

FOOD ALLERGY FACT SHEET

Wheat Allergies

What is a wheat allergy?

Wheat allergy is an abnormal immune system reaction to one of the four proteins found in wheat: gluten, albumin, globulin, gliadin. Wheat allergies affect two to eight percent of children in the United States and about two percent of adults.

What are the symptoms?

Wheat allergy symptoms can range from mild to severe and can include:

- Swelling, itching, or irritation of the mouth or throat
- Hives, itchy rash, or swelling of the skin
- Nasal congestion
- Itchy, watery eyes
- Difficulty breathing
- Cramps, nausea, or vomiting
- Diarrhea
- Anaphylaxis

What foods contain wheat?

Individuals with wheat allergies cannot consume products that contain wheat in any form. Child nutrition staff should become familiar with the types of food that may contain wheat so that extra care can be taken to avoid accidental exposure. Below are some products that could contain wheat.

- Bread and bread products, including bagels, muffins, rolls, pastries, donuts, pancakes, and waffles
- Crackers
- Chips and pretzels
- Cereals (some varieties)
- Pasta and noodle products
- Cakes, cookies, pies, and other baked goods
- Soup, including broth
- Condiments (soy sauce, ketchup, mustard, Worcestershire sauce, salad dressings, barbeque sauces, marinades, glazes, some vinegars)

- Beverages, such as root beer and powdered drink mixes
- Meat or poultry packaged with broth
- Breaded meat, poultry, and fish
- Processed entrees, including meat, poultry, or fish with fillers, luncheon meats, and hot dogs
- Gravies and sauces thickened with flour or starch
- Flour tortillas
- Couscous
- Bulgur
- Whole wheat berries
- Pudding
- Yogurt
- Ice cream
- Chocolate
- Wheat germ

How is wheat located on food labels?

Food labels regulated by the U.S. Food and Drug Administration (FDA) follow the regulations of the Food Allergen Labeling and Consumer Protection Act (FALCPA) by listing the top eight allergens on the label in plain language either in the ingredient list or in a “contains” statement.



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For example, barbeque sauce that contains wheat could be labeled in either of the ways shown in the example below (bold is used for illustrative purposes only):

Label 1	Label 2
<p>INGREDIENTS: Water, High Fructose Corn Syrup, Brown Sugar, Vinegar, Tomato Juice, Modified Food Starch, Molasses, Spice, Salt, Mustard Flour, Worcestershire Sauce (Distilled White Vinegar, Water, Molasses, High Fructose Corn Syrup, Salt)</p> <p>Contains: Wheat</p>	<p>INGREDIENTS: Water, High Fructose Corn Syrup, Brown Sugar, Vinegar, Tomato Juice, Modified Food Starch (Wheat), Molasses, Spice, Salt, Mustard Flour, Worcestershire Sauce (Distilled White Vinegar, Water, Molasses, High Fructose Corn Syrup, Salt)</p>

Labels should also be checked for warnings such as “may contain wheat,” “produced on shared equipment with wheat,” or “produced in a plant that uses wheat in other products.” These foods should be avoided as the product may contain a small amount of wheat due to cross-contact.

All child nutrition staff should be trained to read product labels and recognize food allergens. Because food labels change from time to time, child nutrition staff should check labels for wheat and wheat ingredients for every product each time it is purchased. If the label does not provide clear information, then the school must contact the manufacturer for clarification or use a different product. Labels should be maintained for 24 hours for every product served to a child with food allergies in case of a reaction.

What substitutes can be used for wheat in student meals?

Individuals on a wheat-restricted diet can eat a wide variety of foods, but the grain source must be some-

thing other than wheat. In planning a wheat-free diet, look for alternate grains such as amaranth, barley, corn, oat, quinoa, rice, rye, and tapioca.

There are many grains and flours that can be substituted for wheat. Special recipes must be used when making substitutions for wheat flour because all grains do not have the same properties. When baking from scratch, a combination of wheat-free flours usually provides the best outcome. Some breads made with non-wheat flours are available on the commercial market. However, because bread can contain blends of different types of flour, read labels carefully to ensure that wheat flour is not an ingredient.

Wheat alternatives

- Amaranth
- Arrowroot
- Barley
- Buckwheat
- Chickpea
- Cornmeal
- Millet
- Oat
- Potato
- Potato Starch
- Quinoa
- Rice
- Rye
- Sorghum



When menu substitutions or accommodations for a student with life threatening food allergies are requested, a medical statement from a physician is required. Refer to the manual *Accommodating Children with Special Dietary Needs in the School Nutrition Programs: Guidance for School Foodservice Staff* on the USDA web site (www.fns.usda.gov/cnd/Guidance/special_dietary_needs.pdf) for information on the required content of the physician’s medical statement. Read and follow the statement exactly. If



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there is uncertainty about the statement or if it does not provide enough information, contact the household or physician (as permitted by the family) for clarification. Always follow your school's policies and procedures.

When planning menus for children with wheat allergies, consider current food choices offered to determine if a

reimbursable meal can be selected from foods that do not contain wheat protein. This approach will minimize the need to prepare special recipes or to make menu substitutions. The chart below lists common menu items that may be used as safe alternatives to items that contain wheat. Child nutrition staff should always carefully read labels, even for foods that do not generally contain wheat.

Common Menu Items That May Contain Wheat	Possible Substitutes or Alternatives That Do Not Typically Contain Wheat*
Breaded products (for example, chicken nuggets or patties, fried zucchini or okra)	Non-breaded products (for example, grilled chicken patty)
Bread, muffins, bagels, biscuits, and other bread products	Breads made without wheat flour or wheat products: barley, potato, rye, pure corn, rice, arrowroot and corn tortillas
Crackers and snack chips (some varieties)	Rye cracker, rice cakes
Pretzels	Corn or potato snack chips
Casseroles containing soups, bread crumbs, or sauces thickened with flour or starch	Casseroles and soups without wheat products
Wheat-based cereals	Oatmeal, cream of rice, puffed rice, or other cereals made from pure corn, oats, or rice to which no wheat has been added
Cottage and cream cheese (some varieties)	Cottage and cream cheese without wheat products
Condiments (for example, salad dressings, soy sauce, soy bean paste)	Salt, chili powder, flavoring extracts, herbs, nuts, olives, pickles, popcorn, peanut butter
Pudding	Cornstarch, tapioca, or rice puddings, custard, gelatin
Yogurt	Milk
Processed soups	Soup without wheat products
Processed meats	"All meat" hot dogs or luncheon meats prepared without wheat flour fillers or wheat products
Meatloaf and meatballs	Beef, pork, ham, chicken, turkey, or fish; beans and legumes
Pasta	Rice pasta/noodles, other non-wheat pastas, rice, and polenta
Prepared baked goods (for example, cookies, cakes, quick breads)	Oatmeal, arrowroot, rice, or rye cookies made without wheat products
Chocolate	Wheat-free chocolate or pure cocoa powder
Ice cream and frozen yogurt	Water or fruit ices

*Always check the ingredient label to verify ingredients and check for potential cross contamination.



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Common Questions

Are kamut and spelt safe alternatives to wheat?

No. Both kamut and spelt are grains that are closely related to wheat, and they are not safe for people with wheat allergies.

Is modified food starch a safe ingredient for people with wheat allergies?

Modified food starch can be made using a variety of grain products, including wheat. If the product is made using wheat, then the term “wheat” must be clearly marked on the label. Always contact the manufacturer if there are any questions regarding an ingredient.

How is celiac disease different from a wheat allergy?

Celiac disease is an inherited, or genetic, autoimmune disease characterized by sensitivity to the protein

gluten. The immune system of a person with celiac disease incorrectly perceives gluten as harmful and as a result damages tissues of the small intestine when this protein is eaten. This immune response differs from an immunoglobulin E (IgE) mediated response that causes allergies.

Many of the nutrients found in food are absorbed in the small intestine. A damaged small intestine may be unable to properly absorb these nutrients. This malabsorption may cause a variety of unpleasant gastrointestinal symptoms, such as diarrhea and abdominal pain, as well as medical conditions such as bone disease and anemia.

Gluten-free diets followed by individuals with celiac disease are not the same as wheat-free diets followed by individuals with wheat allergies. Gluten is found in wheat, barley, and rye.

References

- American Dietetic Association. (2007). *Celiac disease evidence analysis project*. Retrieved January 20, 2010, from the ADA Evidence Analysis Library Web site: www.adaevidencelibrary.com
- American Dietetic Association. (2009). *Celiac disease (CD) evidence-based nutrition practice guideline*. Retrieved May 25, 2010, from the ADA Evidence Analysis Library Web site: www.adaevidencelibrary.com
- Food Allergy & Anaphylaxis Network. (2010). *Wheat allergy*. Retrieved May 26, 2010, from <http://www.foodallergy.org/page/wheat-allergy>
- Food Allergy Initiative. (2010). *Wheat allergy*. Retrieved May 27, 2010, from <http://www.faiusa.org/?page=wheat>
- Mayo Clinic. (2009). *Wheat allergy symptoms*. Retrieved June 17, 2010 from <http://www.mayoclinic.com/health/wheat-allergy/ds01002/dsection=symptoms>
- Thompson, T. (2008). *The gluten-free nutrition guide*. New York: McGraw-Hill.
- U.S. Food and Drug Administration. (2009). *Food allergies: What you need to know*. Retrieved May 27, 2010, from <http://www.fda.gov/Food/ResourcesForYou/Consumers/ucm079311.htm>



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For More Information

Food Allergy & Anaphylaxis Network, Wheat Allergy
<http://www.foodallergy.org/page/wheat-allergy>

Food Allergy Initiative, Wheat Allergy
<http://www.faiusa.org/?page=wheat>

National Digestive Diseases Information Clearinghouse, Celiac Disease
<http://digestive.niddk.nih.gov/ddiseases/pubs/celiac/>

U.S. Food and Drug Administration, Food Allergens
<http://www.fda.gov/Food/FoodSafety/FoodAllergens/default.htm>

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