

Egg Allergies

Egg is one of the nine major allergens in the United States. Together, they cause about 90% of all food-related allergic reactions. Both the egg yolk and egg white 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 common. Allergic reactions to egg white are more common than allergies to egg yolk. This fact sheet will discuss how to manage egg allergies in a family child care.

How are children affected by egg allergies?

Egg allergies are estimated to affect about 1.3% of young children. For infants and young children, this is the second most common food allergy behind milk allergies. Egg allergies generally begin in childhood, and most children outgrow them. However, egg allergies can develop at older ages.

What foods contain eggs?

Take extra care when reading ingredient lists for egg products. Even when a food is labeled "egg-free," it could contain egg protein. Commercial egg substitutes typically are made of egg whites, which can be highly allergenic for children with egg allergies. Some fat substitutes also are made with egg proteins.



The following charts lists some products that may contain egg proteins.

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) Apovitellin Globulin 	LecithinLivetinLysozymeOvalbumin	OvoglobulinOvomucinOvomucoidOvotransferrin	OvoviteliaOvovitellinSilici albuminateVitellin	
Dishes, Foods, and Products That May Contain Eggs				
 Artificial flavorings Baked goods (breads, cakes, cookies, crackers) Breaded products (chicken nuggets) Eggnog Fat substitute French toast Gelato 	 Ice cream Lecithin Marshmallows Marzipan Mayonnaise Mayonnaise-based salad dressings (Caesar dressing) Meatloaf, meatballs 	 Meringue/ meringue powder Natural flavorings Nougat Pancakes Pasta (egg nodles) Pretzels Processed meats Pudding and custard 	 Sauces Soufflés Specialty coffee drinks (eggs can be used in the foam or topping) Strata/stratta Surimi seafood Quiche Waffles 	

Many items may not contain egg but may be produced in a facility where egg is processed or used as an ingredient. As a result, crosscontact with eggs may occur. Cross-contact is the accidental transfer of allergens to an allergen-free food or surface. Do not give a food to a child with an egg allergy that is labeled with an advisory statement such as being produced or manufactured in a facility with egg.





What substitutes can be used for eggs?

The following chart lists common menu items that may be used as safe substitutions for items that contain eggs. Always carefully read ingredient lists, even for foods that do not usually contain egg.

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

*All meals and snacks claimed for reimbursement must meet the Child and Adult Care Food Program (CACFP) meal pattern requirements. Please visit www.fns.usda.gov/cacfp/meals-and-snacks for more information. For children with food allergies, providers are required to provide meal modifications as stated in the child's medical statement signed by a State licensed healthcare professional. Meal modifications may require providing meals and snacks that do not meet CACFP meal pattern requirements. These meals are reimbursable as long as there is a medical statement on file documenting the necessary accommodations. Providers may choose to accommodate food-related disabilities without a signed medical statement if the meal modifications still meet the meal pattern requirements. Refer to the *Family Child Care Food Allergy Fact Sheets–Accommodating Children with Food Allergies* for more information.

[†]Always review the ingredient list to verify ingredients and check for possible cross-contact.

Children who have mild to moderate egg allergies may be able to eat traces of egg in baked goods (for example, cakes, bread, and cookies). However, only serve these items if they are noted in the medical statement and signed by the State licensed healthcare professional. Remember, avoid serving large amounts of eggs to children with egg allergies.



What are some baking substitutions for egg?

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

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 flax seed + 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.





References

- Asthma and Allergy Foundation of America. (2015, February). *Egg allergy*. https://www.kidswithfoodallergies.org/page/egg-allergy.aspx
- Centers for Disease Control and Prevention. (2013). *Voluntary guidelines for managing food allergies in schools and early care and education programs.* https://www.cdc.gov/healthyschools/foodallergies/index.htm
- Food Allergy Research & Education. (2020). *Your guide to food allergy*. https://www.foodallergy.org/resources/field-guide-english
- Food Allergy Research & Education. (2021). *With the stroke of President Biden's pen, FASTER Act for sesame labeling becomes law.*

https://www.foodallergy.org/media-room/stroke-president-bidens-pen-faster-act-sesame-labeling-becomes-law

- Food Allergy Research & Education. (n.d.). *Egg allergy*. https://www.foodallergy.org/living-food-allergies/food-allergy-essentials/common-allergens/ egg
- Institute of Child Nutrition. (2020, June 23). *Food allergies for schools: Egg allergies*. https://www.theicn.org/foodsafety
- Iowa State University Extension and Outreach. (2017, November). *Aquafaba...the magical bean juice*. https://www.extension.iastate.edu/allamakee/sites/www.extension.iastate.edu/files/ allamakee/Regional/WOWNov2017.pdf
- Mayo Clinic. (2020, September 3). *Egg allergy*. https://www.mayoclinic.org/diseases-conditions/egg-allergy/symptoms-causes/syc-20372115
- U.S. Department of Agriculture, Food and Nutrition Service. (2013, July 16). *Nutrition standards for CACFP meals and snacks*. https://www.fns.usda.gov/cacfp/meals-and-snacks
- U.S. Department of Agriculture, Food and Nutrition Service. (2017, June 22). *Modifications to accommodate disabilities in CACFP and SFSP*. https://www.fns.usda.gov/modifications-accommodate-disabilities-cacfp-and-sfsp
- U. S. Food and Drug Administration. (2018, July 16). *Food Allergen Labeling and Consumer Protection Act of 2004 (FALCPA)*. https://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/ Allergens/ucm106187.htm
- U.S. Food and Drug Administration. (2021, May 5). *Food allergies*. https://www.fda.gov/food/food-labeling-nutrition/food-allergies
- U.S. Library of Congress. (2021). *Summary:* S.578 FASTER Act of 2021. https://www.congress.gov/bill/117th-congress/senate-bill/578?q=%7B%22search%22%3A%5 B%22S.+578%22%5D%7D&s=1&r=1

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/food-labeling-nutrition/food-allergies

This project was funded using U.S. Department of Agriculture grant funds. The USDA is an equal opportunity provider, employer, and lender.

The University of Mississippi is an EEO/AA/Title VI/Title IX/Section 504/ADA/ADEA employer.

For the nondiscrimination statement in other languages: https://www.fns.usda.gov/cr/fns-nondiscrimination-statement

Except as provided below, you may freely use the text and information contained in this document for non-profit or educational use with no cost to the participant for the training providing the following credit is included. These materials may not be incorporated into other websites or textbooks and may not be sold.

Suggested Reference Citation:

Institute of Child Nutrition. (2022). *Family child care food allergy fact sheets – Egg allergies*. University, MS: Author.

The photographs and images in this document may be owned by third parties and used by the University of Mississippi under a licensing agreement. The University cannot, therefore, grant permission to use these images. Please contact helpdesk@theicn.org for more information.

© 2022, Institute of Child Nutrition, The University of Mississippi, School of Applied Sciences

03/01/2022

