

What I need to know about Celiac Disease



U.S. Department
of Health and
Human Services

NATIONAL INSTITUTES OF HEALTH

NIDDK NATIONAL INSTITUTE OF
DIABETES AND DIGESTIVE
AND KIDNEY DISEASES

National Digestive Diseases
Information Clearinghouse

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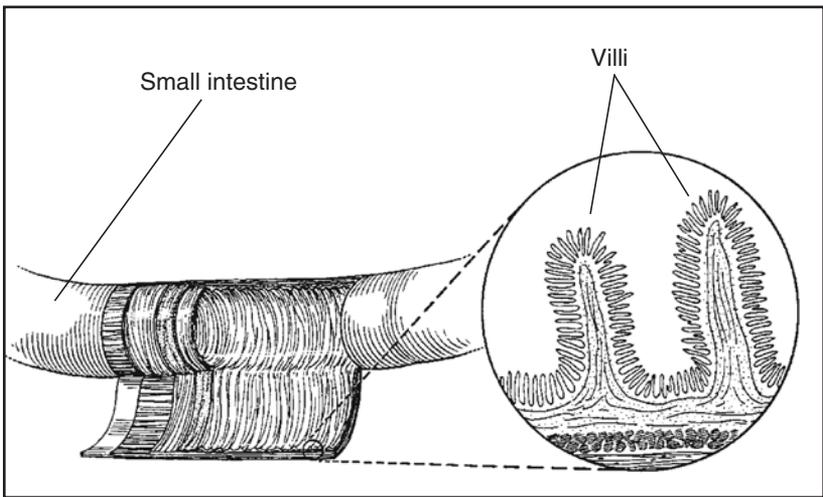
What is celiac disease?

Celiac disease* is an immune disease in which people can't eat **gluten** because it will damage their small **intestine**. Gluten is a protein found in wheat, rye, and barley. Gluten may also be used in products such as vitamin and nutrient supplements, lip balms, and some medicines. Other names for celiac disease are celiac sprue and gluten intolerance.

Your body's natural defense system, called the immune system, keeps you healthy by fighting against things that can make you sick, such as bacteria and viruses. When people with celiac disease eat gluten, their body's immune system reacts to the gluten by attacking the lining of the small intestine. The immune system's reaction to gluten damages small, fingerlike growths called villi. When the villi are damaged, the body cannot get the nutrients it needs.

*See page 10 for tips on how to say the words in **bold** type.

Celiac disease is hereditary, meaning it runs in families. Adults and children can have celiac disease. As many as 2 million Americans may have celiac disease, but most don't know it.



Villi on the lining of the small intestine help absorb nutrients.

Is celiac disease serious?

Yes. Celiac disease can be very serious. It often causes long-lasting digestive problems and keeps your body from getting all the nutrition it needs. Over time, celiac disease can cause anemia, infertility, weak and brittle bones, an itchy skin rash, and other health problems.

What are the symptoms of celiac disease?

Symptoms of celiac disease include

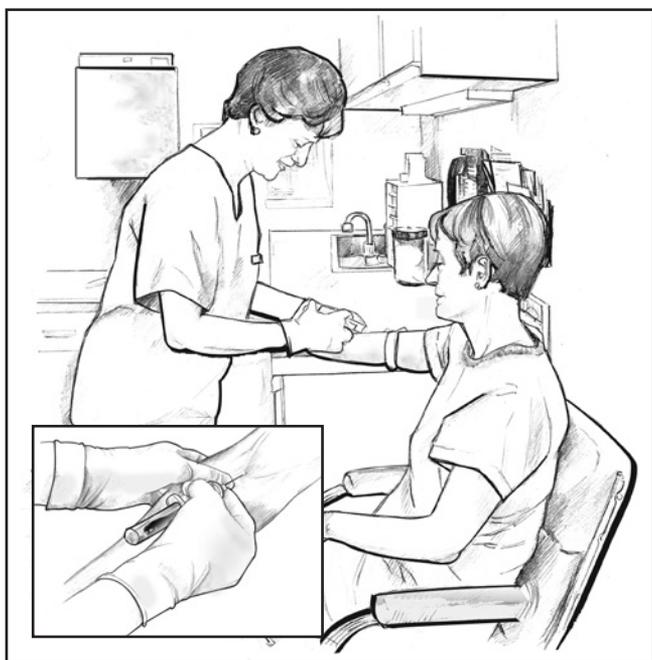
- stomach pain
- gas
- diarrhea
- extreme tiredness
- change in mood
- weight loss
- an itchy, blistering skin rash
- slowed growth

Some people with celiac disease may not feel sick or have symptoms. Or if they feel sick, they don't know celiac disease is the cause. Most people with celiac disease have one or more symptoms. Not all people with celiac disease have digestive problems. Having one or more of these symptoms does not always mean a person has celiac disease because other disorders can cause these symptoms.

How is celiac disease diagnosed?

Celiac disease can be hard to diagnose because some of its symptoms are like the symptoms of other diseases. People with celiac disease may go undiagnosed and untreated for many years. If your doctor thinks you have celiac disease, you will need a blood test. You must be on your regular diet before the test. If not, the results could be wrong.

If your blood test results show you might have celiac disease, your doctor will perform a **biopsy**, which involves taking a tiny piece of tissue from your small intestine. A biopsy may be performed at a hospital or outpatient center.



Your doctor will provide you instructions about how to prepare for a biopsy. Generally, no eating or drinking is allowed 8 hours before a biopsy. Smoking and chewing gum are also prohibited during this time. Tell your doctor about any health conditions you may have, especially heart and lung problems, diabetes, and allergies. Also tell your doctor about any medicines you take. You may be asked to stop taking them for a short time before and after the test.

To perform the biopsy, the doctor inserts a long, narrow tube into your mouth, down through your stomach, and into your small intestine. At the end of the tube are small tools that the doctor uses to snip out a bit of tissue. The tissue will then be viewed with a microscope to look for signs of celiac disease damage. You will take medicine before the biopsy that makes you sleepy and keeps you from feeling any pain. Many people sleep through the procedure.

How is celiac disease treated?

The only treatment for celiac disease is a gluten-free diet. If you avoid gluten, your small intestine will heal. If you eat gluten or use items that contain gluten, celiac disease will continue to harm your small intestine.

Have regular checkups so your doctor can diagnose and treat problems from celiac disease. Celiac disease can cause problems, such as weak or brittle bones, even if you are on a gluten-free diet.

Eating, Diet, and Nutrition

A **dietitian** can help you select gluten-free foods. A dietitian is an expert in food and healthy eating. You will learn how to check labels of foods and other items for gluten.

The following chart lists examples of foods you can eat and foods you should stay away from if you have celiac disease. This list is not complete. A dietitian can help you learn what other foods you can and can't eat on a gluten-free diet.



Foods You Can Eat	
Amaranth	Potatoes
Arrowroot	Quinoa
Buckwheat	Rice
Cassava	Sago
Corn	Seeds
Flax	Soy
Indian rice grass	Sorghum
Job's tears	Tapioca
Legumes	Wild Rice
Millet	Yucca
Nuts	
Foods that Contain Gluten	
Wheat	Barley
• Including einkorn, emmer, spelt, kamut	Rye
• Wheat starch, wheat bran, wheat germ, cracked wheat, hydrolyzed wheat protein	Triticale (a cross between wheat and rye)
Other Wheat Products that Contain Gluten	
Bromated flour	Phosphated flour
Durum flour	Plain flour
Enriched flour	Self-rising flour
Farina	Semolina
Graham flour	White flour
Processed Foods that May Contain Wheat, Barley, or Rye*	
Bouillon cubes	Imitation fish
Brown rice syrup	Matzo
Chips/potato chips	Rice mixes
Candy	Sauces
Cold cuts, hot dogs, salami, sausage	Seasoned tortilla chips
Communion wafer	Self-basting turkey
French fries	Soups
Gravy	Soy sauce
	Vegetables in sauce
*Most of these foods can be found gluten-free. When in doubt, check with the food manufacturer.	

Source: Thompson T. *Celiac Disease Nutrition Guide*, 2nd ed. Chicago: American Dietetic Association; 2006. © American Dietetic Association. Adapted with permission. For a complete copy of the *Celiac Disease Nutrition Guide*, please visit www.eatright.org.

Points to Remember

- Celiac disease is an immune disease in which people can't eat gluten or use items with gluten in them.
- Celiac disease harms the small intestine.
- People with untreated celiac disease can't get needed nutrients.
- Without treatment, people with celiac disease can develop other health problems.
- Celiac disease is diagnosed by blood tests and a biopsy of the small intestine.
- The only treatment for celiac disease is to avoid gluten.
- A dietitian can help people choose the right foods.

Hope through Research

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) conducts and supports research on celiac disease. Researchers are studying new options for diagnosing celiac disease, including capsule endoscopy, which involves patients swallowing a capsule containing a tiny video camera that records images of the small intestine.

Several drug treatments for celiac disease are being studied. Researchers are also studying a combination of enzymes—proteins that aid chemical reactions in the body—that might change gluten in ways that prevent it from causing an immune reaction before it enters the small intestine.

Scientists are also developing educational materials for standardized medical training to raise awareness among health care providers. The hope is that increased understanding and awareness will lead to earlier diagnosis and treatment of celiac disease.

Participants in clinical trials can play a more active role in their own health care, gain access to new research treatments before they are widely available, and help others by contributing to medical research. For information about current studies, visit www.ClinicalTrials.gov.

Pronunciation Guide

biopsy (BY-op-see)

celiac disease (SEE-lee-ak) (dih-ZEEZ)

dietitian (dy-uh-TISH-uhn)

gluten (GLOO-tuhn)

intestine (in-TESS-tin)

For More Information

Celiac Disease Awareness Campaign

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The Celiac Disease Awareness Campaign

The National Institutes of Health Celiac Disease Awareness Campaign provides current, comprehensive, science-based information about the symptoms, diagnosis, and treatment of celiac disease, also known as celiac sprue, nontropical sprue, and gluten-sensitive enteropathy. The Awareness Campaign is an initiative of the National Digestive Diseases Information Clearinghouse, a service of the National Institute of Diabetes and Digestive and Kidney Diseases.

Download this publication and learn more about the Awareness Campaign at www.celiac.nih.gov.



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The National Digestive Diseases Information Clearinghouse (NDDIC) is a service of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). The NIDDK is part of the National Institutes of Health of the U.S. Department of Health and Human Services. Established in 1980, the Clearinghouse provides information about digestive diseases to people with digestive disorders and to their families, health care professionals, and the public. The NDDIC answers inquiries, develops and distributes publications, and works closely with professional and patient organizations and Government agencies to coordinate resources about digestive diseases.

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This publication is available at www.digestive.niddk.nih.gov.

This publication may contain information about medications. When prepared, this publication included the most current information available. For updates or for questions about any medications, contact the U.S. Food and Drug Administration toll-free at 1-888-INFO-FDA (1-888-463-6332) or visit www.fda.gov. Consult your health care provider for more information.



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