



Guide on Adverse Food Reactions: Food Allergies, Intolerances, and Sensitivities

Adverse food reactions can be classified into three main categories: food allergies, food intolerances, and food sensitivities. While they all involve an adverse reaction to food, they differ in their mechanisms, severity, and symptoms. Understanding the differences between them can help in managing these conditions effectively.

1. Food Allergies

- **Mechanism:** Food allergies occur when the immune system mistakenly identifies a harmless food protein as a threat. This triggers an immune response involving IgE antibodies, which cause the release of histamine and other chemicals that lead to allergic reactions.
- **Common Symptoms:** Skin reactions (rash, hives), swelling of the lips, tongue, or throat, difficulty breathing, anaphylaxis, gastrointestinal symptoms like vomiting, diarrhea, and abdominal pain.
- **Common Allergens:**
 - Peanuts
 - Tree nuts
 - Shellfish (shrimp, crab, lobster)
 - Fish (salmon, tuna, etc.)
 - Eggs
 - Milk
 - Wheat (in some cases)
 - Soy
- **Treatment:** Immediate intervention with antihistamines for mild reactions or epinephrine for severe reactions (anaphylaxis).

2. Food Intolerances

- **Mechanism:** Unlike allergies, food intolerances do not involve the immune system. Instead, they occur when the body has difficulty digesting or processing certain foods. For example, lactose intolerance occurs when the body lacks the enzyme lactase needed to digest lactose, a sugar found in milk.
- **Common Symptoms:** Bloating, gas, diarrhea, abdominal pain, and nausea. These reactions are often delayed and can vary in severity.
- **Common Intolerances:**
 - Lactose (found in dairy)
 - Gluten (found in wheat, barley, and rye)
 - FODMAPs (fermentable oligosaccharides, disaccharides, monosaccharides, and polyols)
- **Treatment:** Avoidance of triggering foods, use of digestive enzymes (e.g., lactase supplements), or medications for symptom management.

3. Food Sensitivities

- **Mechanism:** Food sensitivities typically involve the immune system but not in the same way as allergies. They are more often related to an immune response that doesn't cause an immediate reaction but can result in long-term symptoms. Food sensitivities can involve both IgG-mediated and non-IgE immune responses.
- **Common Symptoms:** Headaches, fatigue, joint pain, gastrointestinal distress, skin issues, or respiratory problems.
- **Common Triggers:**
 - Gluten
 - Dairy
 - Nightshades (tomatoes, peppers, eggplants)
 - Histamine-rich foods (aged cheeses, fermented foods, wine)
- **Treatment:** Elimination diets, food testing, and reducing inflammatory responses using supplements or lifestyle changes.

Chart on Hidden Food Sources of 5 Common Allergens

Allergen	Hidden Food Sources
Peanuts	Peanut butter, granola bars, baked goods, sauces (e.g., satay), cereals, salad dressings, candies, mixed nuts
Milk	Cheese, butter, cream, ice cream, margarine, whey, casein, baked goods, salad dressings, processed meats
Eggs	Mayonnaise, salad dressings, baked goods (e.g., cookies, cakes), pasta, meatloaf, marshmallows, vaccines (some)
Wheat	Bread, pasta, pizza dough, crackers, baked goods, breakfast cereals, sauces, soup, processed foods
Soy	Tofu, soy milk, edamame, miso, tempeh, soy sauce, processed meats, baked goods, chocolate, energy bars

Chart on Cross-Reactions Between Food and Environmental Allergens

Food	Cross-Reactions with Environmental Allergens
Birch Pollen	Apples, cherries, carrots, celery, almonds, hazelnuts
Ragweed Pollen	Bananas, melons, cucumbers, zucchini, chamomile, sunflower seeds
Grass Pollen	Peaches, tomatoes, melons, oranges, wheat, potatoes
Latex	Bananas, avocados, kiwis, chestnuts, tomatoes, potatoes
Mold	Peanuts, corn, soy, mushrooms, other fermented foods

Additional Notes:

- **Cross-Reactions** occur when the immune system reacts to proteins in foods or environmental allergens that are similar in structure.
- **Management:** Avoiding both the food allergens and the environmental allergens that trigger similar reactions can help mitigate symptoms. For example, someone with birch pollen sensitivity should avoid apples and cherries.