



Questions & Answers About **Gluten-free Diets**

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You may have noticed an increased number of gluten-free products at your grocery store. Gluten-free products have reached billions of dollars in sales. However, consumers still may be unsure of what gluten is and reasons for gluten-free diets.

What is gluten?

Gluten is a protein found in wheat, barley and rye. Gluten is formed during the kneading process in breadmaking. Gluten acts somewhat like elastic and provides a framework for bread.

What does gluten do?

Gluten has properties that lend well to baking. Dough becomes elastic and stretchy as the gluten network is developed during the kneading process. The protein network formed from gluten allows bread to rise by trapping air bubbles and helps dough maintain its shape during baking. Gluten provides bread with its chewy texture.

Is gluten bad for me?

Gluten is not harmful to the average person, so gluten-free diets are not recommended for the general public. However, those with celiac disease or gluten intolerance may experience harmful or unpleasant effects from gluten consumption.

Who needs to follow a gluten-free diet?

Those who have been diagnosed with celiac disease must follow a gluten-free diet. About one in 133 people in the U.S. has celiac disease, according to the Celiac Foundation. Those with gluten intolerance (non-celiac gluten sensitivity) experience less severe symptoms. They may experience nausea, headaches, gas, bloating and/or abdominal pain. Visit with your health-care provider about your symptoms for an accurate diagnosis.

Are celiac disease, gluten intolerance and wheat allergy the same conditions?

These conditions are different from each other. Celiac disease is an autoimmune disease in which the intestinal wall is damaged by the consumption of gluten. For individuals with celiac disease, consuming even a small amount of gluten can cause damage to the intestines and digestive symptoms such as nausea, diarrhea, gas, bloating, abdominal pain and/or fatigue. About one in 10 celiac patients also experiences an itchy rash called dermatitis herpetiformis.

For individuals with gluten intolerance, the body cannot digest the gluten. Digestive symptoms such as diarrhea, abdominal pain, bloating and gas are common in gluten intolerance. Sometimes, gluten intolerance is mistaken for a wheat allergy.

Wheat allergies, on the other hand, can be life-threatening. In the case of allergic individuals, eating wheat can trigger an immune response when wheat is consumed. The body recognizes the substance as a foreign invader and begins fighting it in an aggressive manner. Those who suffer from wheat allergies may experience hives, itching, swelling of skin, lips and throat, and/or difficulty breathing. Other symptoms may include nausea, vomiting, diarrhea and abdominal pain. Food products that contain wheat must be labeled “Contains wheat” near the ingredient statement to signal those with wheat allergies.

How is celiac disease diagnosed?

If you are experiencing symptoms, see your health-care provider. Celiac disease is diagnosed by a blood test and, potentially, a biopsy of the intestinal wall.

How do I know if a food product is gluten-free?

Celiac patients know they should avoid wheat pasta and rye bread, but sometimes gluten can be somewhat “hidden” in foods, cosmetics, medications and other items.

Here are some products that **may** contain gluten:

- Cosmetics (lipstick, lip balm)
- Herbal or nutritional supplements
- Medications
- Playdough
- Personal care items (toothpaste, mouthwash)
- Condiments
- Sauces and gravies (soy sauce, etc.)
- Candy and candy bars
- Communion wafers
- Processed meat products (meat substitutes)
- Soup bases
- Beer, ales, lager, malt beverages, malt vinegars

Read food and product labels carefully and do your research to find out which foods contain gluten. You may need to contact the manufacturer.

What can I eat if I need to follow a gluten-free diet?

At first, following a gluten-free diet may seem overwhelming. You also may notice that gluten-free products in the grocery store are more expensive than conventional foods. However, eating gluten-free does not need to be difficult or expensive because many foods are naturally gluten-free.

Choose more “whole foods” and fewer processed foods. Vegetables, fruits, meats, fish, seafood, nuts, beans (pinto, kidney, etc.), poultry, eggs, rice, dairy and many other foods are naturally gluten-free. Those on a gluten-free diet should take care with added sauces or seasonings, which may contain gluten. Check the ingredient list and package statements to ensure that your meal is gluten-free.

If you or someone you know follows a gluten-free diet, a registered dietitian or doctor can help you know what to look for on a label. The Food and Drug Administration (FDA) developed standards for voluntary labeling of products as “gluten free.” This uniform definition helps consumers with celiac disease choose gluten-free foods with greater confidence.

More information:

Celiac Disease Foundation: <https://celiac.org/>

Food and Drug Administration: www.fda.gov
(search for gluten and food labeling)

MedlinePlus: <https://medlineplus.gov/celiacdisease.html>

Visit www.ag.ndsu.edu/food for more information.

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