How Gluten Intolerance Contributes to Illness

By Elaine Moore, Dec 4, 2009

Intolerance to gluten protein can cause two distinct disorders: celiac disease and gluten intolerance. Unfortunately, doctors often mistakenly dismiss gluten intolerance as having few consequences in the absence of frank celiac disease. Experts in the field of gluten intolerance, such as Dr. Stephen Wangen, have found that hundreds of health problems are connected to wheat and gluten reactions. About 10 percent of the population is reported to have some degree of gluten intolerance and about 30 million Americans are affected.

Gluten

Gluten is a specific protein found in many cereal grains, particularly wheat. Gluten makes bread dough elastic and foods filling. Because it is inexpensive, it's found in many types of foods, including frozen foods and candies. Besides being found in wheat, gluten is found in rye, barley, malt (beer products included), soy sauce, kamut, durum, semolina, bulgur, graham, and farina grains among others. Gluten is also found in hydrolyzed vegetable oils. Both gluten and wheat are sometimes found as food contaminants in a variety of foods including ice cream and pet products and this is the cause of many food recalls.

Grains that do not contain gluten include: amaranth, buckwheat, corn, millet, oats (unless contaminated with wheat), rice, sorghum, and teff.

Symptoms Related to Gluten Intolerance

Gluten intolerance, which is also known as gluten sensitivity, can affect many of the body’s systems besides the digestive tract. Gluten intolerance is known to cause immune system, musculoskeletal, neurological, endocrine, metabolic, dental and dermatological problems. Gluten intolerance can also affect energy levels, cognitive ability, mood and disposition. Vague symptoms can also occur, including: bloating, angry disposition, projectile vomiting, mental fog, hair loss, low bone density, cold sores, elevated liver enzymes, dental enamel defects, itching, dark circles under eyes, itching, weight loss, weight gain, and edema.

Common symptoms of celiac disease and its variant gluten sensitivity enteropathy, conditions which affect about one percent of the population, include gastrointestinal manifestations, such as nausea, vomiting, gas, flatulence, diarrhea, constipation, bloating, and stomach cramps. Besides these symptoms, celiac disease can cause a number of other symptoms, signs and related illnesses affecting various bodily systems including the skin, blood (hematologic system), bone, and the systemic organs. Symptoms often occur as a result of the nutrient deficiencies, especially those of essential oils, oil-soluble vitamins, and minerals, that occur in celiac disease.
General Systemic Symptoms

Adults with celiac disease often develop symptoms of lassitude, inanition, secondary hyperparathyroidism (due to vitamin D deficiency), hypoglycemia, amenorrhea, impotence, and infertility (related to malabsorption with protein-calorie malnutrition and probably vitamin D and calcium deficiencies), depression, fatigue, irritability, and general malnutrition with or without weight loss. In children, systemic symptoms include irritability, fretfulness, emotional withdrawal or excessive dependence, nausea, anorexia, malnutrition with distended abdomen, muscle wasting of buttocks, thighs and proximal arms, with or without vomiting and diarrhea, and stunted growth.

Illnesses associated with gluten intolerance include:

* acne
* anemia
* autoimmune diseases
* infertility (in males and females)
* restless leg syndromesleep disorders
* thyroid disorders
* various cancers

• Skin and mucous membrane changes include aphthous stomatitis (recurrent canker sores), atopic dermatitis, dermatitis herpetiformis, scaly dermatitis or acrodermatitis (due to zinc deficiency), hyperpigmented dermatitis (due to niacin deficiency), edema (protein malabsorption), alopecia areata, vitiligo, bruising and purpura (related to vitamin K deficiency), melanosis (chloasma bronzium) a disorder of hyperpigmentation, and erythema nodosum.

• Nervous system changes include xerophthalmia and night blindness related to vitamin A deficiency and peripheral neuropathy related to vitamin B12 and thiamine deficiency.

• Bone changes include osteoporosis/osteopenia, (seen in nearly 100 percent of patients with celiac disease), dental enamel defects, short stature, arthritis or arthralgia (especially central arthritis-sacroiliitis), bone pain, especially nocturnal (occurring at night).

• Hematologic System: Common blood changes include anemia, especially iron deficiency anemia and folic acid deficiency, low white blood cell count (leucopenia), coagulation disorders, and thrombocytopenia (platelet deficiency).

Associated Disorders
A number of autoimmune and other disorders are highly associated with celiac disease. These include Down’s syndrome, autoimmune thyroid disease, seizures (seizures resolve after treatment with a gluten free diet), liver disease, type 1 diabetes mellitus, ...

Who is Affected?

People of all ages and of all ethnicities are affected by gluten intolerance. Pets can also be affected, and many autoimmune disorders in pets, such as canine hypothyroidism, can be linked to gluten.

Gluten Allergies

Gluten allergies differ from gluten intolerance. In gluten allergies, individuals are allergic to gluten found in specific grains, such as wheat and/or barley or spelt. Symptoms include, hives, swelling of the lip, tongue, or throat and rash. Some people also become allergic to other proteins in wheat besides gluten. Gluten allergies cause elevated levels of IgE.

Celiac Disease

Celiac disease is a specific type of gluten intolerance that destroys villi in the small intestine. In celiac disease, the villi are worn down or blunted and unable to absorb nutrients from food. This is called villous atrophy and it’s caused by immune destruction of the enzyme tissue transglutaminase. Villous atrophy can also occur in other conditions including soy intolerance. People with celiac disease have gluten intolerance, but not everyone with gluten intolerance develops celiac disease. Both celiac disease and gluten intolerance can cause severe symptoms.

People with celiac disease have endomysial and tissue transglutaminase antibodies and they may also have gliadin antibodies.

Gliadin Antibodies

Individuals with gluten intolerance will have either or both IgG or IgA gliadin antibodies. If they’re avoiding gluten, these tests may not be positive until they resume eating gluten for several weeks. These antibodies can be detected in blood, stool, and saliva samples although blood tests are commonly used.

Nutrient Deficiencies

Gluten intolerance can affect nutrient absorption. Vitamin B12 deficiency and anemia often occur as a result. Vitamin D3, calcium, magnesium, zinc, and selenium deficiencies are also common. Selenium deficiencies are associated with autoimmune thyroid disorders.
It can take several weeks or months of a gluten free diet before those affected notice a difference in their health.

Sources:


Healthier Without Wheat website, accessed December 7, 2009