizio Montella, Valerio Ramazzotti, Eva Negri, Silvia Franceschi, Carlo La Vecchia

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Kidney Cancer](#) : CK(120) : AC(17)

**Problem Substances** : [Wheat](#) : CK(2371) : AC(280)

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## Topic: [Liver Fibrosis](#)

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### [6 months of a gluten free diet result in improvements in celiac disease patients with hypertransaminasemia liver involvement](#) - GMI Summary

**Pubmed Data** : Scand J Gastroenterol. 2012 Apr 19. Epub 2012 Apr 19. PMID: [22512436](#)

**Article Published Date** : Apr 18, 2012

**Authors** : Sara Massironi, Roberta Elisa Rossi, Mirella Fraquelli, Maria Teresa Bardella, Luca Elli, Marco Maggioni, Serena Della Valle, Matilde Pia Spampatti, Massimo Colombo, Dario Conte

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Hypertransaminasemia](#) : CK(10) : AC(1), [Liver Fibrosis](#) : CK(341) : AC(74)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free](#) : CK(208) : AC(29)

**Additional Keywords** : [Transient Elastography \(TE\)](#) : CK(10) : AC(1)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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## Topic: [Mania: Acute](#)

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### [Individuals with mania have significantly increased levels of IgG antibodies to gliadin.](#) - GMI Summary

**Pubmed Data** : Psychiatry Res. 2012 Mar 2. Epub 2012 Mar 2. PMID: [22386570](#)

**Article Published Date** : Mar 02, 2012

**Authors** : Faith Dickerson, Cassie Stallings, Andrea Origoni, Crystal Vaughan, Sunil Khushalani, Robert Yolken

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Sensitivity](#) : CK(2319) : AC(246), [Mania: Acute](#) : CK(10) : AC(1)

**Additional Keywords** : [Anti-Gliadin Antibodies](#) : CK(71) : AC(8)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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## Topic: [Microscopic Colitis Syndrome](#)

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## **Microscopic colitis may be caused by immunological gluten sensitivity. - GMI Summary**

**Pubmed Data** : Am J Gastroenterol. 2000 Aug ;95(8):1974-82. PMID: [10950045](#)

**Article Published Date** : Aug 01, 2000

**Authors** : K D Fine, K Do, K Schulte, F Ogunji, R Guerra, L Osowski, J McCormack

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Microscopic Colitis Syndrome](#) : CK(10) : AC(1)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104)

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## **Topic: Mortality: All-Cause**

### **Mortality from malignant neoplasms, non-Hodgkin's lymphoma and digestive system disorders were significantly higher in gluten sensitive patients compared to the Northern Ireland population. - GMI Summary**

**Pubmed Data** : World J Gastroenterol. 2007 Jan 7 ;13(1):146-51. PMID: [17206762](#)

**Article Published Date** : Jan 07, 2007

**Authors** : L A Anderson, S A McMillan, R G P Watson, P Monaghan, A T Gavin, C Fox, L J Murray

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Cancers: All](#) : CK(8580) : AC(2715), [Gluten Sensitivity](#) : CK(2319) : AC(246), [Mortality: All-Cause](#) : CK(644) : AC(55)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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## **Topic: Mucosa: Flattened**

### **Recurrent aphthous ulceration responds favorably to a gluten free diet, and may reflect undiagnosed celiac disease. - GMI Summary**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Br Med J. 1976 Jan 3 ;1(6000):11-13. PMID: [1247715](#)

**Article Published Date** : Jan 03, 1976

**Authors** : R Ferguson, M K Basu, P Asquith, W T Cooke

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Aphthous Ulcer](#) : CK(131) : AC(14), [Mucosa: Flattened](#) : CK(10) : AC(1)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free](#) : CK(208) : AC(29)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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## **Topic: Myocarditis: Autoimmune**

### **Celiac disease has been associated with autoimmune myocarditis. - GMI Summary**

**Pubmed Data** : Circulation. 2002 Jun 4;105(22):2611-8. PMID: [12045166](#)

**Article Published Date** : Jun 04, 2002

**Authors** : Andrea Frustaci, Lucio Cuoco, Cristina Chimenti, Maurizio Pieroni, Giuseppina Fioravanti, Nicola Gentiloni, Attilio Maseri, Giovanni Gasbarrini

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Myocarditis: Autoimmune](#) : CK(14) : AC(3)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

**Adverse Pharmacological Actions** : [Cardiotoxic](#) : CK(628) : AC(74)

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## Topic: Myopathies

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### Myopathy associated with gluten sensitivity has been demonstrated. - GMI Summary

**Pubmed Data** : Muscle Nerve. 2007 Apr;35(4):443-50. PMID: [17143894](#)

**Article Published Date** : Apr 01, 2007

**Authors** : Marios Hadjivassiliou, Arup K Chattopadhyay, Richard A Grünewald, John A Jarratt, Rosalind H Kandler, D G Rao, D S Sanders, S B Wharton, G A B Davies-Jones

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Myopathies : CK\(241\) : AC\(51\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: Myopathies: Inflammatory

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### There is a high prevalence of antibodies to gliadin in patients with inflammatory myopathies, indicating a higher prevalence of gluten sensitivity or celiac disease in this patient group. - GMI Summary

**Pubmed Data** : Ann N Y Acad Sci. 2009 Sep;1173:174-9. PMID: [19758147](#)

**Article Published Date** : Sep 01, 2009

**Authors** : Hedi Orbach, Nimrod Amitai, Ori Barzilai, Mona Boaz, Maya Ram, Gisele Zandman-Goddard, Yehuda Shoenfeld

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Myopathies: Inflammatory : CK\(10\) : AC\(1\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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## Topic: Nervous System Diseases

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### Gluten sensitivity is common in patients with neurological disease of unknown cause and may have etiological significance. - GMI Summary

**Pubmed Data** : Lancet. 1996 Feb 10;347(8998):369-71. PMID: [8598704](#)

**Article Published Date** : Feb 10, 1996

**Authors** : M Hadjivassiliou, A Gibson, G A Davies-Jones, A J Lobo, T J Stephenson, A Milford-Ward

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Nervous System Diseases : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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## Topic: Neurological Illness: GAD antibody-associated

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### There is a link between gluten sensitivity and GAD antibody-associated diseases, e.g. Stiff-Person Syndrome (SPS). - GMI Summary

**Pubmed Data** : Acta Neurol Scand. 2011 Mar;123(3):175-180. PMID: [20456245](#)

**Article Published Date** : Mar 01, 2011

**Authors** : M Hadjivassiliou, D Aeschlimann, R A Grünewald, D S Sanders, B Sharrack, N Woodroffe

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Neurological Illness: GAD antibody-associated :](#)

CK(10) : AC(1), [Stiff-Person Syndrome](#) : CK(10) : AC(1)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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## **Topic: [Nightshade Foods Intolerance](#)**

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### **[Children with atopic dermatitis commonly have specif IgE to common food allergens.](#) - GMI Summary**

**Pubmed Data** : Iran J Immunol. 2012 Mar ;9(1):32-8. PMID: [22426165](#)

**Article Published Date** : Mar 01, 2012

**Authors** : Mozghan Moghtaderi, Shirin Farjadian, Sara Kashef, Maryam Tavakoli, Soheila Alyasin, Maryam Afrasiab, Marzieh Orooj

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Allergy: Cow's Milk](#) : CK(92) : AC(18), [Atopic Dermatitis: Infant & Childhood](#) : CK(170) : AC(14), [Food Allergies](#) : CK(390) : AC(53), [Food Allergies/Intolerances: Cereals/Grains](#) : CK(11) : AC(2), [Food Allergies: Wheat](#) : CK(366) : AC(47), [Nightshade Foods Intolerance](#) : CK(10) : AC(1)

**Problem Substances** : [Cow Milk](#) : CK(368) : AC(46), [Egg](#) : CK(20) : AC(3), [Nuts](#) : CK(10) : AC(1), [Peanut](#) : CK(31) : AC(5), [Potato](#) : CK(43) : AC(11), [Tomato](#) : CK(10) : AC(1), [Wheat](#) : CK(2371) : AC(280)

**Adverse Pharmacological Actions** : [Immunoreactive](#) : CK(127) : AC(17)

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## **Topic: [Pregnancy: Prevention of Problems](#)**

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### **[803 pregnant women's dietary patterns were compared; women in the 'wheat products' dietary pattern had higher odds of having a small-for-gestational-age infant \(according to weight not birth length or head circumference.\)](#) - GMI Summary**

**Pubmed Data** : Br J Nutr. 2012 May ;107(10):1526-33. Epub 2011 Sep 20. PMID: [21929833](#)

**Article Published Date** : Apr 30, 2012

**Authors** : Hitomi Okubo, Yoshihiro Miyake, Satoshi Sasaki, Keiko Tanaka, Kentaro Murakami, Yoshio Hirota,

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Pregnancy: Prevention of Problems](#) : CK(40) : AC(4), [Small-for-gestational-age infant](#) : CK(10) : AC(1)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free](#) : CK(208) : AC(29)

**Additional Keywords** : [Maternal Dietary Patterns](#) : CK(10) : AC(1), [Pregnancy And Fetal Growth](#) : CK(10) : AC(1)

**Problem Substances** : [Wheat](#) : CK(2371) : AC(280)

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## **Topic: [Small-for-gestational-age infant](#)**

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### **[803 pregnant women's dietary patterns were compared; women in the 'wheat products' dietary pattern had higher odds of having a small-for-gestational-age infant \(according to weight not birth length or head circumference.\)](#) - GMI Summary**

**Pubmed Data** : Br J Nutr. 2012 May ;107(10):1526-33. Epub 2011 Sep 20. PMID: [21929833](#)

**Article Published Date** : Apr 30, 2012

**Authors** : Hitomi Okubo, Yoshihiro Miyake, Satoshi Sasaki, Keiko Tanaka, Kentaro Murakami, Yoshio Hirota,

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Pregnancy: Prevention of Problems](#) : CK(40) : AC(4), [Small-for-gestational-age infant](#) : CK(10) : AC(1)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free](#) : CK(208) : AC(29)

**Additional Keywords** : [Maternal Dietary Patterns](#) : CK(10) : AC(1), [Pregnancy And Fetal Growth](#) : CK(10)

: [AC\(1\)](#)

**Problem Substances** : [Wheat](#) : [CK\(2371\)](#) : [AC\(280\)](#)

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## **Topic: [Spinocerebellar Ataxia Type 2](#)**

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### **[Antigliadin antibodies are found at a higher prevalence in Cuban patients with spinocerebellar ataxia type 2.](#) - GMI Summary**

**Pubmed Data** : J Neurol Neurosurg Psychiatry. 2008 Mar ;79(3):315-7. Epub 2007 Oct 19. PMID: [17951282](#)

**Article Published Date** : Mar 01, 2008

**Authors** : L E Almaguer-Mederos, Y R Almira, E M Góngora, D A Gotay, Y G Zaldivar, R E Pupo, G S Cruz, J M Brown, D C Almarales, L V Pérez

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Spinocerebellar Ataxia Type 2](#) : [CK\(10\)](#) : [AC\(1\)](#)

**Additional Keywords** : [Anti-Gliadin Antibodies](#) : [CK\(71\)](#) : [AC\(8\)](#)

**Problem Substances** : [Gliadin](#) : [CK\(2369\)](#) : [AC\(104\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : [CK\(1064\)](#) : [AC\(179\)](#)

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## **Topic: [Stiff-Person Syndrome](#)**

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### **[There is a link between gluten sensitivity and GAD antibody-associated diseases, e.g. Stiff-Person Syndrome \(SPS\).](#) - GMI Summary**

**Pubmed Data** : Acta Neurol Scand. 2011 Mar;123(3):175-180. PMID: [20456245](#)

**Article Published Date** : Mar 01, 2011

**Authors** : M Hadjivassiliou, D Aeschlimann, R A Grünewald, D S Sanders, B Sharrack, N Woodroffe

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Sensitivity](#) : [CK\(2319\)](#) : [AC\(246\)](#), [Neurological Illness: GAD antibody-associated](#) : [CK\(10\)](#) : [AC\(1\)](#), [Stiff-Person Syndrome](#) : [CK\(10\)](#) : [AC\(1\)](#)

**Problem Substances** : [Gluten](#) : [CK\(1610\)](#) : [AC\(131\)](#)

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## **Topic: [Stomatitis: Aphthous](#)**

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### **[Those with aphthous stomatitis may respond favorably to gluten withdrawal.](#) - GMI Summary**

**Pubmed Data** : Dig Dis Sci. 1981 Aug ;26(8):737-40. PMID: [7261838](#)

**Article Published Date** : Aug 01, 1981

**Authors** : D Wray

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Stomatitis: Aphthous](#) : [CK\(51\)](#) : [AC\(6\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free](#) : [CK\(208\)](#) : [AC\(29\)](#)

**Problem Substances** : [Gluten](#) : [CK\(1610\)](#) : [AC\(131\)](#)

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## **Topic: [Temporal Lobe Epilepsy \(TLE\)](#)**

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### **[Hippocampal sclerosis in refractory temporal lobe epilepsy is associated with gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : J Neurol Neurosurg Psychiatry. 2009 Jun;80(6):626-30. Epub 2009 Feb 24. PMID: [19244266](#)

**Article Published Date** : Jun 01, 2009

**Authors** : M Peltola, K Kaukinen, P Dastidar, K Haimila, J Partanen, A-M Haapala, M Mäki, T Keränen, J Peltola

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Brain Injury: Hippocampal Damage](#) : CK(35) : AC(16), [Celiac Disease](#) : CK(1393) : AC(185), [Epilepsy](#) : CK(128) : AC(27), [Gluten Intolerance](#) : CK(236) : AC(33), [Gluten Sensitivity](#) : CK(2319) : AC(246), [Hippocampal Sclerosis](#) : CK(10) : AC(1), [Temporal Lobe Epilepsy \(TLE\)](#) : CK(10) : AC(1)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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## Topic: [Thyroid Neoplasms](#)

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### [Wheat germ agglutinin \(WGA\) and concanavalin A bind to benign and malignant thyroid nodules.](#) - GMI Summary

**Pubmed Data** : Arch Pathol Lab Med. 1989 Feb;113(2):186-9. PMID: [2916907](#)

**Article Published Date** : Feb 01, 1989

**Authors** : H Sasano, M Rojas, S G Silverberg

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Thyroid Cancer](#) : CK(162) : AC(32), [Thyroid Neoplasms](#) : CK(11) : AC(2)

**Additional Keywords** : [Lectins](#) : CK(58) : AC(36)

**Problem Substances** : [Concanavalin A](#) : CK(17) : AC(6), [Lectins](#) : CK(35) : AC(27), [Wheat Germ Agglutinin \(WGA\)](#) : CK(821) : AC(39)

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## Topic: [Turner Syndrome](#)

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### [Intolerance to wheat \(CD autoantibodies\) is higher than background rates in those with Turner syndrome.](#) - GMI Summary

**Pubmed Data** : Clin Exp Immunol. 2009 May;156(2):205-10. Epub 2009 Feb 26. PMID: [19298606](#)

**Article Published Date** : May 01, 2009

**Authors** : K H Mortensen, L Cleemann, B E Hjerrild, E Nexø, H Locht, E M Jeppesen, C H Gravholt

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases](#) : CK(5084) : AC(779), [Celiac Disease](#) : CK(1393) : AC(185), [Diabetes Mellitus: Type 1](#) : CK(1023) : AC(221), [Hypothyroidism](#) : CK(525) : AC(78), [Turner Syndrome](#) : CK(10) : AC(1)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Wheat](#) : CK(2371) : AC(280)

**Adverse Pharmacological Actions** : [Immunotoxic](#) : CK(230) : AC(38)

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## Topic: [Urinary Stone Disease](#)

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### [Patients with biopsy-verified coeliac disease are at moderately increased risk of urinary stone disease.](#) - GMI Summary

**Pubmed Data** : Aliment Pharmacol Ther. 2012 Feb ;35(4):477-84. Epub 2012 Jan 4. PMID: [22221254](#)

**Article Published Date** : Feb 01, 2012

**Authors** : J F Ludvigsson, F Zingone, M Fored, C Ciacci, M Cirillo

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Urinary Stone Disease](#) : CK(10) : AC(1)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Wheat](#) : CK(2371) : AC(280)

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## Topic: [Kidney Diseases](#)

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## **Renal complications can occur as a result of celiac disease. - GMI Summary**

**Pubmed Data** : Indian J Pediatr. 2011 Jul 9. Epub 2011 Jul 9. PMID: [21744127](#)

**Article Published Date** : Jul 09, 2011

**Authors** : Mukta Mantan, Dhulika Dhingra, Gulshan Rai Sethi

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Kidney Diseases : CK\(424\) : AC\(71\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Gluten and its lectin-like fraction gliadin contribute to experimental IgA glomerulopathy. - GMI Summary**

**Pubmed Data** : Lab Invest. 1989 Apr;60(4):499-506. PMID: [2709812](#)

**Article Published Date** : Apr 01, 1989

**Authors** : R Coppo, G Mazzucco, G Martina, D Roccatello, A Amore, R Novara, A Bargoni, G Piccoli, L M Sena

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Glomerulonephritis : CK\(41\) : AC\(9\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [IgA Nephropathy : CK\(186\) : AC\(22\)](#), [Kidney Diseases : CK\(424\) : AC\(71\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Topic: Prolactin: Inappropriate Secretion**

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### **Gluten exorphins alter serum prolactin levels in male rats. - GMI Summary**

**Pubmed Data** : Nutr Neurosci. 2004 Feb;7(1):53-5. PMID: [15085559](#)

**Article Published Date** : Feb 01, 2004

**Authors** : G Fanciulli, A Dettori, M P Demontis, V Anania, G Delitala

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Male Hormone Imbalances : CK\(14\) : AC\(3\)](#), [Prolactin: Inappropriate Secretion : CK\(4\) : AC\(1\)](#)

**Additional Keywords** : [Food Drugs : CK\(4\) : AC\(2\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Gluten exorphins : CK\(26\) : AC\(10\)](#)

**Adverse Pharmacological Actions** : [Endocrine Disruptor : CK\(463\) : AC\(81\)](#)

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### **Intravenous administration of the food-derived opioid peptide gluten exorphin B5 stimulates prolactin secretion in rats. - GMI Summary**

**Pubmed Data** : Pharmacol Res. 2003 Jan ;47(1):53-8. PMID: [12526862](#)

**Article Published Date** : Jan 01, 2003

**Authors** : Giuseppe Fanciulli, Alessandra Dettori, Emma Fenude, Maria Piera Demontis, Elisabetta Alberico, Giuseppe Delitala, Vittorio Anania

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Prolactin: Inappropriate Secretion : CK\(4\) : AC\(1\)](#), [Prolactin Hypersecretion Syndrome : CK\(4\) : AC\(1\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Gluten exorphins : CK\(26\) : AC\(10\)](#)

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## **Topic: Anemia**

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### **CD: GFD provides drug free control of seizures and helps correct other features of malabsorption like hypocalcaemia and anaemia - GMI Summary**

**Pubmed Data** : J Assoc Physicians India. 2010 Aug ;58:512-5. PMID: [21189704](#)



**Article Published Date** : Jul 31, 2010

**Authors** : Vashishth P Maniar, Sameer S Yadav, Yojana A Gokhale

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Anemia : CK\(89\) : AC\(12\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Hypocalcemia : CK\(7\) : AC\(3\)](#), [Seizures : CK\(122\) : AC\(28\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [Conjunctival Tumor](#)

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### [Regression of conjunctival tumor in celiac disease patient attributed to glutenfree diet.](#) - GMI Summary

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Indian J Ophthalmol. 2010 Sep-Oct;58(5):433-4. PMID: [20689203](#)

**Article Published Date** : Aug 31, 2010

**Authors** : Samuray Tuncer, Baris Yeniad, Gonul Peksayar

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Conjunctival Tumor : CK\(3\) : AC\(1\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#), [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#), [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#), [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [Ectopic Calcification](#)

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### [Celiac disease with multiple foci of calcification in the spleen has been reported.](#) - GMI Summary

**Pubmed Data** : Indian J Pediatr. 2010 Dec 3. Epub 2010 Dec 3. PMID: [21128017](#)

**Article Published Date** : Dec 03, 2010

**Authors** : Anu Maheshwari, Satinder Aneja, Praveen Kumar, Shreshtha Banga

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Ectopic Calcification : CK\(792\) : AC\(113\)](#), [Splenic Calcifications : CK\(3\) : AC\(1\)](#), [Splenic Diseases : CK\(15\) : AC\(3\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: [Encephalopathies](#)

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### [Gluten encephalopathy with psychiatric onset has been reported.](#) - GMI Summary

**Pubmed Data** : Clin Pract Epidemiol Ment Health. 2009;5:16. Epub 2009 Jun 26. PMID: [19558661](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Nicola Poloni, Simone Vender, Emilio Bolla, Paola Bortolaso, Chiara Costantini, Camilla Callegari

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Encephalopathies : CK\(11\) : AC\(5\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Polyneuropathies : CK\(38\) : AC\(7\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## Topic: Glomerulonephritis

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### Gluten and its lectin-like fraction gliadin contribute to experimental IgA glomerulopathy. - GMI Summary

**Pubmed Data** : Lab Invest. 1989 Apr;60(4):499-506. PMID: [2709812](#)

**Article Published Date** : Apr 01, 1989

**Authors** : R Coppo, G Mazzucco, G Martina, D Roccatello, A Amore, R Novara, A Bargoni, G Piccoli, L M Sena

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Glomerulonephritis : CK\(41\) : AC\(9\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [IgA Nephropathy : CK\(186\) : AC\(22\)](#), [Kidney Diseases : CK\(424\) : AC\(71\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: Hypocalcemia

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### CD: GFD provides drug free control of seizures and helps correct other features of malabsorption like hypocalcaemia and anaemia - GMI Summary

**Pubmed Data** : J Assoc Physicians India. 2010 Aug ;58:512-5. PMID: [21189704](#)

**Article Published Date** : Jul 31, 2010

**Authors** : Vashishth P Maniar, Sameer S Yadav, Yojana A Gokhale

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Anemia : CK\(89\) : AC\(12\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Hypocalcemia : CK\(7\) : AC\(3\)](#), [Seizures : CK\(122\) : AC\(28\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: Neuromyelitis Optica

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### Benign neuromyelitis optica has been linked to celiac disease. - GMI Summary

**Pubmed Data** : J Neurol. 2009 Aug 18. Epub 2009 Aug 18. PMID: [21473007](#)

**Article Published Date** : Aug 18, 2009

**Authors** : R Bergamaschi, S Jarius, M Robotti, A Pichiecchio, B Wildemann, G Meola

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Neuromyelitis Optica : CK\(4\) : AC\(2\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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### Gluten sensitivity presenting as neuromyelitis optica has been reported. - GMI Summary

**Pubmed Data** : J Neurol Neurosurg Psychiatry. 2005 Jul ;76(7):1028-30. PMID: [15965221](#)

**Article Published Date** : Jul 01, 2005

**Authors** : S Jacob, M Zarei, A Kenton, H Allroggen

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Neuromyelitis Optica : CK\(4\) : AC\(2\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: Pituitary Diseases

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## **Opioid peptides derived from wheat gluten has an effect on pituitary function when administered intraperitoneally. - GMI Summary**

**Pubmed Data** : Life Sci. 2002 Oct 4;71(20):2383-90. PMID: [12231399](#)

**Article Published Date** : Oct 04, 2002

**Authors** : Giuseppe Fanciulli, Alessandra Dettori, Paolo A Tomasi, Maria Piera Demontis, Silvia Gianorso, Vittorio Anania, Giuseppe Delitala

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Pituitary Diseases](#) : CK(3) : AC(2)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131), [Gluten exorphins](#) : CK(26) : AC(10), [Wheat](#) : CK(2371) : AC(280)

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## **Topic: Polyneuropathies**

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### **Gluten encephalopathy with psychiatric onset has been reported. - GMI Summary**

**Pubmed Data** : Clin Pract Epidemiol Ment Health. 2009;5:16. Epub 2009 Jun 26. PMID: [19558661](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Nicola Poloni, Simone Vender, Emilio Bolla, Paola Bortolaso, Chiara Costantini, Camilla Callegari

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Encephalopathies](#) : CK(11) : AC(5), [Gluten Intolerance](#) : CK(236) : AC(33), [Polyneuropathies](#) : CK(38) : AC(7)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131), [Wheat](#) : CK(2371) : AC(280)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1064) : AC(179)

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## **Topic: Prolactin Hypersecretion Syndrome**

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### **Gluten exorphin B5 enhances prolactin secretion in male rats. - GMI Summary**

**Pubmed Data** : Life Sci. 2005 Feb 25;76(15):1713-9. Epub 2004 Dec 20. PMID: [15698850](#)

**Article Published Date** : Feb 25, 2005

**Authors** : Giuseppe Fanciulli, Alessandra Dettori, Maria P Demontis, Paolo A Tomasi, Vittorio Anania, Giuseppe Delitala

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Gynecomastia](#) : CK(60) : AC(14), [Prolactin Hypersecretion Syndrome](#) : CK(4) : AC(1)

**Additional Keywords** : [Exorphin B5](#) : CK(2) : AC(1)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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### **Intravenous administration of the food-derived opioid peptide gluten exorphin B5 stimulates prolactin secretion in rats. - GMI Summary**

**Pubmed Data** : Pharmacol Res. 2003 Jan ;47(1):53-8. PMID: [12526862](#)

**Article Published Date** : Jan 01, 2003

**Authors** : Giuseppe Fanciulli, Alessandra Dettori, Emma Fenude, Maria Piera Demontis, Elisabetta Alberico, Giuseppe Delitala, Vittorio Anania

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Prolactin: Inappropriate Secretion](#) : CK(4) : AC(1), [Prolactin Hypersecretion Syndrome](#) : CK(4) : AC(1)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131), [Gluten exorphins](#) : CK(26) : AC(10)

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## **Topic: Seizures**

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## **[CD: GFD provides drug free control of seizures and helps correct other features of malabsorption like hypocalcaemia and anaemia - GMI Summary](#)**

**Pubmed Data** : J Assoc Physicians India. 2010 Aug ;58:512-5. PMID: [21189704](#)

**Article Published Date** : Jul 31, 2010

**Authors** : Vashishth P Maniar, Sameer S Yadav, Yojana A Gokhale

**Study Type** : Human: Case Report

### **Additional Links**

**Diseases** : [Anemia : CK\(89\) : AC\(12\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Hypocalcemia : CK\(7\) : AC\(3\)](#), [Seizures : CK\(122\) : AC\(28\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

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## **[Topic: Splenic Calcifications](#)**

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### **[Celiac disease with multiple foci of calcification in the spleen has been reported. - GMI Summary](#)**

**Pubmed Data** : Indian J Pediatr. 2010 Dec 3. Epub 2010 Dec 3. PMID: [21128017](#)

**Article Published Date** : Dec 03, 2010

**Authors** : Anu Maheshwari, Satinder Aneja, Praveen Kumar, Shreshtha Banga

**Study Type** : Human: Case Report

### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Ectopic Calcification : CK\(792\) : AC\(113\)](#), [Splenic Calcifications : CK\(3\) : AC\(1\)](#), [Splenic Diseases : CK\(15\) : AC\(3\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **[Topic: Splenic Diseases](#)**

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### **[Celiac disease with multiple foci of calcification in the spleen has been reported. - GMI Summary](#)**

**Pubmed Data** : Indian J Pediatr. 2010 Dec 3. Epub 2010 Dec 3. PMID: [21128017](#)

**Article Published Date** : Dec 03, 2010

**Authors** : Anu Maheshwari, Satinder Aneja, Praveen Kumar, Shreshtha Banga

**Study Type** : Human: Case Report

### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Ectopic Calcification : CK\(792\) : AC\(113\)](#), [Splenic Calcifications : CK\(3\) : AC\(1\)](#), [Splenic Diseases : CK\(15\) : AC\(3\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **[Topic: Systemic Lupus Erythematosus](#)**

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### **[Gluten sensitivity has been mistaken for Systemic Lupus Erythematosus. - GMI Summary](#)**

**Pubmed Data** : Ann Rheum Dis. 2004 Nov ;63(11):1501-3. PMID: [15479903](#)

**Article Published Date** : Nov 01, 2004

**Authors** : M Hadjivassiliou, D S Sanders, R A Grünewald, M Akil

**Study Type** : Human: Case Report

### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Systemic Lupus Erythematosus : CK\(387\) : AC\(54\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: Urticaria

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### Celiac disease, eosinophilic esophagitis, and immediate-type immunoglobulin E-mediated food allergy. - GMI Summary

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : J Investig Allergol Clin Immunol. 2011 ;21(1):73-5. PMID: [21370728](#)

**Article Published Date** : Dec 31, 2010

**Authors** : S Sánchez-García, M D Ibáñez, M J Martínez-Gómez, C Escudero, A Vereda, M Fernández-Rodríguez, P Rodríguez del Río

**Study Type** : Human: Case Report

#### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Eosinophilic esophagitis : CK\(66\) : AC\(5\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [Food Allergy: Immunoglobulin E-mediated : CK\(3\) : AC\(1\)](#), [Urticaria : CK\(130\) : AC\(8\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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### IgA, intestinal biopsy point to link between cold urticaria and celiac disease in high-risk HLA types - GMI Summary

**Pubmed Data** : J Investig Allergol Clin Immunol. 2008 ;18(2):123-5. PMID: [18447142](#)

**Article Published Date** : Dec 31, 2007

**Authors** : M Pedrosa Delgado, F Martín Muñoz, I Polanco Allué, M Martín Esteban

**Study Type** : Human: Case Report

#### **Additional Links**

**Substances** : [Dietary Modification: Wheat/Gluten Free : CK\(3\) : AC\(1\)](#)

**Diseases** : [Asthma : CK\(857\) : AC\(134\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Urticaria : CK\(130\) : AC\(8\)](#)

**Additional Keywords** : [Urticaria : CK\(130\) : AC\(8\)](#), [Urticaria : CK\(130\) : AC\(8\)](#), [Urticaria : CK\(130\) : AC\(8\)](#), [Urticaria : CK\(130\) : AC\(8\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: Immune Disorders: Low Immune Function

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### Leukocyte migration was inhibited by the wheat-derived peptides in celiac patients. - GMI Summary

**Pubmed Data** : Neuropeptides. 1987 Feb-Mar;9(2):113-22. PMID: [3033541](#)

**Article Published Date** : Feb 01, 1987

**Authors** : L Graf, K Horvath, E Walcz, I Berzetei, J Burnier

**Study Type** : Human In Vitro

#### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Immune Disorders: Low Immune Function : CK\(488\) : AC\(115\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunosuppressive : CK\(143\) : AC\(23\)](#)

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## Topic: Enteropathy

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### Gliadin triggered insulinitis in type 1 diabetes associated with celiac disease - GMI Summary

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : J Immunol. 2011 Oct 15 ;187(8):4338-46. Epub 2011 Sep 12. PMID: [21911598](#)

**Article Published Date** : Oct 14, 2011

**Authors** : Heather J Galipeau, Nestor E Rulli, Jennifer Jury, Xianxi Huang, Romina Araya, Joseph A Murray, Chella S David, Fernando G Chirido, Kathy D McCoy, Elena F Verdu

**Study Type** : Animal Study

### Additional Links

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Enteropathy : CK\(28\) : AC\(4\)](#), [Insulinitis : CK\(2\) : AC\(1\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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## **[Gluten-sensitive enteropathy has been observed in a cynomolgus monkey.](#) - GMI Summary**

**Pubmed Data** : Lab Anim Sci. 1988 Oct ;38(5):592-4. PMID: [3193752](#)

**Article Published Date** : Oct 01, 1988

**Authors** : J D Wagner, C P Jerome, M R Adams

**Study Type** : Animal Study

### Additional Links

**Diseases** : [Enteropathy : CK\(28\) : AC\(4\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## **Topic: [Insulin: Elevated](#)**

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## **[Gluten exorphin modulate pancreatic endocrine function by stimulating insulin release.](#) - GMI Summary**

**Pubmed Data** : Life Sci. 1995;57(7):729-34. PMID: [7637543](#)

**Article Published Date** : Jan 01, 1995

**Authors** : S Fukudome, A Shimatsu, H Suganuma, M Yoshikawa

**Study Type** : Animal Study

### Additional Links

**Diseases** : [Insulin: Elevated : CK\(186\) : AC\(41\)](#), [Insulin Disorders : CK\(15\) : AC\(4\)](#)

**Problem Substances** : [Gluten exorphins : CK\(26\) : AC\(10\)](#)

**Adverse Pharmacological Actions** : [Endocrine Disruptor: Pancreas : CK\(4\) : AC\(2\)](#)

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## **[Gluten exorphins have an effect on plasma insulin and glucagon levels in dogs.](#) - GMI Summary**

**Pubmed Data** : Diabetes. 1981 Apr ;30(4):362-4. PMID: [7009280](#)

**Article Published Date** : Apr 01, 1981

**Authors** : V Schusdziarra, I Henrichs, A Holland, M Klier, E F Pfeiffer

**Study Type** : Animal Study

### Additional Links

**Diseases** : [Glucagon: Excess Secretion : CK\(2\) : AC\(1\)](#), [Insulin: Elevated : CK\(186\) : AC\(41\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Endocrine Disruptor : CK\(463\) : AC\(81\)](#), [Endocrine Disruptor: Insulin Resistance : CK\(152\) : AC\(31\)](#)

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## **Topic: [Male Hormone Imbalances](#)**

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## **[Gluten exorphins alter serum prolactin levels in male rats.](#) - GMI Summary**

**Pubmed Data** : Nutr Neurosci. 2004 Feb;7(1):53-5. PMID: [15085559](#)

**Article Published Date** : Feb 01, 2004

**Authors** : G Fanciulli, A Dettori, M P Demontis, V Anania, G Delitala

**Study Type** : Animal Study

### Additional Links

**Diseases** : [Male Hormone Imbalances : CK\(14\) : AC\(3\)](#), [Prolactin: Inappropriate Secretion : CK\(4\) : AC\(1\)](#)

**Additional Keywords** : [Food Drugs : CK\(4\) : AC\(2\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Gluten exorphins : CK\(26\) : AC\(10\)](#)

**Adverse Pharmacological Actions** : [Endocrine Disruptor : CK\(463\) : AC\(81\)](#)

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## **Topic: [Asthma](#)**

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## [IgA, intestinal biopsy point to link between cold urticaria and celiac disease in high-risk HLA types](#) - GMI Summary

**Pubmed Data** : J Investig Allergol Clin Immunol. 2008 ;18(2):123-5. PMID: [18447142](#)

**Article Published Date** : Dec 31, 2007

**Authors** : M Pedrosa Delgado, F Martín Muñoz, I Polanco Allué, M Martín Esteban

**Study Type** : Human: Case Report

**Additional Links**

**Substances** : [Dietary Modification: Wheat/Gluten Free](#) : CK(3) : AC(1)

**Diseases** : [Asthma](#) : CK(857) : AC(134), [Celiac Disease](#) : CK(1393) : AC(185), [Urticaria](#) : CK(130) : AC(8)

**Additional Keywords** : [Urticaria](#) : CK(130) : AC(8), [Urticaria](#) : CK(130) : AC(8), [Urticaria](#) : CK(130) : AC(8), [Urticaria](#) : CK(130) : AC(8)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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## Topic: [Demyelinating Diseases](#)

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### [Wheat germ agglutinin \(WGA\) and concanavalin bind to peripheral nerve fibres such as myelin in an animal model.](#) - GMI Summary

**Pubmed Data** : Histochem J. 1996 Jan;28(1):7-12. PMID: [8866643](#)

**Article Published Date** : Jan 01, 1996

**Authors** : S Dolapchieva

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Demyelinating Diseases](#) : CK(1278) : AC(250)

**Additional Keywords** : [Lectins](#) : CK(58) : AC(36)

**Problem Substances** : [Concanavalin A](#) : CK(17) : AC(6), [Lectins](#) : CK(35) : AC(27), [Wheat Germ Agglutinin \(WGA\)](#) : CK(821) : AC(39)

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### [Gluten toxicity may express itself in demyelinating diseases.](#) - GMI Summary

**Pubmed Data** : Med Clin (Barc). 2012 Sep 18. Epub 2012 Sep 18. PMID: [22998972](#)

**Article Published Date** : Sep 17, 2012

**Authors** : Carlos Hernández-Lahoz, Luis Rodrigo

**Study Type** : Review

**Additional Links**

**Diseases** : [Demyelinating Diseases](#) : CK(1278) : AC(250)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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## Topic: [Diabetes Mellitus: Type 2](#)

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### [A Glutenfree diet improves osteogenesis imperfecta associated with celiac disease and type II diabetes](#) - GMI Summary

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Case Report Med. 2012 ;2012:813461. Epub 2012 Mar 5. PMID: [22481956](#)

**Article Published Date** : Dec 31, 2011

**Authors** : Luis Rodrigo, Isabel Pérez-Martinez

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Diabetes Mellitus: Type 2](#) : CK(3229) : AC(328), [Diarrhea](#) : CK(549) : AC(72), [Osteogenesis Imperfecta](#) : CK(3) : AC(1)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free](#) : CK(208) : AC(29)

**Additional Keywords** : [Multiple Fractures](#) : CK(3) : AC(1)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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## Topic: Facial Palsy

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### Gluten-related recurrent peripheral facial palsy. - GMI Summary

**Pubmed Data** : J Neurol Neurosurg Psychiatry. 2012 Mar 1. Epub 2012 Mar 1. PMID: [22383733](#)

**Article Published Date** : Mar 01, 2012

**Authors** : Fioravante Capone, Anna Paola Batocchi, Giovanni Cammarota, Fabio Pilato, Paolo Profice, Vincenzo Di Lazzaro

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Facial Palsy](#) : CK(3) : AC(1)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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## Topic: Folic Acid/Folate Deficiency

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### Epilepsy with cerebral calcifications poorly responsive to antiepileptic treatment have been reported significantly improved with folic acid and a gluten-free diet. - GMI Summary

**Pubmed Data** : Acta Paediatr Scand. 1991 May;80(5):559-62. PMID: [1908173](#)

**Article Published Date** : May 01, 1991

**Authors** : A Ventura, F Bouquet, C Sartorelli, E Barbi, G Torre, G Tommasini

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Cerebral Calcifications](#) : CK(13) : AC(2), [Epilepsy](#) : CK(128) : AC(27), [Epilepsy: With Cerebral Calcifications](#) : CK(24) : AC(3), [Folic Acid/Folate Deficiency](#) : CK(13) : AC(2)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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## Topic: Food Allergy: Immunoglobulin E-mediated

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### Celiac disease, eosinophilic esophagitis, and immediate-type immunoglobulin E-mediated food allergy. - GMI Summary

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : J Investig Allergol Clin Immunol. 2011 ;21(1):73-5. PMID: [21370728](#)

**Article Published Date** : Dec 31, 2010

**Authors** : S Sánchez-García, M D Ibáñez, M J Martínez-Gómez, C Escudero, A Vereda, M Fernández-Rodríguez, P Rodríguez del Río

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Eosinophilic esophagitis](#) : CK(66) : AC(5), [Food Allergies](#) : CK(390) : AC(53), [Food Allergy: Immunoglobulin E-mediated](#) : CK(3) : AC(1), [Urticaria](#) : CK(130) : AC(8)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free](#) : CK(208) : AC(29)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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## Topic: Gastrointestinal Diseases

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### Wheat lectin may be responsible for contributing to intestinal disease. - GMI Summary

**Pubmed Data** : Gastroenterology. 1982 May;82(5 Pt 1):838-48. PMID: [6895878](#)

**Article Published Date** : May 01, 1982

**Authors** : V Lorenzsonn, W A Olsen

**Study Type** : Animal Study



### Additional Links

**Diseases** : [Gastrointestinal Diseases : CK\(38\) : AC\(14\)](#)

**Additional Keywords** : [Lectins : CK\(58\) : AC\(36\)](#)

**Problem Substances** : [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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### [Wheat lectin exhibits inflammatory and permeability-inducing effects on the human gastrointestinal lining at nanomolar concentrations via the stimulation of immune cells.](#) - GMI Summary

**Pubmed Data** : Toxicol Appl Pharmacol. 2009 Jun 1;237(2):146-53. Epub 2009 Mar 28. PMID: [19332085](#)

**Article Published Date** : Jun 01, 2009

**Authors** : Chiara Dalla Pellegrina, Omar Perbellini, Maria Teresa Scupoli, Carlo Tomelleri, Chiara Zanetti, Gianni Zoccatelli, Marina Fusi, Angelo Peruffo, Corrado Rizzi, Roberto Chignola

**Study Type** : In Vitro Study

### Additional Links

**Diseases** : [Gastrointestinal Diseases : CK\(38\) : AC\(14\)](#)

**Problem Substances** : [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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### Topic: [Hydronephrosis](#)

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### ["A child with atypical celiac disease and recurrent urolithiasis."](#) - GMI Summary

**Pubmed Data** : Iran J Kidney Dis. 2012 Mar ;6(2):146-8. PMID: [22388615](#)

**Article Published Date** : Mar 01, 2012

**Authors** : Eric L Yarnell

**Study Type** : Human: Case Report

### Additional Links

**Diseases** : [Hydronephrosis : CK\(3\) : AC\(1\)](#), [Kidney Stones : CK\(157\) : AC\(28\)](#), [Urolithiasis : CK\(8\) : AC\(5\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Nephrotoxic : CK\(162\) : AC\(38\)](#)

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### Topic: [Hyperamylasemia](#)

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### [Hyperamylasemia due to macroamylasemia in adult gluten enteropathy has been reported.](#) - GMI Summary

**Pubmed Data** : Scand J Clin Lab Invest. 1997 May ;57(3):271-3. PMID: [9238763](#)

**Article Published Date** : May 01, 1997

**Authors** : G Bonetti, G Serricchio, A Giudici, M Bettonagli, G B Vadacca, R Bruno, E Coslovich, R Moratti

**Study Type** : Human: Case Report

### Additional Links

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Hyperamylasemia : CK\(3\) : AC\(1\)](#), [Macroamylasemia : CK\(19\) : AC\(1\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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### Topic: [Insulin Disorders](#)

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### [Gluten exorphin modulate pancreatic endocrine function by stimulating insulin release.](#) - GMI Summary

**Pubmed Data** : Life Sci. 1995;57(7):729-34. PMID: [7637543](#)

**Article Published Date** : Jan 01, 1995

**Authors** : S Fukudome, A Shimatsu, H Suganuma, M Yoshikawa

**Study Type** : Animal Study

### Additional Links

**Diseases** : [Insulin: Elevated : CK\(186\) : AC\(41\)](#), [Insulin Disorders : CK\(15\) : AC\(4\)](#)

**Problem Substances** : [Gluten exorphins : CK\(26\) : AC\(10\)](#)

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**Adverse Pharmacological Actions :** [Endocrine Disruptor: Pancreas : CK\(4\) : AC\(2\)](#)

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### **[Wheat germ agglutinin \(WGA\) and concanavalin A exhibit insulin-mimetic properties.](#) - GMI Summary**

**Pubmed Data :** Arch Biochem Biophys. 1987 Apr;254(1):110-5. PMID: [3555340](#)

**Article Published Date :** Apr 01, 1987

**Authors :** J L Messina, J Hamlin, J Larner

**Study Type :** In Vitro Study

**Additional Links**

**Diseases :** [Hyperinsulinism : CK\(1182\) : AC\(41\)](#), [Insulin Disorders : CK\(15\) : AC\(4\)](#), [Insulin Resistance : CK\(986\) : AC\(212\)](#)

**Additional Keywords :** [Insulin Mimetic : CK\(3\) : AC\(3\)](#)

**Problem Substances :** [Concanavalin A : CK\(17\) : AC\(6\)](#), [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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### **Topic: Kidney Stones**

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#### **"A child with atypical celiac disease and recurrent urolithiasis." - GMI Summary**

**Pubmed Data :** Iran J Kidney Dis. 2012 Mar ;6(2):146-8. PMID: [22388615](#)

**Article Published Date :** Mar 01, 2012

**Authors :** Eric L Yarnell

**Study Type :** Human: Case Report

**Additional Links**

**Diseases :** [Hydronephrosis : CK\(3\) : AC\(1\)](#), [Kidney Stones : CK\(157\) : AC\(28\)](#), [Urolithiasis : CK\(8\) : AC\(5\)](#)

**Problem Substances :** [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions :** [Nephrotoxic : CK\(162\) : AC\(38\)](#)

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### **Topic: Malabsorption Syndrome**

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#### **A case of malabsorption and macroamylasemia repoding positively to gluten withdrawal has been reported. - GMI Summary**

**Pubmed Data :** Am J Med. 1980 Sep ;69(3):451-7. PMID: [6158266](#)

**Article Published Date :** Sep 01, 1980

**Authors :** H J Hodgson, K B Whitaker, B T Cooper, J H Baron, H G Freeman, D W Moss, V S Chadwick

**Study Type :** Human: Case Report

**Additional Links**

**Diseases :** [Macroamylasemia : CK\(19\) : AC\(1\)](#), [Malabsorption Syndrome : CK\(34\) : AC\(11\)](#)

**Therapeutic Actions :** [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

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### **Topic: Opiate Addiction/Withdrawal**

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#### **Wheat gluten contains opioid peptides. - GMI Summary**

**Pubmed Data :** FEBS Lett. 1992 Jan 13;296(1):107-11. PMID: [1309704](#)

**Article Published Date :** Jan 13, 1992

**Authors :** S Fukudome, M Yoshikawa

**Study Type :** In Vitro Study

**Additional Links**

**Diseases :** [Opiate Addiction/Withdrawal : CK\(55\) : AC\(14\)](#)

**Additional Keywords :** [Food Drugs : CK\(4\) : AC\(2\)](#), [Opioid-Like Activity : CK\(5\) : AC\(4\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#), [Gluten exorphins : CK\(26\) : AC\(10\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: Osteogenesis Imperfecta

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### [A Glutenfree diet improves osteogenesis imperfecta associated with celiac disease and type II diabetes - GMI Summary](#)

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Case Report Med. 2012 ;2012:813461. Epub 2012 Mar 5. PMID: [22481956](#)

**Article Published Date** : Dec 31, 2011

**Authors** : Luis Rodrigo, Isabel Pérez-Martinez

**Study Type** : Human: Case Report

#### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 2 : CK\(3229\) : AC\(328\)](#), [Diarrhea : CK\(549\) : AC\(72\)](#), [Osteogenesis Imperfecta : CK\(3\) : AC\(1\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords** : [Multiple Fractures : CK\(3\) : AC\(1\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: Osteomalacia

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### [Calcium, Vitamin D and a Gluten-Free diet decreased bone pain and improved muscle strength. - GMI Summary](#)

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Arch Osteoporos. 2011 Dec ;6(1-2):209-213. Epub 2011 Jun 15. PMID: [22207878](#)

**Article Published Date** : Dec 01, 2011

**Authors** : Noortje M Rabelink, Hans M Westgeest, Nathalie Bravenboer, Maarten A J M Jacobs, Paul Lips

**Study Type** : Human: Case Report

#### **Additional Links**

**Substances** : [Calcium: CK\(232\) : AC\(35\)](#), [Vitamin D : CK\(1640\) : AC\(238\)](#)

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Osteomalacia : CK\(37\) : AC\(5\)](#), [Osteoporosis : CK\(1136\) : AC\(205\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: Osteopenia

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### [Celiac disease presenting as severe osteopenia has been reported. - GMI Summary](#)

**Pubmed Data** : Hawaii Med J. 2011 Nov ;70(11):242-4. PMID: [22162604](#)

**Article Published Date** : Nov 01, 2011

**Authors** : Christopher J Mulder, Anthony P Cardile, Judith Dickert

**Study Type** : Human: Case Report

#### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Osteopenia : CK\(207\) : AC\(41\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: Osteoporosis

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### [Calcium, Vitamin D and a Gluten-Free diet decreased bone pain and improved muscle strength. - GMI Summary](#)

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Arch Osteoporos. 2011 Dec ;6(1-2):209-213. Epub 2011 Jun 15. PMID: [22207878](#)

**Article Published Date** : Dec 01, 2011

**Authors** : Noortje M Rabelink, Hans M Westgeest, Nathalie Bravenboer, Maarten A J M Jacobs, Paul Lips  
**Study Type** : Human: Case Report  
**Additional Links**  
**Substances** : [Calcium : CK\(232\) : AC\(35\)](#), [Vitamin D : CK\(1640\) : AC\(238\)](#)  
**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Osteomalacia : CK\(37\) : AC\(5\)](#), [Osteoporosis : CK\(1136\) : AC\(205\)](#)  
**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)  
**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [Parathyroid Diseases](#)

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### [Parathyroid adenoma connected with untreated coeliac disease has been reported.](#) - GMI Summary

**Pubmed Data** : Endokrynol Pol. 2012 ;63(1):56-8. PMID: [22378099](#)

**Article Published Date** : Jan 01, 2012

**Authors** : Inan Anaforoglu, Kerem Ersoy, Ekrem Algun

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Parathyroid adenoma : CK\(3\) : AC\(1\)](#), [Parathyroid Diseases : CK\(13\) : AC\(2\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: [Parathyroid adenoma](#)

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### [Parathyroid adenoma connected with untreated coeliac disease has been reported.](#) - GMI Summary

**Pubmed Data** : Endokrynol Pol. 2012 ;63(1):56-8. PMID: [22378099](#)

**Article Published Date** : Jan 01, 2012

**Authors** : Inan Anaforoglu, Kerem Ersoy, Ekrem Algun

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Parathyroid adenoma : CK\(3\) : AC\(1\)](#), [Parathyroid Diseases : CK\(13\) : AC\(2\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: [Stroke](#)

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### [Celiac disease can be associated with cerebral venous thrombosis.](#) - GMI Summary

**Pubmed Data** : J Mal Vasc. 2005 Sep;30(4 Pt 1):228-30. PMID: [16292200](#)

**Article Published Date** : Sep 01, 2005

**Authors** : M Bahloul, A Chaari, N Khlaf-Bouaziz, H Kallel, L Chaari, C Ben Hamida, H Chelly, N Rekik, M Bouaziz

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Stroke : CK\(540\) : AC\(47\)](#), [Thrombosis : CK\(657\) : AC\(74\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: [Thrombosis](#)

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### [Celiac disease can be associated with cerebral venous thrombosis.](#) - GMI Summary

**Pubmed Data** : J Mal Vasc. 2005 Sep;30(4 Pt 1):228-30. PMID: [16292200](#)

**Article Published Date** : Sep 01, 2005

**Authors** : M Bahloul, A Chaari, N Khlaf-Bouaziz, H Kallel, L Chaari, C Ben Hamida, H Chelly, N Rekik, M Bouaziz

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Stroke : CK\(540\) : AC\(47\)](#), [Thrombosis : CK\(657\) : AC\(74\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: [Tremor](#)

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### [Progressive ataxia with palatal tremor due to gluten sensitivity has been reported.](#) - GMI Summary

**Pubmed Data** : Mov Disord. 2012 Jan ;27(1):62-3. PMID: [22252893](#)

**Article Published Date** : Jan 01, 2012

**Authors** : Ammar Kheder, Stuart Currie, Charles Romanowski, Marios Hadjivassiliou

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Ataxia : CK\(96\) : AC\(14\)](#), [Tremor : CK\(39\) : AC\(8\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## Topic: [Urolithiasis](#)

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### ["A child with atypical celiac disease and recurrent urolithiasis."](#) - GMI Summary

**Pubmed Data** : Iran J Kidney Dis. 2012 Mar ;6(2):146-8. PMID: [22388615](#)

**Article Published Date** : Mar 01, 2012

**Authors** : Eric L Yarnell

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Hydronephrosis : CK\(3\) : AC\(1\)](#), [Kidney Stones : CK\(157\) : AC\(28\)](#), [Urolithiasis : CK\(8\) : AC\(5\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Nephrotoxic : CK\(162\) : AC\(38\)](#)

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## Topic: [Uveitis](#)

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### [Gluten-free diet effective in celiac disease related uveitis](#) - GMI Summary

**Pubmed Data** : Rheumatol Int. 2011 Mar ;31(3):399-402. Epub 2009 Oct 14. PMID: [19826819](#)

**Article Published Date** : Feb 28, 2011

**Authors** : Karin Klack, Rosa Maria Rodrigues Pereira, Jozélio Freire de Carvalho

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Uveitis : CK\(63\) : AC\(9\)](#)

**Additional Keywords** : [Uveitis : CK\(63\) : AC\(9\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [A1C](#)

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### [Whole grains do not appear to have long term benefits in the prevention of type 2 diabetes, and wheat increases hemoglobin glycation.](#) - GMI Summary

**Pubmed Data** : Br J Nutr. 2011 Jun 30:1-10. Epub 2011 Jun 30. PMID: [21733309](#)

**Article Published Date** : Jun 30, 2011

**Authors** : O Vaarala, M Knip, J Paronen, A M Hämäläinen, P Muona, M Väättäinen, J Ilonen, O Simell, H K Akerblom

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [A1C : CK\(267\) : AC\(35\)](#), [Diabetes: Glycation/A1C : CK\(220\) : AC\(33\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: [Allergies](#)

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### [Gluten intolerance gives rise to a variety of dermatological manifestations which may benefit from a gluten-free diet.](#) - GMI Summary

**Pubmed Data** : Eur J Dermatol. 2006 Jan-Feb;16(1):4-11. PMID: [16436335](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Philippe Humbert, Fabien Pelletier, Brigitte Dreno, Eve Puzenat, François Aubin

**Study Type** : Commentary

**Additional Links**

**Diseases** : [Allergies : CK\(502\) : AC\(92\)](#), [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Psoriasis : CK\(270\) : AC\(42\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: [Blood-Brain-Barrier Disorders](#)

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### [Wheat germ agglutinin \(WGA\) enhances the passage of native horseradish peroxidase enzyme \(HRP\) approximately 10 times more rapidly than HRP alone.](#) - GMI Summary

**Pubmed Data** : J Neurochem. 1994 Jun;62(6):2404-19. PMID: [7514652](#)

**Article Published Date** : Jun 01, 1994

**Authors** : W A Banks, R D Broadwell

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Blood-Brain-Barrier Disorders : CK\(25\) : AC\(15\)](#)

**Problem Substances** : [Lectins : CK\(35\) : AC\(27\)](#), [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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### [Wheat germ agglutinin \(WGA\) enters through the blood-brain-barrier through adsorptive endocytosis.](#) - GMI Summary

**Pubmed Data** : Proc Natl Acad Sci U S A. 1988 Jan;85(2):632-6. PMID: [2448779](#)

**Article Published Date** : Jan 01, 1988

**Authors** : R D Broadwell, B J Balin, M Salcman

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Blood-Brain-Barrier Disorders : CK\(25\) : AC\(15\)](#)

**Problem Substances** : [Lectins : CK\(35\) : AC\(27\)](#), [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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## Topic: [Diabetes: Glycation/A1C](#)

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### [Whole grains do not appear to have long term benefits in the prevention of type 2 diabetes, and wheat increases hemoglobin glycation.](#) - GMI Summary

**Pubmed Data** : Br J Nutr. 2011 Jun 30:1-10. Epub 2011 Jun 30. PMID: [21733309](#)

**Article Published Date** : Jun 30, 2011

**Authors** : O Vaarala, M Knip, J Paronen, A M Hämäläinen, P Muona, M Väättäinen, J Ilonen, O Simell, H K Akerblom

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [A1C : CK\(267\) : AC\(35\)](#), [Diabetes: Glycation/A1C : CK\(220\) : AC\(33\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: Drug Toxicity: Methotrexate

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### Dietary cereals contribute to intestinal permeability in experimental enteropathy in rats. - GMI Summary

**Pubmed Data** : Gut. 1983 Sep ;24(9):825-30. PMID: [6411526](#)

**Article Published Date** : Sep 01, 1983

**Authors** : J S Sandhu, D R Fraser

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Drug Toxicity: Methotrexate : CK\(30\) : AC\(13\)](#), [Intestinal Permeability : CK\(263\) : AC\(56\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Grains : CK\(27\) : AC\(8\)](#)

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## Topic: Glucagon: Excess Secretion

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### Gluten exorphins have an effect on plasma insulin and glucagon levels in dogs. - GMI Summary

**Pubmed Data** : Diabetes. 1981 Apr ;30(4):362-4. PMID: [7009280](#)

**Article Published Date** : Apr 01, 1981

**Authors** : V Schusdziarra, I Henrichs, A Holland, M Klier, E F Pfeiffer

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Glucagon: Excess Secretion : CK\(2\) : AC\(1\)](#), [Insulin: Elevated : CK\(186\) : AC\(41\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Endocrine Disruptor : CK\(463\) : AC\(81\)](#), [Endocrine Disruptor: Insulin Resistance : CK\(152\) : AC\(31\)](#)

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## Topic: Gluten Enteropathy

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### Bifidobacterium longum administered to rats fed gliadins seemed to ameliorate the inflammation caused by gliadin feeding alone - GMI Summary

**Pubmed Data** : J Proteomics. 2012 Sep 27. Epub 2012 Sep 27. PMID: [23023000](#)

**Article Published Date** : Sep 26, 2012

**Authors** : Marta Olivares, Moisés Laparra, Yolanda Sanz

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Bifidobacterium Longum : CK\(66\) : AC\(8\)](#)

**Diseases** : [Bifidobacterium Longum : CK\(66\) : AC\(8\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

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## Topic: Gynecomastia

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### Gluten exorphin B5 enhances prolactin secretion in male rats. - GMI Summary

**Pubmed Data** : Life Sci. 2005 Feb 25;76(15):1713-9. Epub 2004 Dec 20. PMID: [15698850](#)

**Article Published Date** : Feb 25, 2005

**Authors** : Giuseppe Fanciulli, Alessandra Dettori, Maria P Demontis, Paolo A Tomasi, Vittorio Anania, Giuseppe Delitala

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Gynecomastia : CK\(60\) : AC\(14\)](#), [Prolactin Hypersecretion Syndrome : CK\(4\) : AC\(1\)](#)

**Additional Keywords** : [Exorphin B5 : CK\(2\) : AC\(1\)](#)

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**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

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## **Topic: [HPA Axis Dysregulation](#)**

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### **[Wheat, rye, and barley proteins may act as aids to carcinogens.](#) - GMI Summary**

**Pubmed Data :** Med Hypotheses. 1997 Sep;49(3):285-8. PMID: [9293475](#)

**Article Published Date :** Sep 01, 1997

**Authors :** R Hoggan

**Study Type :** Commentary

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [HPA Axis Dysregulation : CK\(69\) : AC\(11\)](#), [Intestinal Permeability : CK\(263\) : AC\(56\)](#), [Lymphoma : CK\(225\) : AC\(68\)](#)

**Problem Substances :** [Barley : CK\(13\) : AC\(3\)](#), [Gluten exorphins : CK\(26\) : AC\(10\)](#), [Grains : CK\(27\) : AC\(8\)](#), [Rye : CK\(12\) : AC\(3\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## **Topic: [Inflammation](#)**

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### **[Dietary gluten alters the balance of proinflammatory and anti-inflammatory cytokines in T cells of BALB/c mice, indicating that gluten may contribute to increased incidence of type 1 diabetes.](#) - GMI Summary**

**Pubmed Data :** Immunology. 2012 Aug 22. Epub 2012 Aug 22. PMID: [22913724](#)

**Article Published Date :** Aug 21, 2012

**Authors :** Julie C Antvorskov, Petra Fundova, Karsten Buschard, David P Funda

**Study Type :** Animal Study

**Additional Links**

**Diseases :** [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Diabetes Mellitus: Type 1: Prevention : CK\(163\) : AC\(24\)](#), [Inflammation : CK\(1014\) : AC\(348\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions :** [Inflammatory : CK\(150\) : AC\(37\)](#)

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## **Topic: [Insulinitis](#)**

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### **[Gliadin triggered insulinitis in type 1 diabetes associated with celiac disease](#) - GMI Summary**

**Article Publish Status :** This is a free article. [Click here to read the entire article.](#)

**Pubmed Data :** J Immunol. 2011 Oct 15 ;187(8):4338-46. Epub 2011 Sep 12. PMID: [21911598](#)

**Article Published Date :** Oct 14, 2011

**Authors :** Heather J Galipeau, Nestor E Rulli, Jennifer Jury, Xianxi Huang, Romina Araya, Joseph A Murray, Chella S David, Fernando G Chirido, Kathy D McCoy, Elena F Verdu

**Study Type :** Animal Study

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Enteropathy : CK\(28\) : AC\(4\)](#), [Insulinitis : CK\(2\) : AC\(1\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#)

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## **Topic: [Low Immune Function: Thymus Dysfunction](#)**

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### **[Wheat germ agglutinin \(WGA\) exhibits anti-nutritive properties, e.g. hypertrophic growth of the pancreas and thymus atrophy.](#) - GMI Summary**

**Pubmed Data :** Br J Nutr. 1993 Jul;70(1):313-21. PMID: [8399111](#)

**Article Published Date :** Jul 01, 1993

**Authors :** A Pusztai, S W Ewen, G Grant, D S Brown, J C Stewart, W J Peumans, E J Van Damme, S Bardocz



**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Low Immune Function: Thymus Dysfunction : CK\(19\) : AC\(6\)](#), [Thymus Atrophy : CK\(2\) : AC\(1\)](#)

**Additional Keywords** : [Lectins : CK\(58\) : AC\(36\)](#), [Lectins As Insecticides : CK\(2\) : AC\(1\)](#)

**Problem Substances** : [Lectins : CK\(35\) : AC\(27\)](#), [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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## Topic: [Serotonin Disorders](#)

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### [Zein, casein and gluten down-regulate tryptophan production in the rat brain.](#) - GMI Summary

**Pubmed Data** : Physiol Behav. 2009 Aug 4 ;98(1-2):156-62. Epub 2009 May 18. PMID: [19454292](#)

**Article Published Date** : Aug 04, 2009

**Authors** : Sujean Choi, Briana Disilvio, Madelyn H Fernstrom, John D Fernstrom

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Serotonin Disorders : CK\(17\) : AC\(5\)](#)

**Problem Substances** : [Casein : CK\(123\) : AC\(16\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Zein : CK\(2\) : AC\(1\)](#)

**Adverse Pharmacological Actions** : [Serotonin Down-Regulation : CK\(2\) : AC\(1\)](#)

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## Topic: [Thymus Atrophy](#)

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### [Wheat germ agglutinin \(WGA\) exhibits anti-nutritive properties, e.g. hypertrophic growth of the pancreas and thymus atrophy.](#) - GMI Summary

**Pubmed Data** : Br J Nutr. 1993 Jul;70(1):313-21. PMID: [8399111](#)

**Article Published Date** : Jul 01, 1993

**Authors** : A Pusztai, S W Ewen, G Grant, D S Brown, J C Stewart, W J Peumans, E J Van Damme, S Bardocz

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Low Immune Function: Thymus Dysfunction : CK\(19\) : AC\(6\)](#), [Thymus Atrophy : CK\(2\) : AC\(1\)](#)

**Additional Keywords** : [Lectins : CK\(58\) : AC\(36\)](#), [Lectins As Insecticides : CK\(2\) : AC\(1\)](#)

**Problem Substances** : [Lectins : CK\(35\) : AC\(27\)](#), [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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## Topic: [Ataxia: Idiopathic](#)

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### ["It has been proposed that idiopathic ataxias and central nervous system white matter disease are gluten-sensitive syndromes."](#) - GMI Summary

**Pubmed Data** : Curr Opin Neurol. 2002 Oct ;15(5):519-23. PMID: [12351994](#)

**Article Published Date** : Oct 01, 2002

**Authors** : Adrian J Wills, David J Unsworth

**Study Type** : Review

**Additional Links**

**Diseases** : [Ataxia: Idiopathic : CK\(11\) : AC\(2\)](#), [Neurologic Disorders : CK\(63\) : AC\(21\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## Topic: [Brain: Microglial Activation](#)

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### [Wheat germ agglutinin \(WGA\) lectin has neuromodulatory effects.](#) - GMI Summary

**Pubmed Data** : Glia. 1999 Jul;27(1):53-61. PMID: [10401632](#)

**Article Published Date** : Jul 01, 1999

**Authors** : G M Liuzzi, M P Santacrose, W J Peumans, E J Van Damme, B Dubois, G Opendakker, P Riccio

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Brain: Microglial Activation](#) : CK(67) : AC(38)

**Additional Keywords** : [Lectins](#) : CK(58) : AC(36)

**Problem Substances** : [Lectins](#) : CK(35) : AC(27), [Wheat Germ Agglutinin \(WGA\)](#) : CK(821) : AC(39)

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## Topic: [Breast Cancer](#)

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### [Chitin hydrolysate and to a lesser degree WGA stimulate VEGF-C synthesis in breast cancer cells.](#) - GMI Summary

**Pubmed Data** : Cell Biol Int. 2011 Mar 1;35(3):281-6. PMID: [21029043](#)

**Article Published Date** : Mar 01, 2011

**Authors** : Alexander V Timoshenko

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Breast Cancer](#) : CK(2125) : AC(566)

**Problem Substances** : [Chitin Hydrolysate](#) : CK(1) : AC(1), [Wheat Germ Agglutinin \(WGA\)](#) : CK(821) : AC(39)

**Adverse Pharmacological Actions** : [Vascular Endothelial Growth Factor C Up-Regulation](#) : CK(1) : AC(1)

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## Topic: [Chorea](#)

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### [A large number of neurologic syndromes may result from gluten intolerance.](#) - GMI Summary

**Pubmed Data** : Gastroenterology. 2005 Apr;128(4 Suppl 1):S92-7. PMID: [15825133](#)

**Article Published Date** : Apr 01, 2005

**Authors** : Khalafalla O Bushara

**Study Type** : Commentary

**Additional Links**

**Diseases** : [Ataxia: Cerebellar](#) : CK(67) : AC(3), [Autism Spectrum Disorders](#) : CK(1118) : AC(108), [Chorea](#) : CK(1) : AC(1), [Gluten Intolerance](#) : CK(236) : AC(33), [Guillain-Barre Syndrome](#) : CK(84) : AC(14), [Huntington Disease](#) : CK(45) : AC(17), [Myelopathy](#) : CK(11) : AC(2), [Neuropathy](#) : CK(158) : AC(24)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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## Topic: [Clotting](#)

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### [Wheat germ agglutinin \(WGA\) and concanavalin A \(Con A\) stimulate platelet aggregation.](#) - GMI Summary

**Pubmed Data** : Biochemistry (Mosc). 1998 Jun;63(6):710-8. PMID: [9668212](#)

**Article Published Date** : Jun 01, 1998

**Authors** : I V Smirnova, S G Khaspekova, V V Ignatov, A V Mazurov

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Clotting](#) : CK(177) : AC(36)

**Problem Substances** : [Concanavalin A](#) : CK(17) : AC(6), [Wheat Germ Agglutinin \(WGA\)](#) : CK(821) : AC(39)

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## Topic: [Dementia](#)

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### [Celiac disease should be ruled out in the differential diagnosis of neurological dysfunction of unknown cause, including ataxia, epilepsy and dementia.](#) - GMI Summary

**Pubmed Data** : Arq Neuropsiquiatr. 2004 Dec ;62(4):969-72. Epub 2004 Dec 15. PMID: [15608953](#)

**Article Published Date** : Dec 01, 2004

**Authors** : José Ibiapina Siqueira Neto, Ana Carolina Leite Vieira Costa, Francisco George Magalhães, Gisele Sampaio Silva

**Study Type** : Review

**Additional Links**

**Diseases** : [Ataxia : CK\(96\) : AC\(14\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Dementia : CK\(225\) : AC\(31\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## Topic: [Food Poisoning](#)

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### [Ochratoxin A contamination poses a risk in wheat and corn bread.](#) - GMI

#### Summary

**Pubmed Data** : Int J Food Microbiol. 2008 Oct 31;127(3):284-9. Epub 2008 Jul 23. PMID: [18775579](#)

**Article Published Date** : Oct 31, 2008

**Authors** : C Juan, A Pena, C Lino, J C Moltó, J Mañes

**Study Type** : Review

**Additional Links**

**Diseases** : [Food Poisoning : CK\(11\) : AC\(7\)](#)

**Problem Substances** : [Corn : CK\(14\) : AC\(4\)](#), [Ochratoxin A : CK\(1\) : AC\(1\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

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## Topic: [Guillain-Barre Syndrome](#)

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### [A large number of neurologic syndromes may result from gluten intolerance.](#) -

#### GMI Summary

**Pubmed Data** : Gastroenterology. 2005 Apr;128(4 Suppl 1):S92-7. PMID: [15825133](#)

**Article Published Date** : Apr 01, 2005

**Authors** : Khalafalla O Bushara

**Study Type** : Commentary

**Additional Links**

**Diseases** : [Ataxia: Cerebellar : CK\(67\) : AC\(3\)](#), [Autism Spectrum Disorders : CK\(1118\) : AC\(108\)](#), [Chorea : CK\(1\) : AC\(1\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Guillain-Barre Syndrome : CK\(84\) : AC\(14\)](#), [Huntington Disease : CK\(45\) : AC\(17\)](#), [Myelopathy : CK\(11\) : AC\(2\)](#), [Neuropathy : CK\(158\) : AC\(24\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [Huntington Disease](#)

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### [A large number of neurologic syndromes may result from gluten intolerance.](#) -

#### GMI Summary

**Pubmed Data** : Gastroenterology. 2005 Apr;128(4 Suppl 1):S92-7. PMID: [15825133](#)

**Article Published Date** : Apr 01, 2005

**Authors** : Khalafalla O Bushara

**Study Type** : Commentary

**Additional Links**

**Diseases** : [Ataxia: Cerebellar : CK\(67\) : AC\(3\)](#), [Autism Spectrum Disorders : CK\(1118\) : AC\(108\)](#), [Chorea : CK\(1\) : AC\(1\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Guillain-Barre Syndrome : CK\(84\) : AC\(14\)](#), [Huntington Disease : CK\(45\) : AC\(17\)](#), [Myelopathy : CK\(11\) : AC\(2\)](#), [Neuropathy : CK\(158\) : AC\(24\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [Hyperinsulinism](#)

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## [Wheat germ agglutinin \(WGA\) and concanavalin A exhibit insulin-mimetic properties.](#) - GMI Summary

**Pubmed Data** : Arch Biochem Biophys. 1987 Apr;254(1):110-5. PMID: [3555340](#)

**Article Published Date** : Apr 01, 1987

**Authors** : J L Messina, J Hamlin, J Larner

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Hyperinsulinism : CK\(1182\) : AC\(41\)](#), [Insulin Disorders : CK\(15\) : AC\(4\)](#), [Insulin Resistance : CK\(986\) : AC\(212\)](#)

**Additional Keywords** : [Insulin Mimetic : CK\(3\) : AC\(3\)](#)

**Problem Substances** : [Concanavalin A : CK\(17\) : AC\(6\)](#), [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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## Topic: [Insulin Resistance](#)

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## [Wheat germ agglutinin \(WGA\) and concanavalin A exhibit insulin-mimetic properties.](#) - GMI Summary

**Pubmed Data** : Arch Biochem Biophys. 1987 Apr;254(1):110-5. PMID: [3555340](#)

**Article Published Date** : Apr 01, 1987

**Authors** : J L Messina, J Hamlin, J Larner

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Hyperinsulinism : CK\(1182\) : AC\(41\)](#), [Insulin Disorders : CK\(15\) : AC\(4\)](#), [Insulin Resistance : CK\(986\) : AC\(212\)](#)

**Additional Keywords** : [Insulin Mimetic : CK\(3\) : AC\(3\)](#)

**Problem Substances** : [Concanavalin A : CK\(17\) : AC\(6\)](#), [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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## Topic: [Lane-Hamilton syndrome](#)

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## [Lane-Hamilton syndrome \(LHS\) as combined idiopathic pulmonary haemosiderosis \(IPH\) and celiac disease \(CD\) benefit from glutenfree diet](#) - GMI Summary

**Pubmed Data** : Eur J Pediatr. 2011 Dec ;170(12):1597-602. Epub 2011 Sep 23. PMID: [21947219](#)

**Article Published Date** : Nov 30, 2011

**Authors** : Guy F M Hendrickx, Katia Somers, Yvan Vandenplas

**Study Type** : Review

**Additional Links**

**Diseases** : [Lane-Hamilton syndrome : CK\(10\) : AC\(1\)](#)

**Therapeutic Actions** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Additional Keywords** : [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#), [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#), [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#), [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#), [Dietary Modification: Wheat/Gluten Free : CK\(208\) : AC\(29\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [Lectin-Induced Toxicity](#)

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## [Wheat germ agglutinin \(WGA\) may be responsible for the crypt hyperplasia found in celiac children due to a mitogenic response induced by wheat germ agglutinin \(WGA\).](#) - GMI Summary

**Pubmed Data** : Pediatr Allergy Immunol. 1995 May;6(2):98-102. PMID: [7581728](#)

**Article Published Date** : May 01, 1995

**Authors** : K Fälvth-Magnusson, K E Magnusson

**Study Type** : Commentary

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Lectin-Induced Toxicity : CK\(5\) : AC\(4\)](#)  
**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#), [Epidermal Growth Factor Mimetic : CK\(1\) : AC\(1\)](#)  
**Problem Substances** : [Lectins : CK\(35\) : AC\(27\)](#), [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

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## Topic: [Miscarriage](#)

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### [Recurrent miscarriages may be due to undiagnosed celiac disease.](#) - GMI

#### Summary

**Pubmed Data** : Recent Prog Med. 2000 Feb;91(2):72-5. PMID: [10748651](#)

**Article Published Date** : Feb 01, 2000

**Authors** : P Caramaschi, D Biasi, A Carletto, M Randon, M L Pacor, L M Bambara

**Study Type** : Review

#### Additional Links

**Diseases** : [Abortion: Spontaneous : CK\(204\) : AC\(29\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Miscarriage : CK\(516\) : AC\(35\)](#), [Miscarriage: Recurrent : CK\(21\) : AC\(3\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Teratogenic : CK\(304\) : AC\(59\)](#)

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## Topic: [Myelopathy](#)

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### [A large number of neurologic syndromes may result from gluten intolerance.](#) -

#### GMI Summary

**Pubmed Data** : Gastroenterology. 2005 Apr;128(4 Suppl 1):S92-7. PMID: [15825133](#)

**Article Published Date** : Apr 01, 2005

**Authors** : Khalafalla O Bushara

**Study Type** : Commentary

#### Additional Links

**Diseases** : [Ataxia: Cerebellar : CK\(67\) : AC\(3\)](#), [Autism Spectrum Disorders : CK\(1118\) : AC\(108\)](#), [Chorea : CK\(1\) : AC\(1\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Guillain-Barre Syndrome : CK\(84\) : AC\(14\)](#), [Huntington Disease : CK\(45\) : AC\(17\)](#), [Myelopathy : CK\(11\) : AC\(2\)](#), [Neuropathy : CK\(158\) : AC\(24\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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## Topic: [Neurologic Disorders](#)

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### ["It has been proposed that idiopathic ataxias and central nervous system white matter disease are gluten-sensitive syndromes."](#) - GMI Summary

**Pubmed Data** : Curr Opin Neurol. 2002 Oct ;15(5):519-23. PMID: [12351994](#)

**Article Published Date** : Oct 01, 2002

**Authors** : Adrian J Wills, David J Unsworth

**Study Type** : Review

#### Additional Links

**Diseases** : [Ataxia: Idiopathic : CK\(11\) : AC\(2\)](#), [Neurologic Disorders : CK\(63\) : AC\(21\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## Topic: [Neuropathy](#)

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### [A large number of neurologic syndromes may result from gluten intolerance.](#) -

#### GMI Summary

**Pubmed Data** : Gastroenterology. 2005 Apr;128(4 Suppl 1):S92-7. PMID: [15825133](#)

**Article Published Date** : Apr 01, 2005

**Authors** : Khalafalla O Bushara

**Study Type** : Commentary

**Additional Links**

**Diseases** : [Ataxia: Cerebellar](#) : CK(67) : AC(3), [Autism Spectrum Disorders](#) : CK(1118) : AC(108), [Chorea](#) : CK(1) : AC(1), [Gluten Intolerance](#) : CK(236) : AC(33), [Guillain-Barre Syndrome](#) : CK(84) : AC(14), [Huntington Disease](#) : CK(45) : AC(17), [Myelopathy](#) : CK(11) : AC(2), [Neuropathy](#) : CK(158) : AC(24)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

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## Topic: [Osteoarthritis](#)

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### [Lectins bind to inflamed synovial tissue of patients with osteoarthritis and rheumatoid arthritis.](#) - GMI Summary

**Pubmed Data** : Acta Histochem Suppl. 1988;36:277-83. PMID: [3150561](#)

**Article Published Date** : Jan 01, 1988

**Authors** : P Fritz, H V Tuczec, J Hoenes, A Mischlinski, A Grau, C Hage, A Koenig, G Wegner

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Osteoarthritis](#) : CK(615) : AC(91), [Rheumatoid Arthritis](#) : CK(414) : AC(64)

**Problem Substances** : [Lectins](#) : CK(35) : AC(27), [Wheat Germ Agglutinin \(WGA\)](#) : CK(821) : AC(39)

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## Topic: [Oxidative Stress](#)

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### [Despite the belief that immune-mediation is required for gliadin to damage to the body, gliadin appears to directly damage the cells exposed to it; i](#) - GMI Summary

**Pubmed Data** : World J Gastroenterol. 2005 Oct 14 ;11(38):5973-7. PMID: [16273608](#)

**Article Published Date** : Oct 14, 2005

**Authors** : Ersilia Dolfini, Luca Elli, Leda Roncoroni, Barbara Costa, Maria-Pia Colleoni, Vito Lorusso, Simona Ramponi, Paola Braidotti, Stefano Ferrero, Maria-Letizia Falini, Maria-Teresa Bardella

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Gastrointestinal Inflammation](#) : CK(41) : AC(7), [Oxidative Stress](#) : CK(1880) : AC(710)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104)

**Adverse Pharmacological Actions** : [Cytotoxic](#) : CK(68) : AC(35), [Oxidant](#) : CK(104) : AC(37)

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## Category: Adverse Pharmacological Actions

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### Topic: [Neurotoxic](#)

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#### [A high prevalence of gluten sensitivity is found in sporadic and hereditary cerebellar ataxia.](#) - GMI Summary

**Pubmed Data** : Ann Neurol. 2001 Apr;49(4):540-3. PMID: [11310636](#)

**Article Published Date** : Apr 01, 2001

**Authors** : K O Bushara, S U Goebel, H Shill, L G Goldfarb, M Hallett

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Ataxia: Cerebellar](#) : CK(67) : AC(3), [Food Allergies](#) : CK(390) : AC(53), [Gluten Sensitivity](#) : CK(2319) : AC(246)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1064) : AC(179)

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#### [Antigliadin antibodies are found at a higher prevalence in Cuban patients with](#)

## **[spinocerebellar ataxia type 2.](#) - GMI Summary**

**Pubmed Data** : J Neurol Neurosurg Psychiatry. 2008 Mar ;79(3):315-7. Epub 2007 Oct 19. PMID: [17951282](#)

**Article Published Date** : Mar 01, 2008

**Authors** : L E Almaguer-Mederos, Y R Almira, E M Góngora, D A Gotay, Y G Zaldivar, R E Pupo, G S Cruz, J M Brown, D C Almarales, L V Pérez

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Spinocerebellar Ataxia Type 2](#) : CK(10) : AC(1)

**Additional Keywords** : [Anti-Gliadin Antibodies](#) : CK(71) : AC(8)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1064) : AC(179)

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## **[Celiac disease is associated with ataxic syndromes without definite diagnosis, suggesting that it plays a part in the pathogenesis of some ataxic syndromes.](#) - GMI Summary**

**Pubmed Data** : J Neurol Neurosurg Psychiatry. 1999 Jan ;66(1):32-5. PMID: [9886447](#)

**Article Published Date** : Jan 01, 1999

**Authors** : M T Pellecchia, R Scala, A Filla, G De Michele, C Ciacci, P Barone

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Ataxia: Cerebellar](#) : CK(67) : AC(3), [Celiac Disease](#) : CK(1393) : AC(185)

**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1064) : AC(179)

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## **[Epilepsy with cerebral calcifications of unexplained origin may likely be caused by undiagnosed celiac disease.](#) - GMI Summary**

**Pubmed Data** : Lancet. 1992 Aug 22;340(8817):439-43. PMID: [1354781](#)

**Article Published Date** : Aug 22, 1992

**Authors** : G Gobbi, F Bouquet, L Greco, A Lambertini, C A Tassinari, A Ventura, M G Zaniboni

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease](#) : CK(1393) : AC(185), [Cerebral Calcifications](#) : CK(13) : AC(2), [Epilepsy](#) : CK(128) : AC(27), [Epilepsy: With Cerebral Calcifications](#) : CK(24) : AC(3)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2120) : AC(269)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131), [Wheat](#) : CK(2371) : AC(280)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1064) : AC(179)

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## **[Food allergies and migraine.](#) - GMI Summary**

**Pubmed Data** : Lancet. 1979 May 5 ;1(8123):966-9. PMID: [87628](#)

**Authors** : Grant EC.

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Migraine Disorders](#) : CK(455) : AC(54)

**Therapeutic Actions** : [Dietary Modification: Elimination Diet](#) : CK(33) : AC(4)

**Problem Substances** : [Wheat](#) : CK(2371) : AC(280)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1064) : AC(179)

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## **[Gluten sensitivity is a clinically confirmed problem in multiple sclerosis.](#) - GMI Summary**

**Pubmed Data** : Ann N Y Acad Sci. 2009 Sep;1173:343-9. PMID: [19758171](#)

**Article Published Date** : Sep 01, 2009

**Authors** : Dana Ben-Ami Shor, Ori Barzilai, Maya Ram, David Izhaky, Bat Sheva Porat-Katz, Joab Chapman, Miri Blank, Juan-Manuel Anaya, Yehuda Shoenfeld

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Multiple Sclerosis : CK\(716\) : AC\(133\)](#)  
**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)  
**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Gluten sensitivity is associated with sporadic cerebellar ataxia in Taiwan.](#) - GMI Summary**

**Pubmed Data** : Acta Neurol Taiwan. 2010 Dec;19(4):263-9. PMID: [21210327](#)

**Article Published Date** : Dec 01, 2010

**Authors** : Chin-San Liu, Bing-Wen Soong, Yi-Chung Lee, Woan-Ling Chen, Chen-Ling Kuo, Wen-Ling Cheng, Ching-Shan Huang, Wei-Ting Lin

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Cerebellar Ataxia : CK\(36\) : AC\(4\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Headache and CNS white matter abnormalities may be associated with gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : Neurology. 2001 Feb 13 ;56(3):385-8. PMID: [11171906](#)

**Article Published Date** : Feb 13, 2001

**Authors** : M Hadjivassiliou, R A Grünewald, M Lawden, G A Davies-Jones, T Powell, C M Smith

**Study Type** : Human Study

**Additional Links**

**Diseases** : [CNS White Matter Abnormalities : CK\(10\) : AC\(1\)](#), [Headache : CK\(657\) : AC\(72\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Highly significant increases compared with controls were found in patients with multiple sclerosis for IgA and IgG antibodies against gliadin and gluten and IgA antibodies against casein.](#) - GMI Summary**

**Pubmed Data** : Acta Neurol Scand. 2004 Oct;110(4):239-41. PMID: [15355487](#)

**Article Published Date** : Oct 01, 2004

**Authors** : K-L Reichelt, D Jensen

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Casein Intolerance : CK\(44\) : AC\(7\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Multiple Sclerosis : CK\(716\) : AC\(133\)](#)

**Problem Substances** : [Casein : CK\(123\) : AC\(16\)](#), [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Individuals with schizophrenia have a novel immune response to gluten.](#) - GMI Summary**

**Pubmed Data** : Schizophr Res. 2010 May;118(1-3):248-55. Epub 2009 Sep 11. PMID: [19748229](#)

**Article Published Date** : May 01, 2010

**Authors** : Diana Samaroo, Faith Dickerson, Donald D Kasarda, Peter H R Green, Chiara Briani, Robert H Yolken, Armin Alaedini

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Schizophrenia : CK\(247\) : AC\(29\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Markers of gluten sensitivity and celiac disease are increased in recent-onset psychosis and multi-episode schizophrenia.](#) - GMI Summary**



**Pubmed Data** : Biol Psychiatry. 2010 Jul 1;68(1):100-4. Epub 2010 May 14. PMID: [20471632](#)

**Article Published Date** : Jul 01, 2010

**Authors** : Faith Dickerson, Cassie Stallings, Andrea Origoni, Crystal Vaughan, Sunil Khushalani, Flora Leister, Shuojia Yang, Bogdana Krivogorsky, Armin Alaedini, Robert Yolken

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Psychoses : CK\(12\) : AC\(3\)](#), [Schizophrenia : CK\(247\) : AC\(29\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Neurological symptoms occur in 6-10% of those with celiac disease, with cerebella ataxia being the most frequent symptom.](#) - GMI Summary**

**Pubmed Data** : Mov Disord. 2009 Dec 15;24(16):2358-62. PMID: [19845007](#)

**Article Published Date** : Dec 15, 2009

**Authors** : Katrin Bürk, Marie-Louise Farecki, Georg Lamprecht, Guenter Roth, Patrice Decker, Michael Weller, Hans-Georg Rammensee, Wolfgang Oertel

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Carpal Tunnel Syndrome : CK\(80\) : AC\(8\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cerebellar Ataxia : CK\(36\) : AC\(4\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Migraine Disorders : CK\(455\) : AC\(54\)](#), [Psychiatric Disorders : CK\(71\) : AC\(10\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Persons with schizophrenia have higher than expected titers of antibodies related to celiac disease and gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : Schizophr Bull. 2011 Jan;37(1):94-100. Epub 2009 Jun 3. PMID: [19494248](#)

**Article Published Date** : Jan 01, 2011

**Authors** : Nicola G Cascella, Debra Kryszak, Bushra Bhatti, Patricia Gregory, Deanna L Kelly, Joseph P Mc Evoy, Alessio Fasano, William W Eaton

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Schizophrenia : CK\(247\) : AC\(29\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Sensory ganglionopathy may be a manifestation of gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : Neurology. 2010 Sep 14;75(11):1003-8. PMID: [20837968](#)

**Article Published Date** : Sep 14, 2010

**Authors** : M Hadjivassiliou, D G Rao, S B Wharton, D S Sanders, R A Grünewald, A G B Davies-Jones

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Peripheral Neuropathies : CK\(454\) : AC\(31\)](#), [Sensory Neuropathies : CK\(10\) : AC\(1\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[There is a high prevalence of gluten sensitivity in Japanese patients with adult-onset cerebellar ataxia.](#) - GMI Summary**

**Pubmed Data** : Intern Med. 2006;45(3):135-40. Epub 2006 Mar 1. PMID: [16508226](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Masafumi Ihara, Fumi Makino, Hideyuki Sawada, Takahiro Mezaki, Kotaro Mizutani, Hiroshi Nakase, Makoto Matsui, Hidekazu Tomimoto, Shun Shimohama

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Cerebellar Ataxia : CK\(36\) : AC\(4\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[There is a trend toward a higher prevalence of antigliadin antibodies in patients with sporadic ataxia and dominant ataxia.](#) - GMI Summary**

**Pubmed Data** : Neurology. 2003 May 27 ;60(10):1674-5. PMID: [12771263](#)

**Article Published Date** : May 27, 2003

**Authors** : M Abele, L Schöls, S Schwartz, T Klockgether

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Ataxia: Dominant : CK\(10\) : AC\(1\)](#), [Ataxia: Sporadic : CK\(10\) : AC\(1\)](#)

**Additional Keywords** : [Anti-Gliadin Antibodies : CK\(71\) : AC\(8\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Those with celiac disease may experience neurological damage as a result of the intolerance.](#) - GMI Summary**

**Pubmed Data** : Gastroenterology. 2007 Jul ;133(1):195-206. Epub 2007 May 3. PMID: [17631142](#)

**Article Published Date** : Jul 01, 2007

**Authors** : Elisabetta Cervio, Umberto Volta, Manuela Verri, Federica Boschi, Ornella Pastoris, Alessandro Granito, Giovanni Barbara, Claudia Parisi, Cristina Felicani, Marcello Tonini, Roberto De Giorgio

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Pharmacological Actions** : [Apoptotic : CK\(1465\) : AC\(1099\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[A woman with daily headaches caused by wheat consumption has been reported.](#) - GMI Summary**

**Pubmed Data** : J Headache Pain. 2005 Apr ;6(2):91-2. Epub 2005 Apr 8. PMID: [16362649](#)

**Article Published Date** : Apr 01, 2005

**Authors** : Julio Pascual, Carlos Leno

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Headache : CK\(657\) : AC\(72\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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### **[Case study: a migraine as initial presentation of celiac disease.](#) - GMI Summary**

**Pubmed Data** : Rev Neurol (Paris). 2012 Mar 7. Epub 2012 Mar 7. PMID: [22405455](#)

**Article Published Date** : Mar 07, 2012

**Authors** : L Benjilali, M Zahlane, L Essaadouni

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Migraine Disorders : CK\(455\) : AC\(54\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **[Gluten encephalopathy with psychiatric onset has been reported.](#) - GMI**

### **Summary**

**Pubmed Data** : Clin Pract Epidemiol Ment Health. 2009;5:16. Epub 2009 Jun 26. PMID: [19558661](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Nicola Poloni, Simone Vender, Emilio Bolla, Paola Bortolaso, Chiara Costantini, Camilla Callegari

**Study Type** : Human: Case Report

#### **Additional Links**

**Diseases** : [Encephalopathies : CK\(11\) : AC\(5\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Polyneuropathies : CK\(38\) : AC\(7\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **[Progressive ataxia with palatal tremor due to gluten sensitivity has been reported.](#) - GMI Summary**

**Pubmed Data** : Mov Disord. 2012 Jan ;27(1):62-3. PMID: [22252893](#)

**Article Published Date** : Jan 01, 2012

**Authors** : Ammar Kheder, Stuart Currie, Charles Romanowski, Marios Hadjivassiliou

**Study Type** : Human: Case Report

#### **Additional Links**

**Diseases** : [Ataxia : CK\(96\) : AC\(14\)](#), [Tremor : CK\(39\) : AC\(8\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **["It has been proposed that idiopathic ataxias and central nervous system white matter disease are gluten-sensitive syndromes."](#) - GMI Summary**

**Pubmed Data** : Curr Opin Neurol. 2002 Oct ;15(5):519-23. PMID: [12351994](#)

**Article Published Date** : Oct 01, 2002

**Authors** : Adrian J Wills, David J Unsworth

**Study Type** : Review

#### **Additional Links**

**Diseases** : [Ataxia: Idiopathic : CK\(11\) : AC\(2\)](#), [Neurologic Disorders : CK\(63\) : AC\(21\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **[Celiac disease should be ruled out in the differential diagnosis of neurological dysfunction of unknown cause, including ataxia, epilepsy and dementia.](#) - GMI Summary**

**Pubmed Data** : Arq Neuropsiquiatr. 2004 Dec ;62(4):969-72. Epub 2004 Dec 15. PMID: [15608953](#)

**Article Published Date** : Dec 01, 2004

**Authors** : José Ibiapina Siqueira Neto, Ana Carolina Leite Vieira Costa, Francisco George Magalhães, Gisele Sampaio Silva

**Study Type** : Review

#### **Additional Links**

**Diseases** : [Ataxia : CK\(96\) : AC\(14\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Dementia : CK\(225\) : AC\(31\)](#), [Epilepsy : CK\(128\) : AC\(27\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Neurotoxic : CK\(1064\) : AC\(179\)](#)

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## **Topic: Immunoreactive**

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## **["Whereas the development of anti-transglutaminase 2 IgA is linked with gastrointestinal disease, an anti-transglutaminase 6 IgG and IgA response is prevalent in gluten ataxia."](#) - GMI Summary**

**Pubmed Data** : Ann Neurol. 2008 Sep ;64(3):332-43. PMID: [18825674](#)

**Article Published Date** : Sep 01, 2008

**Authors** : Marios Hadjivassiliou, Pascale Aeschlimann, Alexander Strigun, David S Sanders, Nicola Woodrooffe, Daniel Aeschlimann

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Ataxia : CK\(96\) : AC\(14\)](#), [Gluten Ataxia : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **[An adverse immune reaction to wheat proteins is more commonly apparent \(anti-tTG\) in Sjögren's syndrome. - GMI Summary](#)**

**Pubmed Data** : J Rheumatol. 2003 Dec ;30(12):2613-9. PMID: [14719202](#)

**Article Published Date** : Dec 01, 2003

**Authors** : Leeanne M Luft, Susan G Barr, Liam O Martin, Edward K L Chan, Marvin J Fritzler

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Sjogren's Syndrome : CK\(81\) : AC\(14\)](#)

**Additional Keywords** : [Sjogren's Syndrome : CK\(81\) : AC\(14\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **[Approximately 1 in every 3 patients with atopic eczema are positive for anti-gliadin and/or anti-milk antibodies, indicating they may play a causitive role in the disease. - GMI Summary](#)**

**Pubmed Data** : Clin Exp Dermatol. 1985 May;10(3):222-8. PMID: [4006283](#)

**Article Published Date** : May 01, 1985

**Authors** : R Finn, M M Harvey, P M Johnson, J L Verbov, R M Barnes

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Atopic Dermatitis : CK\(667\) : AC\(80\)](#)

**Problem Substances** : [Cow Milk : CK\(368\) : AC\(46\)](#), [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **[Children with atopic dermatitis commonly have specif IgE to common food allergens. - GMI Summary](#)**

**Pubmed Data** : Iran J Immunol. 2012 Mar ;9(1):32-8. PMID: [22426165](#)

**Article Published Date** : Mar 01, 2012

**Authors** : Mozghan Moghtaderi, Shirin Farjadian, Sara Kashef, Maryam Tavakoli, Soheila Alyasin, Maryam Afrasiab, Marzieh Orooj

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Allergy: Cow's Milk : CK\(92\) : AC\(18\)](#), [Atopic Dermatitis: Infant & Childhood : CK\(170\) : AC\(14\)](#), [Food Allergies : CK\(390\) : AC\(53\)](#), [Food Allergies/Intolerances: Cereals/Grains : CK\(11\) : AC\(2\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Nightshade Foods Intolerance : CK\(10\) : AC\(1\)](#)

**Problem Substances** : [Cow Milk : CK\(368\) : AC\(46\)](#), [Egg : CK\(20\) : AC\(3\)](#), [Nuts : CK\(10\) : AC\(1\)](#), [Peanut : CK\(31\) : AC\(5\)](#), [Potato : CK\(43\) : AC\(11\)](#), [Tomato : CK\(10\) : AC\(1\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **[Collagenous enterocolitis represents a diffuse manifestation of gluten sensitivity. - GMI Summary](#)**

**Pubmed Data** : J Clin Gastroenterol. 1992 Jul ;15(1):45-51. PMID: [1500661](#)

**Article Published Date** : Jul 01, 1992

**Authors** : T M McCashland, J P Donovan, R S Strobach, J Linder, E M Quigley

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Colitis: Collagenous : CK\(20\) : AC\(1\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

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**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#), [Inflammatory : CK\(150\) : AC\(37\)](#)

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### **[Elevated IgA rheumatoid factor may result from wheat consumption.](#) - GMI Summary**

**Pubmed Data** : Acta Derm Venereol. 1995 Mar ;75(2):130-2. PMID: [7604641](#)

**Article Published Date** : Mar 01, 1995

**Authors** : M Sökjer, T Jónsson, S Bödvarsson, I Jónsdóttir, H Valdimarsson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [IgA rheumatoid factor: elevated : CK\(20\) : AC\(2\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **[Multiple myeloma patients exhibit humoral immunoreactivity to gliadin and to tissue transglutaminase, not unlike those with celiac disease.](#) - GMI Summary**

**Pubmed Data** : BMC Immunol. 2008;9:22. Epub 2008 May 28. PMID: [18507842](#)

**Article Published Date** : Jan 01, 2008

**Authors** : [No authors listed]

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Multiple Myeloma : CK\(146\) : AC\(53\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **[Patients with multiple myeloma have immunoreactivity to gliadin similar to those with celiac disease.](#) - GMI Summary**

**Pubmed Data** : BMC Immunol. 2009;10:32. Epub 2009 May 31. PMID: [19480718](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Aleksandra Konic-Ristic, Dejan Dodig, Radmilo Krstic, Svetislav Jelic, Ivan Stankovic, Aleksandra Ninkovic, Jelena Radic, Irina Besu, Branka Bonaci-Nikolic, Njegica Jojic, Milica Djordjevic, Dragan Popovic, Zorica Juranic

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Multiple Myeloma : CK\(146\) : AC\(53\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Differences in Immunoreactivity Within Different Wheat Cultivars : CK\(11\) : AC\(2\)](#), [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **[Some patients with NHL possessed immunoreactivity to gliadin , indicating this protein may contribute to immune imbalance in the condition.](#) - GMI Summary**

**Pubmed Data** : Int J Hematol. 2009 Sep ;90(2):212-6. Epub 2009 Jul 17. PMID: [19609644](#)

**Article Published Date** : Sep 01, 2009

**Authors** : Zorica D Juranić, Irina Besu, Svetislav Jelić, Aleksandra Konić-Ristić, Suzana Matković, Ljiljana Janković, Dusica Gavrilović, Branka Radojčić, Ivana Minić

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Non-Hodgkin Lymphoma : CK\(515\) : AC\(67\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **[At least 10% of sporadic cerebellar ataxia may be related to immune-mediated mechanisms which include gliadin intolerance.](#) - GMI Summary**

**Pubmed Data** : Eur Neurol. 2009 ;62(6):356-61. Epub 2009 Sep 26. PMID: [19786780](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Roberto Fancellu, Davide Pareyson, Elena Corsini, Ettore Salsano, Matilde Laurà, Gaetano Bernardi, Carlo Antozzi, Francesca Andreetta, Maurizio Colecchia, Stefano Di Donato, Caterina Mariotti

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Cerebellar Ataxia : CK\(36\) : AC\(4\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **[Omega-5 gliadin anaphylaxis has been reported.](#) - GMI Summary**

**Pubmed Data** : Eur Ann Allergy Clin Immunol. 2011 Jun ;43(3):92-4. PMID: [21789971](#)

**Article Published Date** : Jun 01, 2011

**Authors** : M R Yacoub, E Savi, S E Burastero, S Dal Farra, C Mason, S Pecora, G Colombo

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Anaphylaxis: Exercise-Induced : CK\(27\) : AC\(3\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **["Wheat dependent exercise induced anaphylaxis possibly sensitized by the hydrolyzed wheat proteins in a facial cleansing soap"](#) - GMI Summary**

**Pubmed Data** : J UOEH. 2012 Mar 1 ;34(1):85-9. PMID: [22428462](#)

**Article Published Date** : Mar 01, 2012

**Authors** : Miwa Kobayashi, Risa Okura, Haruna Yoshioka, Kana Hiromasa, Manabu Yoshioka, Motonobu Nakamura

**Study Type** : Review

**Additional Links**

**Diseases** : [Anaphylaxis: Exercise-Induced : CK\(27\) : AC\(3\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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### **[Because anti-gliadin antibodies bind to neuronal synapsin I it is possible that molecular mimicry and antibody cross-reactivity are responsible for neurological symptoms associated with gluten sensitivity.](#) - GMI Summary**

**Pubmed Data** : J Immunol. 2007 May 15 ;178(10):6590-5. PMID: [17475890](#)

**Article Published Date** : May 15, 2007

**Authors** : Armin Alaedini, Haruka Okamoto, Chiara Briani, Kurt Wollenberg, Holly A Shill, Khalafalla O Bushara, Howard W Sander, Peter H R Green, Mark Hallett, Norman Latov

**Study Type** : Review

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Anti-Gliadin Antibodies : CK\(71\) : AC\(8\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#)

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## **Topic: Immunotoxic**

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### **[Celiac disease is a common condition in Down syndrome.](#) - GMI Summary**

**Pubmed Data** : J Pediatr Gastroenterol Nutr. 1995 Nov;21(4):443-5. PMID: [8583297](#)

**Article Published Date** : Nov 01, 1995

**Authors** : U Jansson, C Johansson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Down Syndrome : CK\(50\) : AC\(5\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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### **[Children with autism show elevations against gliadin \(wheat protein\) and cerebellar proteins simultaneously. These proteins simulate antibodies that may cross-react, resulting in neurological damage.](#) - GMI Summary**

**Pubmed Data** : Nutr Neurosci. 2004 Jun;7(3):151-61. PMID: [15526989](#)

**Article Published Date** : Jun 01, 2004

**Authors** : A Vojdani, T O'Bryan, J A Green, J Mccandless, K N Woeller, E Vojdani, A A Nourian, E L Cooper

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autism : CK\(1340\) : AC\(65\)](#), [Autism Spectrum Disorders : CK\(1118\) : AC\(108\)](#), [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Molecular Mimicry : CK\(47\) : AC\(10\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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### **[Intolerance to wheat \(CD autoantibodies\) is higher than background rates in those with Turner syndrome.](#) - GMI Summary**

**Pubmed Data** : Clin Exp Immunol. 2009 May;156(2):205-10. Epub 2009 Feb 26. PMID: [19298606](#)

**Article Published Date** : May 01, 2009

**Authors** : K H Mortensen, L Cleemann, B E Hjerrild, E Nexø, H Locht, E M Jeppesen, C H Gravholt

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Hypothyroidism : CK\(525\) : AC\(78\)](#), [Turner Syndrome : CK\(10\) : AC\(1\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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### **[There is a high frequency of autoimmune thyroid disease among celiac disease patients.](#) - GMI Summary**

**Pubmed Data** : J Pediatr Gastroenterol Nutr. 2003 Jul;37(1):63-6. PMID: [12827007](#)

**Article Published Date** : Jul 01, 2003

**Authors** : Nicoletta Ansaldi, Tiziana Palmas, Andrea Corrias, Maria Barbato, Mario Rocco D'Altiglia, Angelo Campanozzi, Mariella Baldassarre, Francesco Rea, Rosanna Pluvio, Margherita Bonamico, Rosanna Lazzari, Giovanni Corrao

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Autoimmune Thyroiditis : CK\(134\) : AC\(17\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Hypothyroidism : CK\(525\) : AC\(78\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Immunotoxic : CK\(230\) : AC\(38\)](#)

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### **[There is evidence that intolerance to wheat \(measured by CD associated anti-endomysial antibodies\) may play a role in Graves' disease.](#) - GMI Summary**

**Pubmed Data** : Digestion. 1999 Jan-Feb;60(1):86-8. PMID: [9892805](#)

**Article Published Date** : Jan 01, 1999

**Authors** : A Carroccio, N Custro, G Montalto, L Giannitrapani, M Soresi, A Notarbartolo

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Graves Disease : CK\(93\) : AC\(9\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions :** [Immunotoxic : CK\(230\) : AC\(38\)](#)

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### **[Thyroid autoimmunity is associated with celiac disease in children.](#) - GMI Summary**

**Pubmed Data :** J Pediatr. 2010 Feb;156(2):292-5. Epub 2009 Oct 20. PMID: [19846116](#)

**Article Published Date :** Feb 01, 2010

**Authors :** Alessandra Cassio, Giampaolo Ricci, Federico Baronio, Angela Miniaci, Milva Bal, Barbara Bigucci, Veronica Conti, Alessandro Cicognani

**Study Type :** Human Study

**Additional Links**

**Diseases :** [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Hypothyroidism : CK\(525\) : AC\(78\)](#)

**Additional Keywords :** [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances :** [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions :** [Immunotoxic : CK\(230\) : AC\(38\)](#)

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### **[Anti-tissue transglutaminase antibodies from celiac patients are responsible for trophoblast damage associated with infertility.](#) - GMI Summary**

**Pubmed Data :** Am J Gastroenterol. 2010 Oct ;105(10):2254-61. Epub 2010 Jun 22. PMID: [20571491](#)

**Article Published Date :** Oct 01, 2010

**Authors :** Nicoletta Di Simone, Marco Silano, Roberta Castellani, Fiorella Di Nicuolo, Maria C D'Alessio, Francesco Franceschi, Alessandra Tritarelli, Antonio M Leone, Chiara Tersigni, Giovanni Gasbarrini, Nicolò G Silveri, Alessandro Caruso, Antonio Gasbarrini

**Study Type :** Human In Vitro

**Additional Links**

**Diseases :** [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Pharmacological Actions :** [Apoptotic : CK\(1465\) : AC\(1099\)](#)

**Additional Keywords :** [Apoptotic : CK\(1465\) : AC\(1099\)](#)

**Problem Substances :** [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions :** [Immunotoxic : CK\(230\) : AC\(38\)](#)

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### **[Dietary gluten influences the development of type 1 diabetes \(T1D\).](#) - GMI Summary**

**Pubmed Data :** PLoS One. 2012 ;7(3):e33315. Epub 2012 Mar 13. PMID: [22428018](#)

**Article Published Date :** Jan 01, 2012

**Authors :** Julie Christine Antvorskov, Petra Fundova, Karsten Buschard, David P Funda

**Study Type :** Animal Study

**Additional Links**

**Diseases :** [Autoimmune Diseases : CK\(5084\) : AC\(779\)](#), [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions :** [Diabetogenic : CK\(124\) : AC\(14\)](#), [Immunotoxic : CK\(230\) : AC\(38\)](#)

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### **[Dietary gluten reduces the number of intestinal regulatory T cells in mice which may result in loss of self-tolerance and therefore increased risk of type 1 diabetes.](#) - GMI Summary**

**Pubmed Data :** Scand J Immunol. 2008 Jun ;67(6):553-9. PMID: [18476878](#)

**Article Published Date :** Jun 01, 2008

**Authors :** M Ejsing-Duun, J Josephsen, B Aasted, K Buschard, A K Hansen

**Study Type :** Animal Study

**Additional Links**

**Diseases :** [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#)

**Pharmacological Actions :** [Interleukin-10 downregulation : CK\(73\) : AC\(21\)](#)

**Problem Substances :** [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions :** [Diabetogenic : CK\(124\) : AC\(14\)](#), [Immunotoxic : CK\(230\) : AC\(38\)](#)

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**Topic: [Teratogenic](#)**



## **Recurrent miscarriages may occur due to undiagnosed celiac disease, and may resolve after a gluten-free diet. - GMI Summary**

**Pubmed Data** : Dig Dis Sci. 2008 Nov;53(11):2925-8. Epub 2008 Mar 27. PMID: [18368491](#)

**Article Published Date** : Nov 01, 2008

**Authors** : Antonio Tursi, Gianmarco Giorgetti, Giovanni Brandimarte, Walter Elisei

**Study Type** : Meta Analysis

### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Teratogenic : CK\(304\) : AC\(59\)](#)

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## **Celiac disease associated antibodies are higher in Argentine women with recurrent pregnancy loss. - GMI Summary**

**Pubmed Data** : Am J Reprod Immunol. 2006 Mar;55(3):201-7. PMID: [16451354](#)

**Article Published Date** : Mar 01, 2006

**Authors** : Daniel Bustos, Ana Moret, Monica Tambutti, Sebastian Gogorza, Roberto Testa, Amanda Ascione, Norma Prigoshin

**Study Type** : Human Study

### **Additional Links**

**Diseases** : [Abortion: Spontaneous : CK\(204\) : AC\(29\)](#), [Miscarriage: Recurrent : CK\(21\) : AC\(3\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Teratogenic : CK\(304\) : AC\(59\)](#)

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## **Unexplained infertility in women may be due to celiac disease. - GMI Summary**

**Pubmed Data** : Minerva Med. 2007 Jun;98(3):217-9. PMID: [17592443](#)

**Article Published Date** : Jun 01, 2007

**Authors** : R Pellicano, M Astegiano, M Bruno, S Fagoonee, M Rizzetto

**Study Type** : Human Study

### **Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Infertility : CK\(443\) : AC\(94\)](#), [Infertility: Female : CK\(182\) : AC\(33\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Teratogenic : CK\(304\) : AC\(59\)](#)

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## **Recurrent miscarriages may be due to undiagnosed celiac disease. - GMI Summary**

**Pubmed Data** : Recenti Prog Med. 2000 Feb;91(2):72-5. PMID: [10748651](#)

**Article Published Date** : Feb 01, 2000

**Authors** : P Caramaschi, D Biasi, A Carletto, M Randon, M L Pacor, L M Bambara

**Study Type** : Review

### **Additional Links**

**Diseases** : [Abortion: Spontaneous : CK\(204\) : AC\(29\)](#), [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Miscarriage : CK\(516\) : AC\(35\)](#), [Miscarriage: Recurrent : CK\(21\) : AC\(3\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Teratogenic : CK\(304\) : AC\(59\)](#)

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## **Topic: Inflammatory**

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## **Collagenous enterocolitis represents a diffuse manifestation of gluten sensitivity. - GMI Summary**

**Pubmed Data** : J Clin Gastroenterol. 1992 Jul ;15(1):45-51. PMID: [1500661](#)

**Article Published Date** : Jul 01, 1992

**Authors** : T M McCashland, J P Donovan, R S Strobach, J Linder, E M Quigley

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Colitis: Collagenous : CK\(20\) : AC\(1\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Immunoreactive : CK\(127\) : AC\(17\)](#), [Inflammatory : CK\(150\) : AC\(37\)](#)

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### **[Gluten elicits its harmful effect, throughout an IL15 innate immune response, on all the individuals.](#) - GMI Summary**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Gut. 2007 Jun;56(6):889-90. PMID: [17519496](#)

**Article Published Date** : Oct 21, 1976

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gastrointestinal Inflammation : CK\(41\) : AC\(7\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Inflammatory : CK\(150\) : AC\(37\)](#), [Interleukin-15 downregulation : CK\(10\) : AC\(1\)](#)

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### **[Celiac disease and autoimmune pancreatitis: a case report.](#) - GMI Summary**

**Pubmed Data** : Eur J Gastroenterol Hepatol. 2011 Nov ;23(12):1270-2. PMID: [21946127](#)

**Article Published Date** : Oct 31, 2011

**Authors** : Ibrahim Masoodi, Hamidullah Wani, Khalid Alsayari, Tarek Sulaiman, Nadeem Syed Hassan, Adel Nazmi Alqutub, Ahmed Al Omair, Abed H Al-Lehibi

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Pancreatitis : CK\(163\) : AC\(40\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Inflammatory : CK\(150\) : AC\(37\)](#)

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### **[Dietary gluten alters the balance of proinflammatory and anti-inflammatory cytokines in T cells of BALB/c mice, indicating that gluten may contribute to increased incidence of type 1 diabetes.](#) - GMI Summary**

**Pubmed Data** : Immunology. 2012 Aug 22. Epub 2012 Aug 22. PMID: [22913724](#)

**Article Published Date** : Aug 21, 2012

**Authors** : Julie C Antvorskov, Petra Fundova, Karsten Buschard, David P Funda

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#), [Diabetes Mellitus: Type 1: Prevention : CK\(163\) : AC\(24\)](#), [Inflammation : CK\(1014\) : AC\(348\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Inflammatory : CK\(150\) : AC\(37\)](#)

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### **[Retinoic Acid \(a Vitamin A metabolite\) in conjunction with IL-15 promotes rather than prevents Inflammation in Celiacs](#) - GMI Summary**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Nature. 2011 Mar 10 ;471(7337):220-4. Epub 2011 Feb 9. PMID: [21307853](#)

**Article Published Date** : Mar 09, 2011

**Authors** : R W DePaolo, V Abadie, F Tang, H Fehlner-Peach, J A Hall, W Wang, E V Marietta, D D Kasarda, T A Waldmann, J A Murray, C Semrad, S S Kupfer, Y Belkaid, S Guandalini, B Jabri

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : [Vitamin A : CK\(371\) : AC\(58\)](#)

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#)

**Additional Keywords** : [Celiac Disease : CK\(4\) : AC\(2\)](#), [HLA-DQ2/DQ8 : CK\(24\) : AC\(5\)](#), [IL-15 : CK\(4\) :](#)

[AC\(2\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Inflammatory : CK\(150\) : AC\(37\)](#)

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### **[Wheat gliadin may promote its pro-allergenic effects by upregulation of interleukin-4 induced IgE production.](#) - GMI Summary**

**Pubmed Data** : Cytokine. 2003 Mar 21;21(6):270-80. PMID: [12824000](#)

**Article Published Date** : Mar 21, 2003

**Authors** : Bernard Dugas, Nathalie Dugas, Marc Conti, Alphonse Calenda, Paco Pino, Yolène Thomas, Dominique Mazier, Ioannis Vouldoukis

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Allergenic : CK\(25\) : AC\(5\)](#), [Inflammatory : CK\(150\) : AC\(37\)](#), [Interleukin-4 Up-Regulation : CK\(1\) : AC\(1\)](#)

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### **Topic: Interleukin-15 downregulation**

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#### **[Gluten elicits its harmful effect, throughout an IL15 innate immune response, on all the individuals.](#) - GMI Summary**

**Article Publish Status** : This is a free article. [Click here to read the entire article.](#)

**Pubmed Data** : Gut. 2007 Jun;56(6):889-90. PMID: [17519496](#)

**Article Published Date** : Oct 21, 1976

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gastrointestinal Inflammation : CK\(41\) : AC\(7\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Inflammatory : CK\(150\) : AC\(37\)](#), [Interleukin-15 downregulation : CK\(10\) : AC\(1\)](#)

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### **Topic: Proliferative**

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#### **[Preparations of gliadin, extracted from wheat gluten, were shown to stimulate a proliferative response by lymphocytes of normal donors.](#) - GMI Summary**

**Pubmed Data** : Int Arch Allergy Appl Immunol. 1980;62(2):162-7. PMID: [7372365](#)

**Article Published Date** : Jan 01, 1980

**Authors** : A J Frew, S Bright, P R Shewry, A Munro

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#), [Wheat : CK\(2371\) : AC\(280\)](#)

**Adverse Pharmacological Actions** : [Proliferative : CK\(13\) : AC\(3\)](#)

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### **Topic: Nephrotoxic**

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#### **[Gluten sensitivity is prevalent in patients with IgA nephropathy.](#) - GMI Summary**

**Pubmed Data** : Nephrol Dial Transplant. 2009 Aug;24(8):2476-81. Epub 2009 Mar 30. PMID: [19332868](#)

**Article Published Date** : Aug 01, 2009

**Authors** : Hilde Kloster Smerud, Bengt Fellström, Roger Hällgren, Sonia Osagie, Per Venge, Gudjón Kristjánsson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Gluten Intolerance](#) : CK(236) : AC(33), [IgA Nephropathy](#) : CK(186) : AC(22)  
**Problem Substances** : [Gliadin](#) : CK(2369) : AC(104)  
**Adverse Pharmacological Actions** : [Nephrotoxic](#) : CK(162) : AC(38)

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### **["A child with atypical celiac disease and recurrent urolithiasis."](#) - GMI Summary**

**Pubmed Data** : Iran J Kidney Dis. 2012 Mar ;6(2):146-8. PMID: [22388615](#)

**Article Published Date** : Mar 01, 2012

**Authors** : Eric L Yarnell

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Hydronephrosis](#) : CK(3) : AC(1), [Kidney Stones](#) : CK(157) : AC(28), [Urolithiasis](#) : CK(8) : AC(5)

**Problem Substances** : [Wheat](#) : CK(2371) : AC(280)

**Adverse Pharmacological Actions** : [Nephrotoxic](#) : CK(162) : AC(38)

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### **Topic: [Diabetogenic](#)**

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### **[A casein- and wheat-free diet was associated with the lowest rate of autoimmune diabetes \(type 1\) development in mice.](#) - GMI Summary**

**Pubmed Data** : Ann Nutr Metab. 2009;54(3):208-17. Epub 2009 May 27. PMID: [19478481](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Daniela B Mueller, Kerstin Koczwara, Andreas S Mueller, Josef Pallauf, Anette-G Ziegler, Ezio Bonifacio

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Diabetes Mellitus: Type 1: Prevention](#) : CK(163) : AC(24)

**Problem Substances** : [Casein](#) : CK(123) : AC(16), [Gluten](#) : CK(1610) : AC(131)

**Adverse Pharmacological Actions** : [Diabetogenic](#) : CK(124) : AC(14)

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### **[Delayed exposure to wheat and barley proteins reduces diabetes incidence in non-obese diabetic mice.](#) - GMI Summary**

**Pubmed Data** : Clin Immunol. 2004 Apr;111(1):108-18. PMID: [15093559](#)

**Article Published Date** : Apr 01, 2004

**Authors** : Sandra Schmid, Kerstin Koczwara, Susanne Schwinghammer, Vito Lampasona, Anette-G Ziegler, Ezio Bonifacio

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Diabetes Mellitus: Type 1: Prevention](#) : CK(163) : AC(24)

**Problem Substances** : [Barley](#) : CK(13) : AC(3), [Gliadin](#) : CK(2369) : AC(104), [Gluten](#) : CK(1610) : AC(131), [Grains](#) : CK(27) : AC(8), [Wheat](#) : CK(2371) : AC(280)

**Adverse Pharmacological Actions** : [Diabetogenic](#) : CK(124) : AC(14)

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### **[Dietary gluten influences the development of type 1 diabetes \(T1D\).](#) - GMI Summary**

**Pubmed Data** : PLoS One. 2012 ;7(3):e33315. Epub 2012 Mar 13. PMID: [22428018](#)

**Article Published Date** : Jan 01, 2012

**Authors** : Julie Christine Antvorskov, Petra Fundova, Karsten Buschard, David P Funda

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Autoimmune Diseases](#) : CK(5084) : AC(779), [Diabetes Mellitus: Type 1](#) : CK(1023) : AC(221)

**Problem Substances** : [Gluten](#) : CK(1610) : AC(131)

**Adverse Pharmacological Actions** : [Diabetogenic](#) : CK(124) : AC(14), [Immunotoxic](#) : CK(230) : AC(38)

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### **[Dietary gluten reduces the number of intestinal regulatory T cells in mice which may result in loss of self-tolerance and therefore increased risk of type 1 diabetes.](#) - GMI Summary**

**Pubmed Data** : Scand J Immunol. 2008 Jun ;67(6):553-9. PMID: [18476878](#)

**Article Published Date** : Jun 01, 2008

**Authors** : M Ejsing-Duun, J Josephsen, B Aasted, K Buschard, A K Hansen

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Diabetes Mellitus: Type 1 : CK\(1023\) : AC\(221\)](#)

**Pharmacological Actions** : [Interleukin-10 downregulation : CK\(73\) : AC\(21\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Diabetogenic : CK\(124\) : AC\(14\)](#), [Immunotoxic : CK\(230\) : AC\(38\)](#)

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## Topic: [Allergenic](#)

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### [Wheat intolerance is a common causative factor in atopic dermatitis.](#) - GMI Summary

**Pubmed Data** : Allergy. 2000 Apr;55(4):386-91. PMID: [10782525](#)

**Article Published Date** : Apr 01, 2000

**Authors** : E Varjonen, E Vainio, K Kalimo

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Atopic Dermatitis : CK\(667\) : AC\(80\)](#), [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Allergenic : CK\(25\) : AC\(5\)](#)

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### [Wheat gliadin may promote its pro-allergenic effects by upregulation of interleukin-4 induced IgE production.](#) - GMI Summary

**Pubmed Data** : Cytokine. 2003 Mar 21;21(6):270-80. PMID: [12824000](#)

**Article Published Date** : Mar 21, 2003

**Authors** : Bernard Dugas, Nathalie Dugas, Marc Conti, Alphonse Calenda, Paco Pino, Yolène Thomas, Dominique Mazier, Ioannis Vouldoukis

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Allergenic : CK\(25\) : AC\(5\)](#), [Inflammatory : CK\(150\) : AC\(37\)](#), [Interleukin-4 Up-Regulation : CK\(1\) : AC\(1\)](#)

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## Topic: [Cardiotoxic](#)

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### [Celiac disease has been associated with autoimmune myocarditis.](#) - GMI Summary

**Pubmed Data** : Circulation. 2002 Jun 4;105(22):2611-8. PMID: [12045166](#)

**Article Published Date** : Jun 04, 2002

**Authors** : Andrea Frustaci, Lucio Cuoco, Cristina Chimenti, Maurizio Pieroni, Giuseppina Fioravanti, Nicola Gentiloni, Attilio Maseri, Giovanni Gasbarrini

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Myocarditis: Autoimmune : CK\(14\) : AC\(3\)](#)

**Additional Keywords** : [Diseases that are Linked : CK\(2120\) : AC\(269\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Cardiotoxic : CK\(628\) : AC\(74\)](#)

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## Topic: [Endocrine Disruptor](#)

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## [Gluten exorphins alter serum prolactin levels in male rats.](#) - GMI Summary

**Pubmed Data** : Nutr Neurosci. 2004 Feb;7(1):53-5. PMID: [15085559](#)

**Article Published Date** : Feb 01, 2004

**Authors** : G Fanciulli, A Dettori, M P Demontis, V Anania, G Delitala

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Male Hormone Imbalances : CK\(14\) : AC\(3\)](#), [Prolactin: Inappropriate Secretion : CK\(4\) : AC\(1\)](#)

**Additional Keywords** : [Food Drugs : CK\(4\) : AC\(2\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#), [Gluten exorphins : CK\(26\) : AC\(10\)](#)

**Adverse Pharmacological Actions** : [Endocrine Disruptor : CK\(463\) : AC\(81\)](#)

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## [Gluten exorphins have an effect on plasma insulin and glucagon levels in dogs.](#) - GMI Summary

**Pubmed Data** : Diabetes. 1981 Apr ;30(4):362-4. PMID: [7009280](#)

**Article Published Date** : Apr 01, 1981

**Authors** : V Schusdziarra, I Henrichs, A Holland, M Klier, E F Pfeiffer

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Glucagon: Excess Secretion : CK\(2\) : AC\(1\)](#), [Insulin: Elevated : CK\(186\) : AC\(41\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Endocrine Disruptor : CK\(463\) : AC\(81\)](#), [Endocrine Disruptor: Insulin Resistance : CK\(152\) : AC\(31\)](#)

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## **Topic: [Immunosuppressive](#)**

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## [Leukocyte migration was inhibited by the wheat-derived peptides in celiac patients.](#) - GMI Summary

**Pubmed Data** : Neuropeptides. 1987 Feb-Mar;9(2):113-22. PMID: [3033541](#)

**Article Published Date** : Feb 01, 1987

**Authors** : L Graf, K Horvath, E Walcz, I Berzetei, J Burnier

**Study Type** : Human In Vitro

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Immune Disorders: Low Immune Function : CK\(488\) : AC\(115\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Immunosuppressive : CK\(143\) : AC\(23\)](#)

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## **Topic: [Cytotoxic](#)**

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## [Bread wheat gliadin exhibits direct and significant cytotoxicity.](#) - GMI Summary

**Pubmed Data** : Scand J Clin Lab Invest. 2003 ;63(2):135-41. PMID: [12751695](#)

**Article Published Date** : Jan 01, 2003

**Authors** : E Dolfini, L Elli, S Ferrero, P Braidotti, L Roncoroni, T Dasdia, M L Falini, F Forlani, M T Bardella

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Gluten Intolerance : CK\(236\) : AC\(33\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Cytotoxic : CK\(68\) : AC\(35\)](#)

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## [Despite the belief that immune-mediation is required for gliadin to damage to the body, gliadin appears to directly damage the cells exposed to it; i](#) - GMI Summary

**Pubmed Data** : World J Gastroenterol. 2005 Oct 14 ;11(38):5973-7. PMID: [16273608](#)

**Article Published Date** : Oct 14, 2005

**Authors** : Ersilia Dolfini, Luca Elli, Leda Roncoroni, Barbara Costa, Maria-Pia Colleoni, Vito Lorusso, Simona Ramponi, Paola Braidotti, Stefano Ferrero, Maria-Letizia Falini, Maria-Teresa Bardella

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Gastrointestinal Inflammation : CK\(41\) : AC\(7\)](#), [Oxidative Stress : CK\(1880\) : AC\(710\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Cytotoxic : CK\(68\) : AC\(35\)](#), [Oxidant : CK\(104\) : AC\(37\)](#)

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### **[Gliadin has a direct cytotoxic effect on the cytoskeleton and tight junctions of epithelial cells. - GMI Summary](#)**

**Pubmed Data** : World J Gastroenterol. 2005 Dec 28 ;11(48):7597-601. PMID: [16437684](#)

**Article Published Date** : Dec 28, 2005

**Authors** : Ersilia Dolfini, Leda Roncoroni, Luca Elli, Chiara Fumagalli, Roberto Colombo, Simona Ramponi, Fabio Forlani, Maria Teresa Bardella

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Gastrointestinal Inflammation : CK\(41\) : AC\(7\)](#), [Gluten Sensitivity : CK\(2319\) : AC\(246\)](#), [Intestinal Permeability : CK\(263\) : AC\(56\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Cytotoxic : CK\(68\) : AC\(35\)](#)

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### **[Wheat gliadin exhibits non-specific cytotoxicity to a variety of human cells. - GMI Summary](#)**

**Pubmed Data** : Lancet. 1976 Feb 14;1(7955):339-41. PMID: [54743](#)

**Article Published Date** : Feb 14, 1976

**Authors** : D A Hudson, H J Cornell, D R Purdham, C J Rolles

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Celiac Disease : CK\(1393\) : AC\(185\)](#), [Gluten Intolerance : CK\(236\) : AC\(33\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Additional Keywords** : [Lectins : CK\(58\) : AC\(36\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Cytotoxic : CK\(68\) : AC\(35\)](#)

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## **Topic: Endocrine Disruptor: Insulin Resistance**

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### **[Gluten exorphins have an effect on plasma insulin and glucagon levels in dogs. - GMI Summary](#)**

**Pubmed Data** : Diabetes. 1981 Apr ;30(4):362-4. PMID: [7009280](#)

**Article Published Date** : Apr 01, 1981

**Authors** : V Schusdziarra, I Henrichs, A Holland, M Klier, E F Pfeiffer

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Glucagon: Excess Secretion : CK\(2\) : AC\(1\)](#), [Insulin: Elevated : CK\(186\) : AC\(41\)](#)

**Problem Substances** : [Gluten : CK\(1610\) : AC\(131\)](#)

**Adverse Pharmacological Actions** : [Endocrine Disruptor : CK\(463\) : AC\(81\)](#), [Endocrine Disruptor: Insulin Resistance : CK\(152\) : AC\(31\)](#)

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## **Topic: Endocrine Disruptor: Pancreas**

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### **[Gluten exorphin modulate pancreatic endocrine function by stimulating insulin release. - GMI Summary](#)**

**Pubmed Data** : Life Sci. 1995;57(7):729-34. PMID: [7637543](#)

**Article Published Date** : Jan 01, 1995

**Authors** : S Fukudome, A Shimatsu, H Suganuma, M Yoshikawa

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Insulin: Elevated : CK\(186\) : AC\(41\)](#), [Insulin Disorders : CK\(15\) : AC\(4\)](#)

**Problem Substances** : [Gluten exorphins : CK\(26\) : AC\(10\)](#)

**Adverse Pharmacological Actions** : [Endocrine Disruptor: Pancreas : CK\(4\) : AC\(2\)](#)

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## Topic: [Serotonin Down-Regulation](#)

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### [Zein, casein and gluten down-regulate tryptophan production in the rat brain.](#) - GMI Summary

**Pubmed Data** : Physiol Behav. 2009 Aug 4 ;98(1-2):156-62. Epub 2009 May 18. PMID: [19454292](#)

**Article Published Date** : Aug 04, 2009

**Authors** : Sujean Choi, Briana Disilvio, Madelyn H Fernstrom, John D Fernstrom

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Serotonin Disorders : CK\(17\) : AC\(5\)](#)

**Problem Substances** : [Casein : CK\(123\) : AC\(16\)](#), [Gluten : CK\(1610\) : AC\(131\)](#), [Zein : CK\(2\) : AC\(1\)](#)

**Adverse Pharmacological Actions** : [Serotonin Down-Regulation : CK\(2\) : AC\(1\)](#)

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## Topic: [Interleukin-4 Up-Regulation](#)

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### [Wheat gliadin may promote its pro-allergenic effects by upregulation of interleukin-4 induced IgE production.](#) - GMI Summary

**Pubmed Data** : Cytokine. 2003 Mar 21;21(6):270-80. PMID: [12824000](#)

**Article Published Date** : Mar 21, 2003

**Authors** : Bernard Dugas, Nathalie Dugas, Marc Conti, Alphonse Calenda, Paco Pino, Yolène Thomas, Dominique Mazier, Ioannis Vouldoukis

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Food Allergies: Wheat : CK\(366\) : AC\(47\)](#), [Wheat Intolerance : CK\(2213\) : AC\(231\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Allergenic : CK\(25\) : AC\(5\)](#), [Inflammatory : CK\(150\) : AC\(37\)](#), [Interleukin-4 Up-Regulation : CK\(1\) : AC\(1\)](#)

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## Topic: [Oxidant](#)

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### [Despite the belief that immune-mediation is required for gliadin to damage to the body, gliadin appears to directly damage the cells exposed to it; i](#) - GMI Summary

**Pubmed Data** : World J Gastroenterol. 2005 Oct 14 ;11(38):5973-7. PMID: [16273608](#)

**Article Published Date** : Oct 14, 2005

**Authors** : Ersilia Dolfini, Luca Elli, Leda Roncoroni, Barbara Costa, Maria-Pia Colleoni, Vito Lorusso, Simona Ramponi, Paola Braidotti, Stefano Ferrero, Maria-Letizia Falini, Maria-Teresa Bardella

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Gastrointestinal Inflammation : CK\(41\) : AC\(7\)](#), [Oxidative Stress : CK\(1880\) : AC\(710\)](#)

**Problem Substances** : [Gliadin : CK\(2369\) : AC\(104\)](#)

**Adverse Pharmacological Actions** : [Cytotoxic : CK\(68\) : AC\(35\)](#), [Oxidant : CK\(104\) : AC\(37\)](#)

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## Topic: [Vascular Endothelial Growth Factor C Up-Regulation](#)

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### [Chitin hydrolysate and to a lesser degree WGA stimulate VEGF-C synthesis in](#)



## **breast cancer cells. - GMI Summary**

**Pubmed Data** : Cell Biol Int. 2011 Mar 1;35(3):281-6. PMID: [21029043](#)

**Article Published Date** : Mar 01, 2011

**Authors** : Alexander V Timoshenko

**Study Type** : In Vitro Study

### **Additional Links**

**Diseases** : [Breast Cancer : CK\(2125\) : AC\(566\)](#)

**Problem Substances** : [Chitin Hydrollysate : CK\(1\) : AC\(1\)](#), [Wheat Germ Agglutinin \(WGA\) : CK\(821\) : AC\(39\)](#)

**Adverse Pharmacological Actions** : [Vascular Endothelial Growth Factor C Up-Regulation : CK\(1\) : AC\(1\)](#)

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