

Celiac disease is a digestive disease that damages the small intestine and interferes with absorption of nutrients from food. People who have celiac disease cannot tolerate a protein called gluten, which is found in wheat, rye, barley, and possibly oats. When people with celiac disease eat foods containing gluten, their immune systems respond by damaging the small intestine. Specifically, tiny finger-like protrusions called villi on the lining of the small intestine are lost. Nutrients from food are absorbed into the bloodstream through these villi and without villi a person becomes malnourished – regardless of the quantity of food eaten.

Because the body's own immune system causes the damage, celiac disease is considered an autoimmune disorder. However, it is also classified as a disease of malabsorption because nutrients are not absorbed. Celiac disease is a genetic disease, meaning that it runs in families. Sometimes the disease is triggered-or becomes active for the first time after surgery, pregnancy, childbirth, viral infection, or severe emotional stress. Celiac disease is also known as celiac sprue, nontropical sprue, and gluten-sensitive enteropathy.

What Are the Symptoms?

Celiac disease affects people differently. Some people develop symptoms as children, others as adults. One factor thought to play a role in when and how celiac appears is whether and for how long a person was breastfed – the longer one was breastfed, the later symptoms of celiac disease appear and the more atypical the symptoms. Other factors include the age at which one began eating foods containing gluten and how much gluten is eaten. Symptoms may or may not occur in the digestive system. For example, one person might have diarrhea and abdominal pain, while another person has irritability or depression. In fact, irritability is one of the most common symptoms in children.

Symptoms of celiac disease may include one or more of the following:

Recurring abdominal bloating and pain	Fatigue
Chronic diarrhea	Failure to thrive in infants
Weight loss	Pain in the joints
Pale, foul-smelling stool	Seizures
Unexplained anemia (low count of red blood cells)	Tingling numbness in the legs (from nerve damage)
Bone pain	Pale sores inside the mouth, called aphthous ulcers
Behavior changes	Painful skin rash, called dermatitis herpetiformis
Muscle cramps	Tooth discoloration or loss of enamel
Delayed growth	Missed menstrual periods (due to excessive weight loss)

Anemia, delayed growth, and weight loss are signs of malnutrition – not getting enough nutrients. Malnutrition is a serious problem for anyone, but particularly for children because they need adequate nutrition to develop properly. Some people with celiac disease may not have symptoms. The undamaged part of the small intestine is able to absorb enough nutrients to prevent symptoms. However, people without symptoms are still at risk for the complications of celiac disease.

How is Celiac Disease Diagnosed?

Diagnosing celiac disease can be difficult because some of its symptoms are similar to those of other diseases, including irritable bowel syndrome, Crohn's disease, ulcerative colitis, diverticulosis, intestinal infections, chronic fatigue syndrome and depression. Recently, researchers discovered that people with celiac disease have higher than normal levels of certain antibodies in their blood. Antibodies are produced by the immune system in response to substances the body perceives to be threatening. To diagnose celiac disease, physicians test blood to measure levels of antibodies to gluten. These antibodies are antigliadin, antiendomysium, antireticulin, and tissue transglutamase.

If the tests and symptoms suggest celiac disease, the physician may remove a tiny piece of tissue from the small intestine to check for damage to the villi. This is done in a procedure called a biopsy: the physician eases a long, thin tube called an endoscope through the mouth and stomach into the small intestine, and then takes a sample of tissue using instruments passed through the endoscope. Biopsy of the small intestine is the best way to diagnose celiac disease.

Screening

Screening for celiac disease involves testing asymptomatic people for the antibodies to gluten. Americans are not routinely screened for celiac disease. However, because celiac disease is hereditary, family members – particularly first degree relatives – of people who have been diagnosed may need to be tested for the disease. About 10 percent of an affected person's first degree relatives (parents, siblings, or children) will also have the disease. The longer a person goes undiagnosed and untreated, the greater the chance of developing malnutrition and other complications.

Treatment

Gluten free diet. For more information on this diet please see a dietician and/or refer to our [Gluten-free diet](#).