

# FOOD ALLERGY FACT SHEET

## Egg Allergies

### What age group is most affected by egg allergies?

Egg allergy is estimated to affect approximately 1.5% of young children, although most children outgrow this allergy by the time they are five years old. Most egg allergies begin in childhood, but egg allergies can develop at older ages.

The egg yolk and white both contain proteins that can cause allergies. There are over 40 different types of protein in eggs, but ovalbumin, found in the egg white, is the most prevalent. Allergic reactions to egg white are more common than allergies to egg yolk.

### What are the symptoms?

The most common symptoms of an allergic reaction to eggs include:

- Eczema (atopic dermatitis)
- Hives (urticaria)
- Asthma
- Runny nose
- Digestive symptoms
- Anaphylaxis

### What foods contain egg?

Even when a food is labeled “egg-free,” it could contain egg protein. Commercial egg substitutes typically are made of egg whites. Some fat substitutes, such as Simplese™, also are made with egg proteins. Below are some products that may contain egg proteins, so extra care should be taken when reading food labels for these products.

- All egg products (scrambled eggs, hard-boiled eggs, etc.)
- Baked goods (including pastries, bread, muffins, and quick bread)
- Bread pudding
- Breeding on processed meat and poultry products

- Egg substitutes
- Ice cream and gelato
- Marshmallows
- Mayonnaise and mayonnaise-based salad dressings (including Caesar dressing)
- Meatloaf and meatballs
- Meringues
- Pasta
- Pretzels
- Processed meats
- Pudding and custard
- Sauces
- Soufflés
- Stratas and quiche



### How is egg 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, hamburger buns that contain egg could be labeled in either of the ways shown below (bold is used for illustrative purposes only):

Label 1	Label 2
<b>INGREDIENTS:</b> Enriched flour, Water, Milk, High fructose corn syrup, Albumin, Soybean oil, Whey, Yeast, Sugar, Wheat gluten, Soy flour  Contains: <b>Egg</b> , Wheat, Milk, Soy	<b>INGREDIENTS:</b> Enriched flour (Wheat), Water, Milk, High fructose corn syrup, <b>Albumin (Egg)</b> , Soybean oil, Whey, Yeast, Sugar, Wheat gluten, Soy flour

Labels should also be checked for warnings such as “may contain eggs,” “produced on shared equipment with eggs,” or “produced in a plant that uses eggs in other products.” These foods should be avoided because the product may contain a small amount of egg through 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, school nutrition staff should check labels for egg and egg ingredients for every product each time it is purchased. Labels should be maintained for a minimum of 24 hours for every product served to a child with food allergies in case of a reaction.

## What substitutes can be used for egg in student meals?

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](http://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 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 or child care facility’s policies and procedures.

When planning menus for children with egg allergies, consider current food choices offered to determine if a reimbursable meal can be selected from foods offered that do not contain egg. This approach will minimize the need to prepare special recipes or to make menu substitutions. Child nutrition staff should always carefully read labels, even for foods that generally do not contain egg.



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Common Menu Items that May Contain Egg	Possible Substitutes or Alternatives That Do Not Typically Contain Egg*
Breakfast entrees containing eggs	Yogurt, cheese, cereal
Bread, bagels, muffins, crackers and other bread products	Egg-free bread, French-type bread, tortillas
Pancakes, waffles, and French toast	Egg-free pancakes
Processed meats	Grilled or baked meats
Breaded products, including chicken, fish, corn dogs, and other breaded items	Meat or fish with no breading
Mayonnaise-based salad dressings and salads	Mustard, vinegar, Italian dressing
Pasta	Rice, couscous, barley, egg-free noodles
Meatloaf and meatballs	Hamburgers
Casseroles	Macaroni and cheese, pizza
Pudding	Fruited gelatin
Baked desserts, including cookies and cake	Fruit crisps and homemade fruit pies made without egg
Any desserts made with marshmallows or meringue (for example, crisped rice squares or some types of pie)	Graham crackers, whipping cream
Pretzels (some soft varieties)	Graham crackers and saltines
Ice cream and frozen yogurt	Sorbet and ices

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

## Baking Substitutions

The following ingredients can be used to replace one to three eggs in a recipe:

2 T. cornstarch, arrowroot flour, or potato starch = 1 egg

1 T. soy powder + 2 T. water = 1 egg

1 T. soy milk powder + 1 T. cornstarch + 2 T. water = 1 egg

1 banana = 1 egg in cakes

1 T. milled flax seed + 3 T. water = 1 egg

1 tsp. gelatin + 3 T. cold water + 7 tsp. boiling water, chilled and beaten = 1 egg

2 T. water + 1 T. oil + 2 tsp. baking powder = 1 egg



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## Common Questions

### Can egg substitutes be used to prepare foods for children with egg allergies?

No. Typically, egg substitutes are made from egg whites, which are highly allergenic for children with egg allergies. Egg substitutes were primarily developed for cooking food for individuals needing to reduce cholesterol consumption.

### Can someone with an egg allergy sometimes eat cooked eggs?

People who have mild to moderate egg allergies may be able to eat traces of egg in baked goods (for example, cakes, breads, cookies), if permitted by their physician. Still, foods containing larger amounts of eggs should be avoided (for example, French toast or pancakes).

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## References

Asthma and Allergy Foundation of America. (2005). *Egg allergy*. Retrieved June 23, 2010, from <http://www.aafa.org/display.cfm?id=9&sub=20&cont=523>

Food Allergy & Anaphylaxis Network. (2010). *Egg allergy*. Retrieved June 3, 2010, from <http://www.foodallergy.org/page/egg-allergy>

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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>

## For More Information

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

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

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





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