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## Eating Clean & Allergen-Free: Nutrition in Food Allergies

by Katie Ferraro, MPH, RD, CDE  
1.0 Continuing Education Units for Registered Dietitians  
(RDs/RDNs) and Dietetic Technicians, Registered (DTRs)




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## Learning Objectives

**By the end of this presentation, participants will be able to:**

- Identify the primary sources of food allergens in the US diet
- Recognize the possible nutrient deficits in allergen-restricted diets
- Recommend well-balanced food items for patients with food allergies




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## Food Allergy Basics

- Affects almost 15 million Americans, 1 in 13 children
- Immune system responds to normally harmless substance as if it were threatening
- Food allergy: immune system makes Immunoglobulin E; Ig-E antibody binds to mast cells & basophils
- When exposed to allergen, allergen attaches to antibodies
- Binding signals body to release histamine & other chemicals that cause allergy symptoms
- Allergic reaction typically occurs within 30 minutes of exposure

Source: Food Allergy & Research Education (FARE), 2013. [www.foodallergy.org](http://www.foodallergy.org)




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## Anaphylaxis

- Most severe type of reaction
  - Sudden drop in blood pressure
  - Difficulty breathing
  - Dizziness
  - Possible death
- Must be treated with:
  - Epinephrine: maintains BP and opens up the airways
- Auto-injector medical device delivers single dose of epinephrine into the thigh
- Antihistamines are not an effective treatment

Source: National Institute of Allergy and Infectious Diseases, 2010.



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## Food Allergy Management

- There is no cure for food allergy

Best ways to handle food allergy?

- Avoid offending allergen in foods
- Read food labels and ingredient lists carefully
- Wash hands and surfaces of kitchen & household carefully
- Always carry an epinephrine auto-injector
- Seek medical help immediately if exposed to food allergen

Source: National Institute of Allergy and Infectious Diseases, 2010.




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## Food Allergy Symptoms

Mild Symptoms	Severe Symptoms
<ul style="list-style-type: none"> <li>• Hives, eczema</li> <li>• Redness of skin</li> <li>• Itchy mouth or ear canal</li> <li>• Nausea, vomiting, diarrhea</li> <li>• Stomach pain</li> <li>• Nasal congestion</li> <li>• Slight, dry cough</li> <li>• Odd taste in mouth</li> <li>• Uterine contractions</li> </ul>	<ul style="list-style-type: none"> <li>• Obstructive swelling of lips, tongue, and/or throat</li> <li>• Difficulty swallowing</li> <li>• Shortness of breath, wheezing</li> <li>• Turning blue</li> <li>• Drop in blood pressure</li> <li>• Loss of consciousness</li> <li>• Chest pain, weak pulse</li> <li>• Sense of “impending doom”</li> </ul>

Source: Food Allergy & Research Education (FARE), 2013. [www.foodallergy.org](http://www.foodallergy.org)



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### How a Child Might Describe a Reaction

- "This food is too spicy."
- "My tongue is hot [or burning]."
- "It feels like something's poking my tongue."
- "My tongue [or mouth] is tingling [or burning]."
- "My tongue [or mouth] itches."
- "It [my tongue] feels like there is hair on it."
- "My mouth feels funny."
- "There's a frog in my throat."
- "There's something stuck in my throat."
- "My tongue feels full [or heavy]."
- "My lips feel tight."
- "It feels like there are bugs in there." (to describe itchy ears)
- "It [my throat] feels thick."
- "It feels like a bump is on the back of my tongue [throat]."

Source: Food Allergy & Research Education (FARE), 2013. [www.foodallergy.org](http://www.foodallergy.org)



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### Can You Outgrow a Food Allergy?


Most children will eventually outgrow allergies to:

- Milk
- Egg
- Soy
- Wheat

Fewer children outgrow allergies to:

- Peanuts
- Tree nuts

Source: National Institute of Allergy and Infectious Diseases, 2010.




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### Diagnosing Food Allergy

- Do not self-diagnose, may be another type of disorder
- Choose a board-certified allergist
- Tests may include:
  - Skin prick test
  - Blood test
  - Oral food challenge
  - Trial elimination diet

Source: Food Allergy & Research Education (FARE), 2013. [www.foodallergy.org](http://www.foodallergy.org)



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### The "Big 8"

8 foods account for 90% of food-allergic reactions in the US:

- Milk
- Egg
- Wheat
- Soy
- Fish
- Shellfish
- Peanut
- Tree nut

If a peanut isn't a tree nut...what is it?!

Source: Food Allergy & Research Education (FARE), 2013. [www.foodallergy.org](http://www.foodallergy.org)



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### Milk-Free Diet

Avoid foods that contain "milk" or any of these ingredients:

- Butter, butter fat, butter oil, butter acid, butter ester(s), ghee
- Buttermilk, half-and-half, milk (all forms), sour milk solids
- Casein, casein hydrolysate, caseinates (in all forms)
- Cheese, cottage cheese, curds, custard
- Lactalbumin, lactalbumin phosphate, lactoferrin
- Lactose, lactulose
- Whey, whey protein hydrolysate, milk protein hydrolysate
- Sour cream, sour cream solids, yogurt, pudding, cream
- Diacetyl, tagatose, Recaldent®, rennet casein

Source: Food Allergy & Research Education (FARE), 2013. [www.foodallergy.org](http://www.foodallergy.org)



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### Soy-Free Diet

Avoid foods that contain "soy" or any of these ingredients:

- Edamame
- Miso, natto, shoyu
- Soy, soya, soybean, soy protein, soy sauce
- Tamari
- Tempeh
- Textured vegetable protein (TVP)
- Tofu

What about soybean oil and soy lecithin?

Source: Food Allergy & Research Education (FARE), 2013. [www.foodallergy.org](http://www.foodallergy.org)




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### Wheat-Free Diet

Avoid foods that contain “wheat” or any of these ingredients:

- Bread crumbs, bulgur, cereal extract
- Club wheat, couscous, cracker meal
- Durum, einkorn, emmer, farina
- Flour, whole wheat, hydrolyzed wheat protein
- Kamut®, spelt, wheat grass, wheat protein
- Matzoh/matzo/matzah/matza, matzoh meal
- Pasta, semolina, seitan
- Wheat, sprouted wheat, triticale, vital wheat gluten
- Wheat bran, wheat germ, wheat bran hydrolysate

Source: Food Allergy & Research Education (FARE), 2013. [www.foodallergy.org](http://www.foodallergy.org)



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### Shellfish-Free Diet

Product label must disclose if contains crustacean shellfish:

- Barnacle, crab, crawfish/crawdadd/crayfish/ecrevisse
- Krill
- Lobster
- Prawns
- Shrimp

What about mollusks?  
What supplement may contain shellfish?

Source: Food Allergy & Research Education (FARE), 2013. [www.foodallergy.org](http://www.foodallergy.org)



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### Egg-Free Diet

Avoid foods that contain “egg” or any of these ingredients:

- Albumin/albumen, ovalbumin
- Egg, eggnog, egg substitutes
- Lysozyme, mayonnaise, meringue
- Surimi

Egg may also be found in:

- Baked goods, macaroni, pasta
- Lecithin
- Marzipan, marshmallows, nougat

Source: Food Allergy & Research Education (FARE), 2013. [www.foodallergy.org](http://www.foodallergy.org)



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### Peanut-Free Diet

Avoid foods that contain “peanut” or any of these ingredients:

- Artificial nuts, beer nuts, ground nuts, mixed nuts
- Monkey nuts, nut pieces, nut meat
- Peanut butter, peanut flour
- Peanut protein hydrolysate
- Cold pressed, expeller pressed, or extruded peanut oil

What about peanut oil and mandelonas?  
How can sunflower seeds affect people with peanut allergies?

Source: Food Allergy & Research Education (FARE), 2013. [www.foodallergy.org](http://www.foodallergy.org)



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### Tree Nut-Free Diet

Avoid foods that contain “nuts” or any of these ingredients:

- Almond, artificial nuts, beechnut, Brazil nut, butternut
- Cashew, chestnut, chinquapin nut, coconut
- Filbert/hazelnut, gianduja, ginkgo nut, hickory nut
- Litchi/lichee/lychee nut, macadamia nut
- Marzipan/almond paste, Nangai nut
- Natural nut extract, nut butters, nut meal, nut paste
- Nut pieces, pecan, pesto, pili nut, pine nut (pignoli/pignon)
- Pistachio, praline, shea nut, walnut

Source: Food Allergy & Research Education (FARE), 2013. [www.foodallergy.org](http://www.foodallergy.org)




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### Tips for Managing Food Allergies

1. Always read labels
2. Take care when cooking
3. Dine out defensively
4. Formulate an action plan
5. Wear a medical ID bracelet
6. Always carry medication, ideally two doses

Source: Harvard Health Publications. HEALTHbeat, April 2013.



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- Baked sunflower and sesame seed nuggets
- Good source of vitamin E, fiber, and folate
- #1 ANDI score in category of nuts and seeds (=78)
- Nut-free, certified GMO-free
- Primary ingredient is sunflower seeds
- SHAPE Magazine, Best for Post-Workout Snack



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- National Institute of Allergy and Infectious Diseases: <http://www.niaid.nih.gov/topics/foodallergy/Pages/default.aspx>
- NIH/NIAID Understanding Food Allergy video: <http://www.youtube.com/watch?v=AKVlK3u9hk>
- Guidelines for the Diagnosis and Management of Food Allergies in the United States: <http://www.niaid.nih.gov/topics/foodallergy/clinical/Pages/default.aspx>
- Today's Dietitian Magazine articles on Food Allergies: [http://www.todaysdietitian.com/allergies\\_index.shtml](http://www.todaysdietitian.com/allergies_index.shtml)

