

Gluten-Free: Is It for Me?

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What is gluten?

Gluten is a protein found in wheat, barley, and rye. Known for giving baked goods their fluffiness, gluten is frequently found in cereals, breads, pastas, and other bakery items. Gluten can also be found in other foods, such as salad dressings, canned foods, sauces, seasonings, and soups. Malted alcoholic beverages such as beer, porter, stout, and pilsner also contain gluten, due to the barley content. Oats do not contain gluten naturally; however, oats are commonly milled and processed in the same facility as wheat. This contamination is harmless for most people but is dangerous to individuals experiencing gluten sensitivity. There are many causes for experiencing symptoms after eating gluten-containing foods. Three of them are celiac disease, non-celiac gluten sensitivity (NCGS), and a wheat allergy.

Celiac disease

Celiac disease is a genetic autoimmune disorder that causes a negative reaction to gluten in the gastrointestinal tract. Only 1 percent of the population has been diagnosed with celiac disease. Women are thought to be 2.5 to 3 times more likely than men to have celiac disease. Currently, the only proven treatment for those with celiac disease is to maintain a gluten-free diet.

Those with celiac disease are unable to digest gluten. The gluten destroys some of the gastrointestinal lining as it passes through the digestive tract. The greatest amount of nutrient

absorption occurs in the intestine and is drastically hindered without a healthy lining.

Those with celiac disease exhibit a wide array of symptoms. Symptoms can include diarrhea, bloating, fatigue, malnutrition, cramping, vomiting, and constipation, among others. The longer someone is left undiagnosed, the more problems may develop, largely due to nutrient malabsorption. Because gluten interferes with nutrient absorption, people with celiac disease experience deficiencies in vital nutrients, leading to more serious health conditions. Such health conditions can include anemia, reduced bone mineral density, and infertility.

Gluten intolerance and wheat allergy

In contrast to celiac disease, NCGS, which is also referred to as gluten intolerance, is not an autoimmune disorder. NCGS results in similar symptoms to celiac disease when someone with the sensitivity eats gluten. The immune response to gluten in those with celiac disease results in inflammation and damage to the digestive tract, which has long-term health consequences. Individuals with gluten intolerance may experience abdominal pain, bloating, diarrhea or constipation, fatigue, headache, joint pain, nausea, and vomiting for hours or days after eating gluten. They may be encouraged to remove all gluten from their diet, following a similar eating pattern as someone diagnosed with celiac disease.

Celiac disease and NCGS are different from a wheat allergy. A wheat allergy is an immune response to proteins found in wheat. Gluten is found in all wheat products, but wheat is not found in all gluten-containing products. While a gluten-free diet is generally safe for wheat allergies, it may be limiting. Many different grains contain gluten, while a wheat allergy is specific to the proteins in wheat. Work with your healthcare provider to determine an accurate diagnosis.

Who should be on a gluten-free diet?

A gluten-free diet is a medically prescribed treatment for those with celiac disease. Those who have celiac disease cannot tolerate even the smallest amounts of gluten. Individuals experiencing symptoms related to their eating patterns should work with a health-care provider and registered dietitian, if available. A registered dietitian can help identify ingredients specific to the symptoms and work with you to ensure you are receiving adequate nutrition when removing an ingredient from your diet. With the right adjustments to a gluten-free diet plan, the damage caused by gluten can be repaired, healing the intestines and replenishing depleted nutrient stores. In turn, the individual will experience relief from symptoms and reverse the consequences of malabsorption. The sooner a person with celiac disease can get started on a gluten-free diet plan, the better the outcome.

In mainstream culture, the gluten-free diet has been added to the list of current fad diets. Many people are under the impression that gluten is a bad thing. For those without celiac disease, there is no known negative consequence of eating gluten. Some people mistakenly believe that following a gluten-free diet is a good way to lose weight. For those without gluten sensitivity, following a gluten-free diet can lead to an imbalanced intake of nutrients. To mimic the taste and flavor of their gluten-containing counterparts, gluten-free foods frequently contain more fat and added sugar. In addition, a gluten-free diet is often low in carbohydrates, fiber, iron, folate, niacin, thiamine, riboflavin, calcium, vitamin B₁₂, phosphorus, and zinc, all of which are commonly added into processed foods. If you are interested in weight loss, consider prioritizing a balanced diet of whole grains, fruits, vegetables, lean protein, and low-fat dairy. Find an activity that you enjoy, like biking, walking, or swimming, to encourage consistent and enjoyable movement.

For those with celiac disease and non-celiac gluten sensitivity, it is necessary to choose naturally gluten-free foods or those that have been processed to be gluten-free. The list of food and ingredients that *might* contain gluten in this publication includes some foods that often contain gluten or items you might find on an ingredient list that indicate gluten. These foods may need to be avoided. Always check ingredients lists on food labels.

Foods and Ingredients That Might Contain Gluten

Always read ingredients lists of packaged food items to identify any gluten-containing ingredients.

Many foods listed below are available in gluten-free varieties.

Ale	Couscous	Imitation seafood	Rice mixes
Atta	Dextrin	Kamut	Roux
Autolyzed yeast	Dinkel	Lager	Rye
Baked beans	Dry-roasted nuts	Licorice	Salad dressings
Barley	Durum	Malt	Sauces
(pearl, flakes, flour)	Einkorn	Malt extract, malt syrup, or malt flavoring	Seasonings
Beer	Emmer	Malted milk	Seitan
Blue cheese crumbles	Farina	Maltodextrin	Self-basting poultry
Breading	Faro/Farro	Marinades	Semolina
Brewer's yeast	Flavoring	Matzo/Matzoh	Soups or soup bases
Broth or bouillon	French fries	Meat loaf	Soy sauce
Brown rice syrup	Fu	Modified food starch	Spelt
Bouillon cubes	Gelatinized starch	Monoglycerides	Stuffing
Bulgur	Gluten or gluten flour	and diglycerides	Thickeners
Candy	Graham flour	Nuts	Triticale
Cereal binding	Gravy	Oats	Vegetarian
Chapati	Herbal teas	Orzo	meat alternatives
Chocolate bars	Hydrolyzed vegetable/ plant protein	Processed meat	Wheat
or chocolates	Ice cream	(deli meat, hot dogs, salami, sausage)	Wheat bran
Coloring	Icing/frosting	Puddings	Wheat flour
(artificial, caramel)	Imitation bacon		Wheat germ
Communion wafers			Wheat starch

Gluten-free marketplace

As the gluten-free diet has become more common, the availability and quality of gluten-free products has increased. However, in many cases, this has also led to higher purchasing prices. Food manufacturers can voluntarily label their products “gluten-free,” and in doing so, they must follow strict rules set by the Food and Drug Administration (FDA). These foods must contain less than 20 parts per million (ppm) of gluten, which is the lowest amount that can be detected in foods. Products labeled as gluten-free cannot have any gluten-containing grain ingredients or ingredients derived from these grains that were not processed to remove the gluten. This rule applies to both foods and beverages, as well as dietary supplements.

However, this regulation does not apply to meat, poultry, and some egg products that are regulated by the U.S. Department of Agriculture (USDA). The regulation also does not cover most alcoholic beverages. Packaged foods that naturally do not contain gluten, like fruits, vegetables, eggs, and bottled water, are not required to be labeled “gluten-free.”

Gluten-free breads, crackers, baked goods, pastas, and other food items may be available to replace common items in a regular

eating pattern. A gluten-free diet can be nutrient-dense with or without these gluten-free substitutes. Some examples of nutritious food options are included in the Nutrient-Dense and Naturally Gluten-Free Foods table. The foods listed are good sources of the nutrients in the left side of the table. These nutrients are often low in a gluten-free dietary pattern. The ingredients lists of packaged food items can also help in identifying foods with gluten-containing additives.

Restaurants labeling their menu items as “gluten-free” are encouraged to follow guidance based on the FDA’s definition. These establishments are monitored by state and local governments with oversight of the FDA. However, there is a greater risk of cross-contact in these environments. Even a small amount of gluten can cause a reaction in some individuals. When dining out, explain your dietary restrictions. Ensure they understand that it is an allergy rather than a personal preference. Ask to talk to the manager or chef and ask about preparation methods, ingredients, and separation of foods from gluten-containing foods.

Nutrient-Dense and Naturally Gluten-Free Foods	
These foods are gluten-free in their natural, unprocessed form and good sources of the listed nutrients, which can help to prevent common deficiencies for those with celiac disease, NCGS, or wheat allergies. Always check ingredients lists and labels of packaged food items to identify possible gluten-containing additives or cross-contact risks.	
Nutrient	Food sources
Calcium	Milk, yogurt, cheese, salmon and sardines with bones, broccoli, collard greens, almonds, calcium-fortified juice, amaranth, teff, quinoa
Iron	Meat, fish, chicken, beans, nuts, seeds, eggs, amaranth, quinoa, teff
B vitamins	Eggs, milk, meat, fish, orange juice, beans, nuts, seeds, gluten-free whole grains
Vitamin D	Vitamin D-fortified milk and yogurt, egg yolks, salmon, sardines, tuna
Fiber	Vegetables, fruits, oats, beans, amaranth, quinoa, millet, buckwheat, sorghum, teff, flax, lentils



Conclusion

The gluten-free diet is a medical treatment for those with gluten intolerance or sensitivity. For the larger population, gluten is a harmless protein found in many foods that contribute to a balanced diet. Those suspicious of a gluten sensitivity should seek the guidance of a health-care provider and a registered dietitian, if accessible in their communities.

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