

Celiac Disease (CD) is an autoimmune disorder that causes inflammation and damage to the small intestine when gluten (a protein found in wheat, rye, and barley) is ingested. For individuals without Celiac Disease or gluten intolerance, gluten is safe to eat and can be a part of a well-balanced diet. However, gluten should be avoided if one has Celiac Disease or gluten intolerance.



## WHAT IS HAPPENING IN YOUR BODY WITH CD?

When individuals with Celiac Disease eat gluten, the body's immune response attacks the small intestine and causes inflammation. This inflammation damages the villi, small finger-like projections in the small intestine that aid in the absorption of nutrients. When the villi are damaged they flatten and are unable to properly absorb nutrients that are essential for normal body functions and growth. This can lead to deficiencies in some vitamins and serious health issues.

## TREATING CELIAC DISEASE: A GLUTEN-FREE DIET

Strict adherence to a gluten-free (GF) diet is the only treatment for Celiac Disease. A GF diet eliminates all dietary wheat, rye, and barley. Care must be taken as there may be gluten or gluten cross-contamination in certain foods. Following a GF diet will allow the small intestine to heal which will lead to improved nutrient absorption. A well-balanced GF diet will typically meet daily nutritional needs if the intestine is healthy; however, supplementation of some nutrients may be necessary for some individuals.

## GLUTEN CROSS-CONTAMINATION

Read nutrient labels carefully. Some products may come into contact with gluten during processing or may have gluten foods mixed in with the other ingredients, such as wheat flour. Some medications, dental products, or beauty products may also contain gluten. Cross-contamination may occur with toasters, bulk bins, condiment jars, buffet lines, and deep-fried foods.

## CAUSES OF CELIAC DISEASE

CD may be caused by a combination of these four factors: genetics, exposure to gluten, environmental "triggers", and/or an autoimmune response.

## GLUTEN INTOLERANCES

Individuals with symptoms such as nausea, abdominal cramps, or diarrhea after eating gluten may have gluten intolerance and should be tested for Celiac Disease.

## SIGNS AND SYMPTOMS

Nausea, diarrhea, excessive weight loss (or being underweight), and/or symptoms associated with vitamin or mineral deficiencies (anemia, osteomalacia, vitamin K deficiency, lactose intolerance, delayed growth, delayed puberty, and others).

### RESOURCES

*National Foundation for Celiac Awareness*  
celiacawareness.org

*Celiac Disease and Gluten-free Support Center*  
celiac.com

*Gluten-free Restaurant Awareness Program*  
gffs.org

*Academy of Nutrition and Dietetics*  
eatright.org

*Gluten Intolerance Group*  
gluten.net

*National Celiac Association*  
nationalceliac.org

*Beyond Celiac*  
beyondceliac.org

*Gluten-Free Diet: A Comprehensive Resource Guide*  
Shelley Case

*Real Life with Celiac Disease: Troubleshooting and Thriving Gluten-Free*  
Melinda Dennis & Daniel Leffler

*Celiac Disease for Dummies*  
Ian Blumer & Sheila Crowe

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SOURCES: Krause's Food and the Nutrition Care Process, Edition 13 / celiac.org