

FOOD ALLERGY FACT SHEET

Soy Allergies

What population does soy allergies affect?

Soy is a common allergen that often starts in infancy. About 0.4% of children in America have a soy allergy. Most children outgrow soy allergies by the age of ten, but some adults have soy allergies.

What are the symptoms?

Symptoms of a soy allergy may occur within a few minutes to an hour after ingesting soy and vary from person to person. Common reactions to soy include:

- Tingling in the mouth
- Hives, itching, or eczema (itchy, scaly skin)
- Swelling of the lips, face, tongue, throat, or other parts of the body
- Wheezing, runny nose, or difficulty breathing
- Abdominal pain, diarrhea, nausea, or vomiting
- Dizziness, lightheadedness, or fainting
- Skin redness (flushing)

Symptoms of a soy allergy are usually mild, but in rare cases, anaphylaxis can occur. Signs of anaphylaxis include:

- Constriction of airways by throat swelling, making breathing difficult
- Rapid pulse
- Shock with a severe drop in blood pressure
- Dizziness, lightheadedness, or loss of consciousness



What foods contain soy?

Soybeans are not generally a major food in the United States, but some variations of soybeans, such as edamame, have become a niche food. Regardless, soy is versatile as an ingredient. Soy can be found in processed food (for example, chicken/vegetable broth, bouillon cubes, cereals, and baked goods) as well as many meat and vegetarian entrees. Asian cuisine often has soy ingredients. It is important that child nutrition staff read all food labels to check for soy to avoid accidental exposure.

Products or Ingredients with Soy

- Bean curd
- Cold-pressed, expelled, or extruded soy oil*
- Edamame (soybeans in the pod)
- Kinako (roasted soybean flour)
- Koya dofu (freeze-dried tofu)
- Miso (soybean paste)
- Natto
- Okara (soy pulp)
- Processed meats (for example, hotdogs)
- Shoyu
- Soybean (granules, curd, flour, paste)
- Soy/Soya (soy albumin, soy fiber, soy flour, soy grits, soy sprouts)
- Soy lecithin*
- Soy milk (soy infant formula, soy cheese, soy yogurt, soy ice cream)
- Soy nuts and nut butter
- Soy protein (concentrate, hydrolyzed, isolate)
- Soy sauce and other sauces
- Supro
- Tamari (a type of soy sauce)
- Tempeh (fermented soybean product)
- Teriyaki sauce
- Textured soy flour (TSF)
- Textured soy protein (TSP)
- Textured vegetable protein (TVP)
- Tofu
- Worcestershire sauce
- Yaki-dofu (grilled tofu)
- Yuba (bean curd)

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Soy may be found in:

- Artificial flavoring
- Asian foods (e.g., Japanese, Chinese, Indian, Indonesian, Thai, Vietnamese, etc.)
- Baked goods (cookies, crackers, etc.)
- Canned items (broths, soups, tuna, and meats)
- Cereals
- High-protein energy bars and snacks
- Hydrolyzed plant protein
- Hydrolyzed vegetable protein (HVP)
- Lecithin*
- Low-fat peanut butter
- Natural flavoring
- Vegetable broth
- Vegetable gum
- Vegetable starch

*Food production companies are not required to label highly refined soy oil as an allergen. Some studies show that most people with soy allergies can safely eat highly refined soy oil and soy lecithin. Consult your doctor about consuming these products if you have a soy allergy.

Where is soy 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: (1) using the common name, (2) common name written in parenthesis after the ingredient, or (3) in a “contains” statement.

For example, the cereal that contains soy could be labeled in either of the following ways shown (bold is used for illustrative purposes only):

Label 1	Label 2
<p>INGREDIENTS: Whole Grain Wheat, Sugar, Raisins, Almond Pieces, Corn Bran, Partially Hydrogenated Cottonseed, Oil, Corn Syrup, Glycerin, Brown Sugar Syrup, Salt, Soy Lecithin, Natural and Artificial Flavor</p> <p>CONTAINS: Wheat, Almond, Soy</p>	<p>INGREDIENTS: Whole Grain Wheat, Sugar, Raisins, Almond Pieces, Corn Bran, Partially Hydrogenated Cottonseed, Oil, Corn Syrup, Glycerin, Brown Sugar Syrup, Salt, Soy Lecithin (Soy), Natural and Artificial Flavor</p>

Labels should also be checked for warnings such as “may contain soy,” “produced on shared equipment with soy,” or “produced in a plant that uses soy in other products.” These foods should be avoided because the product may contain a small amount of soy 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 soy and soy ingredients for every product each time it is received. If the label does not provide clear information, then the school must contact the manufacturer for clarification or use a different product. It is recommended that labels be maintained for a minimum of 24 hours for every product served to a child with food allergies in case of a reaction. If the product is saved as leftovers, the labels should be kept for 24 hours after all the food item has been used up or discarded.



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What substitutes can be used for soy in student meals?

When menu substitutions or accommodations for a student with life-threatening food allergies are outside of the meal pattern, a medical statement from a state licensed healthcare professional, such as a physician, is required. Refer to the manual *Accommodating Children with Disabilities in the School Meal Programs: Guidance for School Foodservice Professionals* on the USDA website (<https://www.fns.usda.gov/2017-edition-accommodating-children-disabilities-school-meal-programs>) for information on the required content of the physician's statement. 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. However, clarification of the medical statement should not delay the child nutrition staff from providing a meal modification. Child nutrition 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 medical statement.

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

Common Menu Items/Ingredients That May Contain Soy	Possible Substitutes or Alternatives That Do Not Typically Contain Soy*
Asian foods	Asian foods made without soy; other ethnic foods
Prepared baked goods (for example, bread, cookies, and crackers)	Scratch-made baked goods prepared without soy
Breakfast cereals	Oatmeal and other hot cereals; cereal without any soy
Canned broths and soups, bouillon	Scratch-made soups prepared without soy or canned varieties without soy
Canned tuna and meat	Fresh tuna and meat
Condiments, salad dressings and sauces (for example, soy sauce and soybean paste)	Condiments (for example, ketchup and mustard), salad dressings, or sauces that do not contain soy
Processed meats (for example, chicken nuggets, hamburgers, and hotdogs)	Beef, pork, ham, chicken, turkey, or fish; beans and legumes

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



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Common Questions

Are soybean oil and soy lecithin safe for people with soy allergies?

Research indicates that most people with soy allergies can safely consume highly refined soybean oil and soy lecithin. It is always best to check with a healthcare professional first. Highly refined soybean oil is exempt from being labeled as an allergen, but soy lecithin must be labeled.

A physician has stated that soy lecithin is safe for a student to eat. If soy lecithin is the only soy ingredient on the food label, but soy is listed in the allergen statement, is the product safe to use?

Not necessarily. Because the common name of an allergen in a product is only required by FALCPA to appear once, it is possible that there are other soy-derived ingredients in the product that are not listed. All ingredients on the food label need to be reviewed carefully. If there are any questions, the manufacturer should be contacted for additional information.



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References

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For More Information

Food Allergy Research & Education
<http://www.foodallergy.org>

Institute of Child Nutrition
<http://www.theicn.org/foodsafety>

U.S. Food and Drug Administration
Food Allergens
<https://www.fda.gov/food/food-ingredients-packaging/food-allergens>

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