

FOOD ALLERGENS Wheat Allergy

Anna M. Cason, RDN Senior Extension Associate

What is a wheat allergy?

Wheat is a cereal grain grown and used around the world. A wheat allergy is an immune response to proteins found in wheat. There are four classes of wheat proteins – albumin, globulin, gliadin, and gluten. You can develop an allergy to any of these. The immune system's defense leads to symptomatic reactions that can be mild or severe.

Wheat versus gluten

While a wheat allergy, celiac disease, and gluten intolerance are all adverse reactions to food parts, they are not the same condition. Celiac disease is an autoimmune condition. The reaction happens with exposure to gluten, a protein found in wheat, but also in other cereal grains like rye and barley. The exposure causes inflammation and damage to the small intestine. Symptoms of celiac disease typically involve the gastrointestinal tract, like diarrhea, bloating, and abdominal pain. Celiac disease is not life-threatening.

Gluten intolerance, also called non-celiac gluten sensitivity, does not involve the immune system. Symptoms may be like those of celiac disease, but can also include anxiety, brain fog, headaches, joint pain, and fatigue.

Treatment for each of these includes removing gluten from the diet. Those with celiac or a highly sensitive intolerance might need to exclude gluten in



products other than food as well. A discussion with your health-care provider can determine an accurate diagnosis.

Identifying the allergen

Wheat is the most common grain product in the United States and appears in many food products. It is one of the nine major allergy-causing foods identified by the Food and Drug Administration (FDA). This means the FDA requires food

manufacturers to highlight the ingredient on food and drink labels. This helps with identification of foods that can cause a reaction. Manufacturers can list the ingredient in two ways. They can put wheat in the ingredients list, in parentheses directly following the ingredient containing it. Or they can list it in a separate "contains" statement near the ingredients list.

It is important to note that the FDA does not require manufacturers to warn of potential contamination. For example, if the product was made in a facility that contains wheat, manufacturers can voluntarily state this. However, the law does not require it. Trace amounts of the allergen can trigger severe allergies.

Some foods and ingredients that typically contain wheat allergens are:

- Breadcrumbs
- Bulgur
- Couscous
- Durum
- Farro
- Flour
- Freekeh
- Pasta
- Semolina
- Spelt
- Triticale
- Terms with "wheat" in the name (whole wheat, wheat protein isolate, wheat grass, etc.)*

*Buckwheat is considered safe to eat as it is not related to wheat.

Other foods and non-food related items use wheat in their production process. Check packaging labels of these items to be sure:

- Alcoholic beverages
- Fried foods
- Processed meat and meat alternatives (hot dogs, sausages, turkey patties, plant-based "meat")
- Imitation crab meat

- Sauces and condiments (soy sauce, marinara)
- Marinara sauce
- Spices
- Soups
- Play dough or modeling clay
- Skin care products, makeup, hair products

*Lists adapted from https://www.foodallergy.org/livingfood-allergies/food-allergy-essentials/common-allergens/ wheat

Some alcohol-containing products use wheat in the production process. The law does not require manufacturers of alcoholic beverages to list allergens on their products. Those produced without wheat may be processed in the same facility and are at risk of cross-contamination. Contacting a manufacturer directly may provide answers.

Those with wheat allergies generally do not have reactions to other grains. In some cases, barley has caused a reaction in those with a wheat allergy.

Wheat provides fiber, vitamins, and minerals to our bodies. Many wheat alternatives are on market shelves today. When choosing a wheat alternative, look for ones made with whole grains, like oat, rice, quinoa, corn, and more. Many grain products naturally contain similar vitamins and minerals to wheat or are fortified with them.

Managing a wheat allergy

The best way to manage a food allergy is to avoid the allergen, which in this case is wheat.

Symptoms of an allergic reaction can differ from person to person. Reactions can occur immediately after eating or drinking an allergen or hours later. A previously mild reaction can be severe the next time.

Symptoms of an allergy can include:

- Skin conditions, like hives,
- Abdominal pain, nausea and vomiting, diarrhea,
- Itching or swelling of the mouth, throat, eyes,
- Shortness of breath, or even

 Anaphylaxis, which happens when your immune system releases a flood of chemicals that cause you to go into shock. Symptoms of anaphylaxis can include the previously mentioned conditions plus tightness in the throat, coughing, choking, or wheezing, or a severe drop in blood pressure. Anaphylaxis can be life-threatening and requires immediate treatment.

Minor symptoms may improve with the use of an antihistamine, but this does not make it safe to eat the food. Severe reactions, such as anaphylaxis, require medical treatment. Your health-care provider might prescribe medication for emergency treatment of your allergy. It is important to understand how and when to use the medication. Reach out to your health-care provider with any questions.

Food allergies are different from person to person and symptoms may vary. The severity of a reaction can change over time. The only way to prevent a reaction is to avoid the allergen. Working with a health-care provider, specifically a registered dietitian, can help identify safe foods to maintain a varied and nutritious diet.

References

- Wheat. (n.d.). Retrieved from https://www. foodallergy.org/living-food-allergies/foodallergy-essentials/common-allergens/wheat
- Wheat allergy. (n.d.). Retrieved from https://www.mayoclinic.org/diseases-conditions/wheat-allergy/symptoms-causes/syc-20378897
- Shewry, P. R., & Hey, S. J. (2015). The contribution of wheat to human diet and health. Food and energy security, 4(3), 178–202. https://doi.org/10.1002/fes3.64
- Center for Food Safety and Applied Nutrition. (n.d.). Food Allergies. Retrieved from https://www. fda.gov/food/food-labeling-nutrition/foodallergies

Educational programs of Kentucky Cooperative Extension serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expression, pregnancy, marital status, genetic information, age, veteran status, physical or mental disability or reprisal or retaliation for prior civil rights activity. Reasonable accommodation of disability may be available with prior notice. Program information may be made available in languages other than English. University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating.