

Adult Day Care Food Allergy Fact Sheet



Egg Allergies

Egg allergies are estimated to affect approximately 2.6 million Americans. For adults age 18 years and over, 0.5% to 1.1% are allergic to eggs. Although egg is not the most common allergen in adults, its effects can be serious. Egg allergies may develop during adulthood.

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

What are the symptoms of an allergic reaction?

Knowing the symptoms of an allergic reaction can save a participant's life. One or more allergic symptoms can occur and can be mild to severe. Symptoms can happen within a few minutes or up to a few hours after the food allergen is eaten. Participants can display different symptoms, even if they have the same allergy (e.g., one participant with an egg allergy may have trouble breathing when exposed to eggs while a different participant with an egg allergy vomits after consuming it). Each time a participant has a reaction, the symptoms may be different.

It is also important to know the symptoms of an allergic reaction as there is a possibility that a participant may have a reaction yet not have a known food allergy. As shown in the following chart, the Food Allergy Research and Education (FARE) organization details how a variety of symptoms can appear in the body.

Mild Symptoms	Severe Symptoms
<ul style="list-style-type: none">• Gut: mild nausea or discomfort (stomach pain, abdominal cramping)• Mouth: itchy; odd taste; slight, dry cough• Nose: itchy, runny nose; sneezing; congestion• Skin: a few hives (reddish, swollen, itchy areas on the skin), mild itch (sometimes in the ear canal)	<ul style="list-style-type: none">• Body: lightheadedness, fainting or loss of consciousness, anaphylaxis• Gut: repetitive vomiting or severe diarrhea• Heart: pale; turning blue; faint, weak, or “thready” pulse; dizziness; chest pain; drop in blood pressure• Lung: shortness of breath, wheezing, repetitive cough, difficulty breathing• Mouth: significant swelling of the tongue or lips• Psychological: feeling something bad is about to happen, sense of impending doom, anxiety, confusion, feeling weak• Skin: many hives over the body, widespread redness, eczema• Throat: tight, hoarse, trouble breathing/swallowing, swelling

What is anaphylaxis?

Anaphylaxis is a severe allergic reaction with a rapid onset that may cause difficulty breathing and death. It may disrupt breathing and blood circulation. An anaphylactic reaction usually occurs within minutes of being exposed to an allergen, but in some rare instances, it can occur a couple of hours later. Symptoms of anaphylaxis include:

- Difficulty breathing, constriction of airways, tightness of the throat, hoarse voice
- Drop in blood pressure (e.g., pale, weak pulse, confusion, dizziness, fainting, weakness, loss of consciousness)
- Feeling of doom
- Gastrointestinal symptoms (e.g., abdominal pain, nausea, vomiting, diarrhea, cramping)
- Rapid pulse, cardiac arrest
- Shock (i.e., drop in blood pressure and narrowing of airways)
- Skin symptoms (e.g., hives, swelling)
- Swollen lips



What foods contain eggs?

Even when a food is labeled “egg free,” it could contain egg protein that may trigger an allergic reaction. Commercial egg substitutes typically are made of egg whites. Some fat substitutes also are made with egg proteins. The following products contain egg proteins, so extra care should be taken when reading the ingredient list on food labels for these products.

Egg-Based Ingredients			
• Dried eggs	• Egg whites	• Liquid eggs	• Scrambled eggs
• Egg solids	• Egg yolk	• Poached eggs	• Whole eggs
• Egg substitute	• Fried eggs	• Powdered eggs	
• Egg wash	• Hard-boiled eggs	• Raw eggs	
Egg Protein Ingredients			
• Albumin (also spelled albumen)	• Livetin	• Ovomuroid	• Vitellin
• Apovitellin	• Lysozyme	• Ovotransferrin	
• Globulin	• Ovalbumin	• Ovovitelia	
• Lecithin	• Ovoglobulin	• Ovovitellin	
	• Ovomucin	• Silici albuminate	
Dishes, Foods, and Products That May Contain Eggs			
• Artificial flavorings	• Ice cream	• Meringue/meringue powder	• Quiche
• Baked goods (breads, cakes, cookies, crackers)	• Lecithin	• Natural flavorings	• Sauces
• Breaded products (e.g., chicken nuggets)	• Marshmallows	• Nougat	• Soufflés
• Eggnog	• Marzipan	• Pancakes	• Specialty coffee drinks (eggs can be used in the foam or topping)
• Fat substitute	• Mayonnaise	• Pasta (egg noodles)	• Strata/stratta
• French toast	• Mayonnaise-based salad dressings (including Caesar dressing)	• Pretzels	• Surimi seafood
• Gelato	• Meatloaf and meatballs	• Processed meats	• Waffles
		• Pudding and custard	

Where is egg located on food labels?

Food labels that are regulated by the U.S. Food and Drug Administration (FDA) follow the regulations of the *Food Allergen Labeling and Consumer Protection Act* (FALCPA). FALCPA requires that the major eight food allergens are listed on the label in one of three ways in the ingredient list: (1) using the common name, (2) common name written in parenthesis after the ingredient, or (3) in a “contains” statement. In 2021, the *Food Allergy Safety, Treatment, Education, and Research Act* (FASTER) was passed into law. This act expands what is considered a major allergen that has to be declared on a food label from eight to nine by adding sesame as a major allergen. This law will take effect in January 2023, but manufacturers may begin incorporating sesame as a major allergen in the ingredients list of their food labels before this date.

How bread rolls that contain egg could be labeled in the ingredient list in different ways is shown in the following examples (bold is used for illustrative purposes only).

Label 1
INGREDIENTS: Whole wheat flour, water, high fructose corn syrup, albumin, soybean oil, whey, yeast, sugar, soy flour Contains: Egg , Wheat, Milk, Soy

Label 2
INGREDIENTS: Whole wheat flour, water, high fructose corn syrup, albumin (Egg) , soybean oil, whey, yeast, sugar, 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.” Foods with these advisory statements should be avoided because the product may contain a small amount of egg through cross-contact.

For example, pasta may or may not contain eggs depending on the recipe. An egg-free pasta could be labeled like below (bold is used for illustrative purposes only).

INGREDIENTS: Whole durum wheat flour, whole grain wheat, semolina, and sorghum bran Contains: Wheat Manufactured in a facility that uses eggs.

How should adult day care employees check and manage food labels?

Adult day care sites have a variety of procedures for preparing and serving food. All staff who prepare and serve food should be trained to read product labels and recognize food allergens in the ingredient list. Because food labels change from time to time, adult day care staff should check labels for egg and egg ingredients for every product each time it is received. If the label does not provide clear information, then the manufacturer must be contacted for clarification or a different product should be used. The Centers for Disease Control and Prevention (CDC) recommends that food labels for every product that is served to a participant with food allergies be kept for a minimum of 24 hours afterward in case of a reaction. If the product is saved for later use as leftovers, keep labels for 24 hours after all product has been served or discarded.

What documentation is needed to make substitutions for participant meals?

When menu modifications for a participant with food allergies are outside of the Child and Adult Food Program (CACFP) meal pattern, a medical statement from a State licensed healthcare professional, such as a general practice physician, registered nurse, or allergist, is required. Refer to the *Modifications to Accommodate Disabilities in the Child and Adult Care Food Program and Summer Food Service Program* on the USDA website for information on the required content of the medical statement. Adult day care staff can also contact their State agencies and sponsors for information. For more information about what is required in the medical statement, refer to ICN's *Adult Day Care Food Allergy Fact Sheet – Common Questions: Adult Day Care Directors*.

If there is uncertainty about the statement, or if it does not provide enough information, contact the State licensed healthcare professional (as permitted by the participating adult, family, caregiver, or guardian) for clarification. However, the adult day care staff should not delay in providing a meal modification and a safe environment (i.e., prevent exposure to known allergens) while awaiting clarification of the medical statement. Staff should follow the portion of the medical statement that is clear and unambiguous to the greatest extent possible while obtaining the additional information or amended statement.



What substitutes can be used for eggs in participant meals?

When planning menus for a participant with egg allergies, consider current food choices offered to determine if a reimbursable meal can be selected from foods offered that do not contain eggs. This approach will minimize the need to prepare special recipes or to make menu substitutions. Adult day care staff should always carefully read ingredient lists, even for foods that generally do not contain eggs. The following chart lists common menu items that may be used as safe alternatives to items that contain eggs.

Menu Items & Condiments That May Contain Egg*	Possible Substitutes*†
Bread, bagels, biscuits, muffins, pancakes, waffles, and other bread products	Egg-free bread, French-type bread, tortillas, and egg-free pancakes
Breaded products (such as chicken nuggets or fish sticks)	Non-breaded products (such as grilled chicken patties)
Mayonnaise-based salad dressings	Mustard, vinegar, and Italian dressing
Meatloaf and meatballs	Hamburger
Pasta	Egg-free noodles, rice, couscous, barley
Processed meats (such as chicken nuggets)	100% beef, pork, poultry, fish, or shellfish; beans, peas, or legumes
Pretzels (some soft varieties)	Hard pretzels, saltines, corn chips, egg-free bread

*All meals claimed for reimbursement must meet the Child and Adult Care Food Program (CACFP) meal pattern requirements. Please visit <https://www.fns.usda.gov/cacfp/meals-and-snacks> for more information.

† Always review the ingredient list on a food label to verify ingredients and check for possible cross-contact (look for advisory statements or contact manufacturer).

What are some baking substitutions for eggs?

The following ingredients can be used to replace one to three eggs in a recipe. Always check the ingredient list on food labels as some substitutions may contain other allergens.

- 2 Tbsp cornstarch, arrowroot flour, or potato starch = 1 egg
- 1 Tbsp soy powder + 2 Tbsp water = 1 egg
- 1 Tbsp soy milk powder + 1 Tbsp cornstarch + 2 Tbsp water = 1 egg
- 1 banana = 1 egg in cakes
- 1 Tbsp milled flaxseed + 3 Tbsp cold water = 1 egg
- 1 tsp gelatin + 3 Tbsp cold water + 7 tsp boiling water, chilled and beaten = 1 egg
- 2 Tbsp water + 1 Tbsp oil + 2 tsp baking powder = 1 egg
- 3 Tbsp aquafaba* = 1 whole egg

*Aquafaba is the liquid from canned chickpeas or beans.



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

No. Typically, egg substitutes are made from egg whites, which are highly allergenic for participants 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, crackers and bread) if permitted by their healthcare professional. Still, foods containing large amounts of eggs should be avoided (for example, French toast or pancakes).

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For More Information

Food Allergy Research & Education
www.foodallergy.org

Institute of Child Nutrition
www.theicn.org/foodsafety

U.S. Food and Drug Administration
Food Allergens
www.fda.gov/Food/IngredientsPackagingLabeling/FoodAllergens/default.htm

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