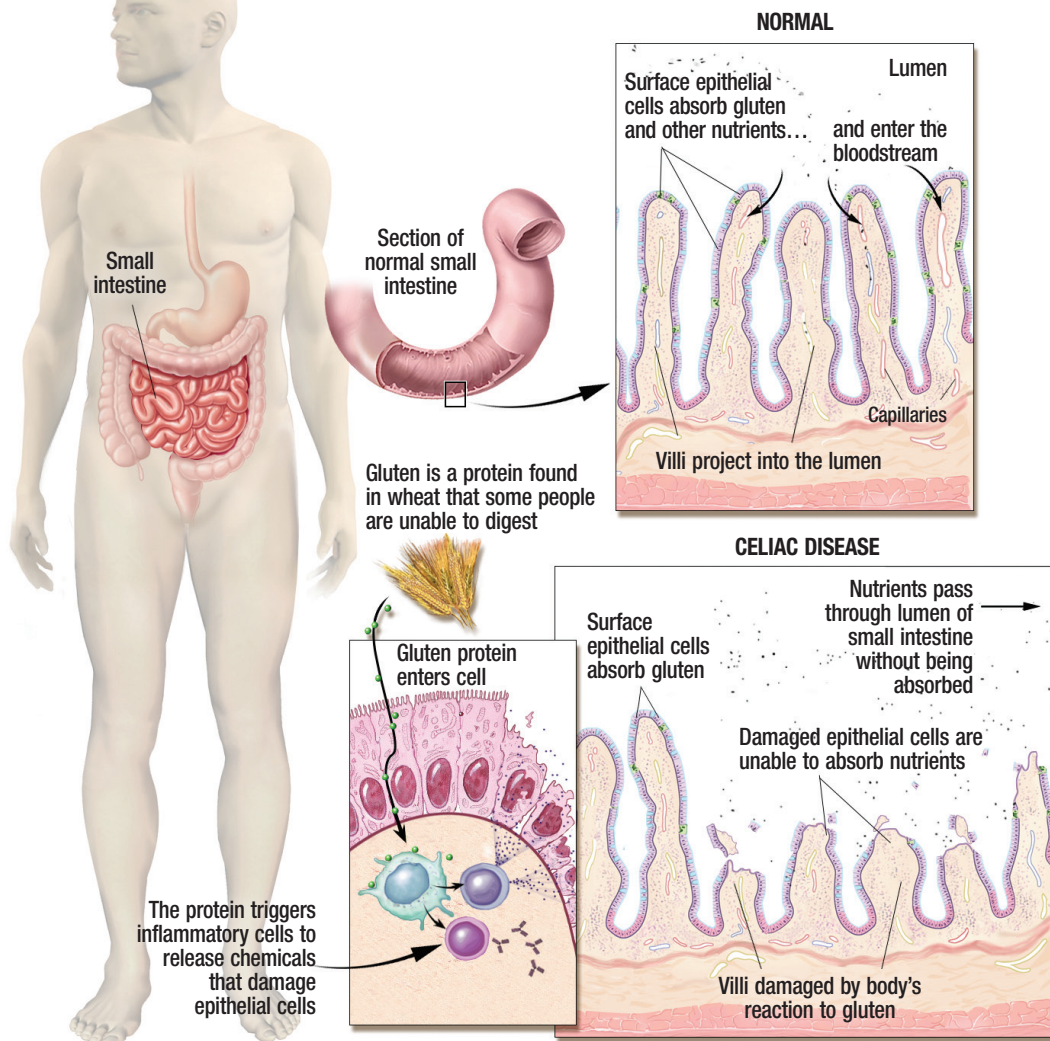


# Celiac Disease



## Intolerance to Gluten

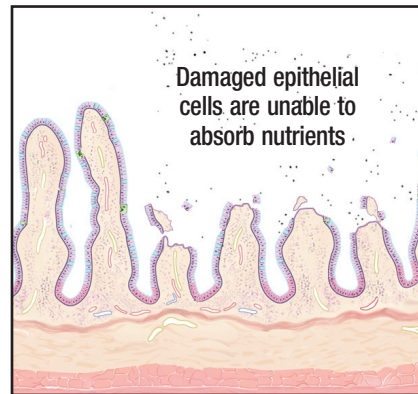
*Celiac disease is a disorder caused by an immune reaction when gluten, a grain found in many foods and beverages, is consumed. The specific result of the body's immune response to gluten is damage to the tiny villi that line the small intestine. Villi allow the absorption of important nutrients in food as it travels through the gastrointestinal (GI) system. When food is not absorbed properly, symptoms such as diarrhea, cramping, and bloating can occur. If left untreated, celiac disease, can lead to chronically poor absorption of many important vitamins, minerals, and other nutrients that can result in anemia, osteoporosis, dental problems, and neuropathies (pain and tingling in the legs, feet, arms, and hands). Celiac disease in childhood is a special problem because it can also lead to stunted growth and development.*

*Gluten is a protein found in wheat, including semolina and durum, as well as in related grains such as rye, barley, and triticale. These grains are present in many foods and beverages and must be avoided in people with celiac disease to prevent the immune reaction that causes intestinal damage. Once all gluten-containing products are avoided, the damaged villi in the small intestine begin to heal. Over a period of months to a few years, the villi are able to properly absorb nutrients again. With a gluten-free diet, GI symptoms in a patient with celiac disease are often relieved quickly, although the disease is not cured, and gluten must be avoided throughout the patient's lifetime.*

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## Patients With Celiac Disease Must Avoid Gluten

Celiac disease, also known as *gluten intolerance*, *gluten-sensitive enteropathy*, or *celiac sprue*, can occur anytime during childhood or adulthood. It is more common in Caucasians of European ancestry and in people with a family history of celiac disease. Patients with type 1 diabetes, Down syndrome, or autoimmune diseases such as lupus, Sjögren's syndrome, rheumatoid arthritis, or autoimmune thyroid disease have an increased risk of celiac disease.



*An immune reaction to ingested gluten damages the small intestine.*

### Nonspecific Symptoms Complicate Diagnosis

Many people with celiac disease are not aware of the cause of their symptoms because symptoms are not very specific and can be caused by many conditions. A wide variety of symptoms can accompany celiac disease, including diarrhea, constipation, abdominal cramping, bloating and gas, foul-smelling or floating stools, weight loss, fatigue, and a change in appetite. Some patients with celiac disease may have problems digesting dairy products (lactose intolerance). Celiac disease can also be accompanied by an itching skin rash, with or without gastrointestinal (GI) symptoms, known as *dermatitis herpetiformis*.

As a result of the general nature of these symptoms, it may take a significant period of time before the proper diagnosis is made. Ultimately, the diagnosis of celiac disease is often a result of ruling out other causes of GI symptoms, combined with information from the patient on the history of symptoms and family history of celiac disease. Blood tests can be used to measure antibodies the body forms to attack gluten proteins. Additional tests include the examination of a biopsied tissue from the small intestine or examination of the small intestinal lining with a tiny camera that is swallowed.

### A Gluten-Free Diet Relieves Symptoms

Although celiac disease does not have a cure, it can be well managed by diet. Treatment for celiac disease is complete avoidance of gluten-containing foods. If strictly followed, a gluten-free diet results in the elimination of symptoms and the eventual healing of the small intestinal wall lining. A dietician is often the health care professional who supplies the patient with a comprehensive list of foods, beverages, nutritional products, and drugs that contain gluten, along with a list of gluten-free products. This list should also include gluten-free toothpastes, mouthwashes, and lipsticks, which can possibly enter the digestive tract.

Complications from celiac disease that is not well managed can be serious. The chronic immune response and small intestinal wall damage can lead to complications such as malnutrition, lactose intolerance, intestinal cancer, liver disease, anemia, low blood sugar, miscarriage, nerve damage, and weakened bones and teeth.

As more people are discovering that their GI symptoms are a result of celiac disease, more gluten-free products are becoming available and are clearly labeled as "gluten free" on their packaging. Recently, grocery stores have established gluten-free sections and restaurants are labeling menu items as "gluten free." These conveniences are making it easier for people with celiac disease to eat a wider variety of foods.

If you think you might have celiac disease, see your doctor. Do not begin a gluten-free diet prior to evaluation, because avoiding gluten can affect the diagnostic tests for celiac disease. Your pharmacist can tell you which drugs, OTC medications, or nutritional supplements contain gluten and should be avoided.