

## Celiac Disease and the Gluten-Free Diet

### What is celiac disease?

Celiac disease is a chronic digestive problem that affects the lining of the small intestine and blocks absorption of nutrients from food. If this disease is not diagnosed and treated, it can lead to malnutrition and other serious problems.

### How does it occur?

Celiac disease is thought to be a hereditary, autoimmune disorder. If you have celiac disease, your body has a reaction to a protein called gluten, which is found in wheat, barley, and rye grains. When you eat gluten, your immune system responds by attacking the part of the small intestine that is responsible for absorbing nutrients. Your body might also react to another type of protein found in oats.

### What are the symptoms?

The symptoms can vary greatly from one person to the next, ranging from digestive problems such as diarrhea and cramping to a skin rash or an irritable mood. Common symptoms may include the following:

- diarrhea that does not go away
- crampy abdominal pain
- bloating
- gas
- foul-smelling bowel movements
- weight loss
- poor growth in children
- tiredness
- behavior changes and irritability
- tooth discoloration and enamel loss
- numbness or tingling in the legs.

Some people have no symptoms.

### How is it diagnosed?

Once considered rare, celiac disease is now being diagnosed much more often since we have better diagnostic tools such as Endoscopy and blood tests. The gold standard of diagnosis is an upper GI endoscopy or EGD. It is now estimated to occur in 1 of 133 Americans. It used to be hard to diagnose because many of the symptoms are like the symptoms of other conditions such as irritable bowel syndrome, chronic fatigue, or intestinal infections. Recently it was found that people with celiac disease have a higher level of certain antibodies in their blood. This means a simple blood test for these antibodies can now help with the diagnosis. Before having this test, you will be asked to eat your usual diet and continue to eat foods that contain gluten, such as bread. If you avoid foods containing gluten before the test, it may come up negative even if you have the disease.



If your blood test is positive for the antibodies and you have symptoms, you may need a biopsy of your small intestine. A biopsy is the removal of a tiny piece of the intestine. The sample of intestine is examined for signs of celiac disease.

## How is it treated?

The only treatment for celiac disease is a gluten-free diet. For most people, following the diet relieves the symptoms in a few weeks. The gluten-free diet allows the intestine to heal and prevents any further damage. Typically, in children and young adults, the bowel may be completely healed 3 to 6 months after you start the diet. In older adults, the healing may take up to a few years.

In some cases you may keep having symptoms even though you are eating a gluten-free diet. This may be caused by having a small amount of gluten still in your diet, or the intestine may have been too damaged before you started the diet. This is called unresponsive celiac disease.

In yet other cases, inflammatory bowel diseases such as Crohn's disease may be the culprit. That is why Dr. Simoni may also perform a colonoscopy, and possibly a wireless capsule endoscopy if necessary.

## What is a gluten-free diet?

A gluten-free diet is one that contains no wheat (including spelt, triticale, and Kamut), barley, or rye. It also does not include products that use additives containing gluten, such as some vitamins, medicines, and stamp or envelope adhesives. Because the American diet is based on grains and many processed foods contain grain-based additives, this diet can be hard to follow. You may need to talk to a dietitian who knows about gluten-free diets and treating celiac disease. You will need to have follow-up visits with the dietitian to check your diet and get help in staying up-to-date on gluten-free food products.

At first, gluten-free diet recommendations can be overwhelming. Keep it simple until you have had a chance to meet with your dietitian. Fresh fruits, vegetables, milk, and unprocessed protein foods such as fresh beef, pork, poultry, fish, and eggs do not contain gluten. Natural nuts, seeds, and vegetable oils (without additives) can also be included safely. Add in foods from the allowed starches and grains listed below for a balanced diet.

## What foods are included in a gluten-free diet?

The list of choices for gluten-free foods is growing. Below are some acceptable foods as well as foods you need to avoid. The lists are not complete. Consult your dietitian and recommended Web sites for more detailed information.

Allowed starches and grains:

- breads and other baked goods made with potato, rice, bean, buckwheat, soy, tapioca, arrowroot, quinoa, millet, and flax flours
- rice
- rice noodles and pasta made with allowed ingredients
- beans
- cornmeal
- potatoes, sweet potatoes, and yams



- corn and peas (avoid creamed varieties unless made with acceptable ingredients)
- gluten-free bread and pasta products
- hot cereals made from white or brown rice, hominy, hominy grits, groats, soy, or millet
- cold cereals such as puffed rice and corn.

Allowed fruits and vegetables:

- all fresh, canned, and frozen fruit or fruit juices
- fresh vegetables
- canned and frozen vegetables made with allowed ingredients.

Allowed milk products:

- milk
- aged cheese
- all other milk products produced without gluten additives.

Allowed meats, poultry, fish, eggs, dried beans, nuts and seeds:

- all unprocessed foods in this category
- peanut butter.

Allowed fats, sweets, and drinks:

- butter and vegetable oils
- salad dressings and sauces made with allowed ingredients
- sugar
- honey
- marshmallows
- plain chocolate
- coconut
- jelly or jam
- pure instant or ground coffee
- carbonated sodas.

## What foods are avoided in a gluten-free diet?

Listed below are some foods you need to avoid. The lists are not complete. Consult your dietitian and recommended Web sites for more detailed information.

Starches and grains to avoid:

- wheat
- rye
- barley
- bulgur
- spelt



- triticale
- Kamut
- semolina
- all breads, baked goods, crackers, noodles, pastas, and cereals made with the above grains
- cereals containing malt extract or malt flavoring
- canned baked beans.

Dr. Simoni may also advise avoiding oats. Commercial oats are often harvested and processed with wheat or barley, making it likely that bits of wheat or barley will be in the oats. Also, small studies have shown that some people with celiac disease react to the protein in oats. Some national celiac agencies approve of the addition of pure oats to the gluten-free diet, while others advise adding oats only for healthy adults with no sign of bowel inflammation. Other experts still recommend that until more research is done, the only safe amount of oats is no oats at all. Some healthcare providers allow the addition of oats to the diet with careful follow-up tests to check your tolerance.

Fruits and vegetables to avoid:

- some pie fillings and dried fruits
- creamed vegetables
- breaded vegetables.

Milk products to avoid:

- some flavored milks and yogurts (including frozen)
- malted milk.

Meats, poultry, fish, eggs, dried beans, nuts and seeds to avoid:

- some egg substitutes
- some premarinated meats, poultry, and fish
- cold cuts made with gluten stabilizers, wheat, barley, rye, oat fillers, and self basting turkey.

Fats, sweets and drinks to avoid:

- commercially prepared condiments, soups, salad dressings, and sauces
- flavored instant coffees, herbal teas, and hot cocoa mixes
- nondairy creamers
- beer and malted beverages
- sauces, gravies, and products made with hydrolyzed vegetable or plant protein (HVP or HPP) made from wheat protein.

## What should I look for on food labels?

There are many hidden sources of gluten, so learning to read labels is a must. Ingredients that carry possible risk include:



- unidentified starch
- modified food starch
- hydrolyzed vegetable or plant proteins ("HVP" or "HPP")
- texturized vegetable protein ("TVP")
- binders, fillers, and extenders.

If you have any question about the ingredients of a food, you should avoid the product or contact the food manufacturer for more information. Many companies, such as Campbell Soup and Frito-Lay, will send you a list of their gluten-free products.

### What about medicines and supplements?

Some medicines and supplements contain gluten additives. It is important to ask your pharmacist or call the manufacturer to find out about the specific ingredients in your medicine. The risk for vitamin deficiency, especially B vitamins, is greater in people with active celiac disease, so you may need vitamin supplements while you are having symptoms. In this case a prescription for a gluten-free vitamin and mineral supplement is important. Usually you are able to stop the vitamins when your symptoms go away on the gluten-free diet.

### Can I still eat at restaurants?

People following a gluten-free diet must be very careful when eating at a restaurant or deli.

- Order simple dishes without sauces.
- When in doubt, ask your restaurant server about the ingredients.
- Have the server inquire about food preparation areas (Are grain products prepared with the same equipment or utensils that are used to prepare other foods?)
- Ask if the restaurant has a gluten-free menu.

### How long will the effects last?

You must follow the gluten-free diet all your life. If you keep eating foods that contain gluten, the condition can become life threatening.

Keep your checkup appointments on the schedule recommended by Dr. Simoni. See Dr. Simoni sooner, if you are having symptoms again.

### How can I get more information?

For more information about the gluten-free diet and available gluten-free products, see

- The Celiac Sprue Association/USA, Inc.: <http://www.csaceliacs.org> ▶▶
- The Celiac Disease Foundation: <http://www.celiac.org> ▶▶
- Gluten-Free Diet: A comprehensive Resource Guide: <http://www.glutenfreediet.ca> ▶▶
- Kinnikinnick Foods: <http://www.kinnikinnick.com> ▶▶ or <http://www.goglutenfree.com> ▶▶.