

# READE'S REVIEW

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**Special points of interest:**

- **Gluten Sensitivity and Celiac Disease**
- **Symptoms of CD and GS**
- **Causes of CD and GS**
- **Hidden sources of Gluten**
- **Testing for CD and GS**
- **Natural treatment of CD and GS**

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Both celiac disease and gluten sensitivity are conditions in which the bodies immune system responds to proteins found in grains such as wheat, barley, spelt and rye. The bodies immune system response is not just isolated to the gastrointestinal tract but, can cause inflammation by the immune system throughout the body and brain! These conditions can lead to an enormous number of symptoms and other conditions that are often misdiagnosed,, treated improperly or go untreated for years.

The existence of celiac disease (CD) is often suspected when there is chronic spells of diarrhea, malabsorption, muscular weakness/wasting, general swelling, anemia, low blood calcium, low B vitamin levels, vitamin D deficiency and osteopenia/osteoporosis. Many times these symptoms will vary in intensity and frequency. This often can to treatment of the symptoms of CD and not the actual cause of CD.

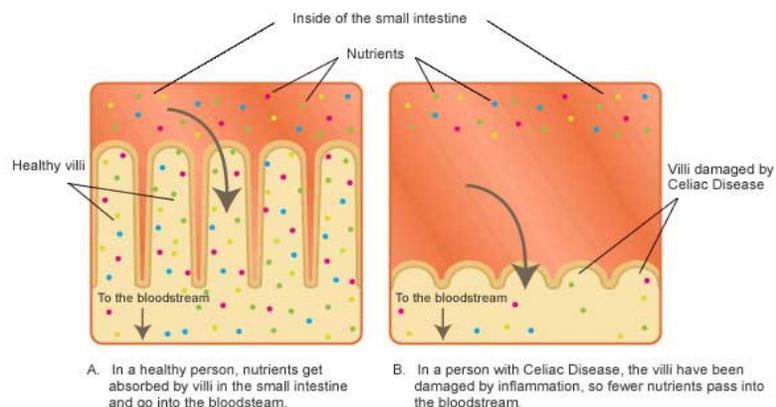
Most physicians will confirm CD with a battery of blood tests, but ultimately a biopsy

of the intestines is done to actual examine the tissue change of the lining of the upper portion of the intestines, namely the duodenum and jejunum. Normally the intestines contain a velvety lining the contains finger-like projections called villi. These villi would be analogous to a shag carpet. This is where we get our absorption of our nutrients. However, with CD these villi are flattened, shortened or missing, there are increased “crevices” in the intestinal lining and there is a huge increase in white blood cells called lymphocytes that invade the lining. So it almost looks like there are bald spots, flattened spots, holes and stains in the shag carpet.

Gluten sensitivity (GS) is very similar to CD and involves an immune system response but,



does not seem to demonstrate the same intestinal changes or level of symptoms as full blown CD. However, GS should not be ignored and it can cause huge problems in the body. Often, if someone is not having a lot of gastrointestinal symptoms they can have what they call “silent” CD or GS. Both “silent” CD or GS can have effects particularly on the nervous system, brain, musculoskeletal system and many other organs in the body.



## COMMON SYMPTOMS OF CD AND GS



**For every symptomatic patient with CD there are eight patients with CD and have no gastrointestinal symptoms**

Remember that these are body wide immunological responses and are not just restricted to the gastrointestinal tract. From the journal of Gastroenterology 2001, "For every symptomatic patient with CD there are eight patients with CD and have no gastrointestinal symptoms". From the same journal January 2004, "CD "out of the intestine" is even more frequent than CD within the intestine." Here are some symptoms and disease associated with CD and GS.

**DIGESTIVE:** Diarrhea, excessive flatulence, bloating, lactose intolerance, abdominal pain, fatty/light colored stools, fatty liver degeneration, liver cirrhosis, decreased pancreatic enzyme production, gastric reflux, gall bladder dysfunction, sometimes sensitivities to corn, oats and dairy.

**GENERAL:** Weight loss, fluid retention, easily bruised ( lack of Vitamin K ), chronic

fatigue

**BLOOD:** Folate, Vitamin B12, and iron related anemias, clotting factor abnormalities, increased homocysteine, increased arterial plaquing

**BONE:** Loose teeth or lose of teeth, poor tooth enamel, osteoporosis, osteopenia, bone or joint pain. Most of this is due to poor absorption of calcium, other minerals and Vitamin D.

**NERVOUS SYSTEM:** Peripheral neuropathy, poor balance, muscular weakness, migraine headaches, numbness and tingling.

**BRAIN:** Mental fogginess, depression, ADHD, ADD, schizophrenia and seizures

**MUSCULAR:** Muscular weakness, muscle cramping, sporadic inclusion body myositis (IBM). IBM is the most common cause of muscular degeneration in patients over

50 years of age.

**SEXUAL:** Infertility, spontaneous abortion, lack of menstruation, low infant birth weight

**SKIN:** painful mouth ulcers, dermatitis herpetiformis, psoriasis. Dermatititis herpetiformis is a itchy, blistery skin rash that can occur on most areas of the body and looks similar to a breakout of shingles.

**AUTOIMMUNE:** Rheumatoid arthritis, Systemic lupus, Sjogrens, and a very common thyroid disorder called Hashimoto's thyroiditis.

Please note not everyone will show these problems, but often do show up later in life, general are worse if the immune response is more intense or if the patient has more severe leaky gut problems. Some patients may only demonstrate behavioral problems or migraines.

## WHAT CAUSES CD AND GS

Gluten is the protein portion of several grains and is used in breads and other products because it provides a soft, chewy texture, helps the dough to rise and maintain its shape. Gluten actually consists of two major classes of protein gliadins and glutenin. The most studied are the gliadins, but the glutenins probably also cause problems with those that have GS and CD. These proteins are found in all forms of wheat, including durum, semolina, spelt,

kamut, malt, couscous, bulgar, triticale, einkorn, farina, udon and faro. Similar proteins are also found in barley and rye. Oats come from a different family of grains and do not contain the same immune stimulating proteins as wheat. However, there are some patients that can react to oat proteins and should be checked.

Gluten seems to cause an increase of a protein in the lining of the intestines and at the

blood-brain barrier in the brain called zonulin. Increased levels of zonulin allow these gluten proteins to pass through the tight junctions between the cells. They then enter and begin to cause a immune system response that causes inflammation at the gut level and also in the brain tissue. Antibodies are produced and circulate throughout the body causing further inflammation and immune system responses in other tissues.



"Maybe she's gluten intolerant."

## HIDDEN SOURCES OF GLUTEN AND HELP TO GO GLUTEN FREE

Gluten is added to many of our foods and here are some red flags when you read labels, be aware of: emulsifiers, flavoring, hydrolyzed plant protein, stabilizers, malt, maltodextrin, binders, fillers and starches. These products may contain gluten. Some other products that may contain glutes are gravy, broth, marinades, spice mixtures or blends, soup thickeners, mustard, salad dressing, roasted nuts, egg substitutes, soy sauce, some medications,

some vitamin supplements, beer, wine, certain distilled spirits, wine coolers, luncheon meats or cold cuts, some cosmetics and personal hygiene products.

This really becomes overwhelming at first if someone is trying to go gluten free. It is helpful to know that a lot of regular grocery stores now have gluten free products.

To help out the FDA in 2004 had a new law called, Food Allergen Labeling and Consumer Protection Act or

known as FALCPA. This requires that FDA regulated packaged food to clearly state on the label when a food or an ingredient in a food is or contains proteins from one of the eight major allergens: milk, eggs, peanut, tree nut, fish, shellfish soy and WHEAT. This includes medications and vitamin supplements. In order to be listed as “gluten free” manufacturers need to have under 20 parts per million of gluten in their product. We will list some helpful websites later in our newsletter.

Gluten, a substance in wheat and other grains, may be found in a variety of foods including breads, cakes, cereals, pasta, commercial dairy products and alcoholic beverages



## TESTING FOR CD AND GS

There is no one specific test that confirms that someone has CD or GS. However, many blood tests can be done to highly suggest that one may have CD or GS. The patients symptoms, other physical findings and other diagnostic tests help to confirm that a patient does have CD or GS. Another “test” to confirm this is by going on a gluten free diet and noting if many symptoms dissipate or are significantly reduced.

The “gold standard” of CD diagnosis is performing a biopsy and looking for flattening of the villi, increased crypts, and invasion of the lining by T lymphocytes. However, this should be the last test to perform and certainly if symptoms are chronic and severe this test should be performed sooner.

There are many blood test to suggest that someone has CD

or GS. There is a genetic test looking for the “celiac genes” called HLA Q2 and HLA Q8. If either one of these test is positive this does not mean you will get CD or GS, but merely indicates you have the potential coding for these diseases. It has recently been found that there are other genetic markers for CD and GS.

The other tests involve looking for antibodies to the protein alpha gliadin. The antibodies measured are IgA, IgG or IgM (these are immunoglobulins). They can be measured in the blood, saliva and stool. It is believed that the stool testing may be better at detecting earlier signs of GS because the immune reaction initially starts on the surface of the gut before spreading to the immune cells found in the lining of the intestines. Another gliadin antibody test is called deaminated gliadin pep-

tide (DGP) that may be more sensitive than antibody tests mentioned earlier.

Two more antibody tests are available and seem to be more specific for CD especially if there is damage to the lining of the intestines or active destruction at the time of the testing. They are anti-endomysial antibody and anti-tissue transglutaminase antibodies (IgA & IgG). These tests will strongly suggest the existence of CD.

The combination of these battery of tests would suggest that someone does have CD or GS. However, further testing using applied kinesiological testing can many times identify these sensitivities. It is important to have someone evaluated because it is estimated that 3 million in the US have CD but, 95% go undiagnosed!

**There is no one specific test that confirms that someone has CD or GS**





## Arizona Family Health Centre

Dedicated to Quality Natural Health Care

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### **Bringing you Natural Healthcare Information**

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Our mission is to help inform and educate the public about alternative treatments that are less invasive and employ more natural therapeutics. We in no way are suggesting that regular medical treatments should not be sought and with some conditions we will suggest a referral to the appropriate specialist.

We wish to provide hope to those people suffering and especially to those with chronic conditions. It is our purpose to provide you with knowledge that is helpful and can provide better health.

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## **NATURAL TREATMENT FOR CD AND GS**

Obviously one of the approaches to helping those with CD and GS is to decrease the immune system response in the intestines by eliminating the proteins that elicit the reaction ... GO GLUTEN FREE. Here are some good websites that have recipes, places to purchase gluten free products, provide additional information about CD and GS:

[www.celiac.com](http://www.celiac.com)

[www.celiac.org](http://www.celiac.org), I like this one because it also has local support group listed:

[www.eastarizonaceliac.blogspot.com](http://www.eastarizonaceliac.blogspot.com)

[www.celiaccentral.org](http://www.celiaccentral.org)

[www.glutenfreegirl.com](http://www.glutenfreegirl.com)

[www.gfreefoodie.com](http://www.gfreefoodie.com), this one is good as it lists local restaurants that have gluten free menus.

The next step is to help repair the damaged intestines and diminish the inflammation and the persistent leaky gut problems. There are several products that we have available that are mixtures of various herbals and other compounds that help heal leaky gut. Other products such as fish oils, carnithine, zinc carnosine, Vitamin A, Vitamin D, resveratrol, green tea extracts, an extract from rosemary called

carnosol and probiotics all help in repairing and decreasing the abnormal immune response in the intestines and in other parts of the body.

Another factor not discussed is the connection between dysbiosis, imbalanced microflora in the intestines and CD or GS. Certain overgrowth of microorganisms may lead to the leaky gut and lead to immune system reactions to other proteins found in grains like wheat.

Lastly, supplying lost nutrients especially B vitamins, Vitamin K, Vitamin D and minerals like iron and calcium.

