What is a Food Allergy?

Food allergy is an abnormal response to a food, triggered by the body's immune system. In individuals with food allergies, the immune system mistakenly responds to a food (known as the *food allergen*) as if it were harmful, triggering a variety of negative health effects. Some food allergies can be outgrown, but some are lifelong; there is no cure for food allergies. Strict avoidance of the food allergen is the only way to prevent a reaction.

Common Food Allergens

More than 170 foods are known to cause a reaction in some people; however, eight foods account for 90% of all allergic reactions to food. They are:

- milk
- eggs
- peanuts
- soy
- wheat
- tree nuts (e.g., almonds, walnuts, pecans)
- fish
- shellfish (e.g., crab, lobster, shrimp)

While these eight allergens are the most common, a student may have a severe, life-threatening allergy to a different food, and they may be allergic to more than one food.

FACT:

4 out of every 100 U.S. children have a food allergy.

Did you know?

88% of schools reported that they had one or more students with a food allergy.

Unexpected food allergens can be found in non-food items such as:

- modeling clay and paper mache (may contain wheat)
- crayons (may contain soy)
- shaving cream (may contain milk)
- finger paints (may contain milk or egg whites)
- soaps (may contain wheat, dairy, soy, or nut extracts)

Food Allergy vs. Food Intolerance

Food intolerances, such as lactose intolerance, are often confused with food allergies because both can result in cramps, nausea, vomiting, diarrhea, or other gastrointestinal (GI) symptoms. Food intolerance involves the digestive system, while a food allergy involves the immune system. Food intolerances are generally not life-threatening, unlike food allergies, which can cause severe, life-threatening reactions. It is important that food allergies are diagnosed by a doctor.

Did you know?

The first time a person is exposed to the food they are allergic to, they may not show symptoms. It often takes additional exposure to trigger a reaction and have symptoms appear.

Signs and Symptoms of an Allergic Reaction

Allergic reactions vary from mild to severe and can appear within minutes to hours after exposure to a food allergen. Reactions can affect one or more systems in the body, such as the skin, gastrointestinal (GI) tract, and

respiratory or cardiovascular system. While the majority of severe reactions occur when food allergens are eaten, skin contact and inhalation also can cause a reaction, although these reactions are usually less severe.

Signs and Symptoms of an Allergic Reaction to Food

Affected Body System	Symptoms
Skin	
	Swollen lips/tongue/eyes, itchy/flushed skin, rash, hives
Gastrointestinal Tract	
	Cramps, nausea, vomiting, diarrhea, reflux
Respiratory System	
	Wheezing, coughing, shortness of breath, trouble breathing, red/watery eyes, trouble swallowing, sneezing, hoarse voice, nasal congestion
Cardiovascular System	
	Pale or blue skin color, weak pulse, dizziness, fainting, confusion, shock, drop in blood pressure, loss of consciousness

Did you know?

25% of anaphylactic reactions at school involve students whose allergy was unknown at the time of the reaction.

FACT:

Anaphylaxis may also be caused by other allergens such as medications, latex exposure, and bee or other insect stings.

Be aware that children of different ages and developmental levels may communicate their symptoms in different ways. Children may describe their allergic reaction by saying:

- It feels like something is poking my tongue.
- My tongue (or mouth) is tingling (or burning).
- My tongue (or mouth) itches.
- My tongue feels like there is hair on it.
- My mouth feels funny.
- There is a frog in my throat; there is 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).
- My throat feels thick.
- It feels like a bump is on the back of my tongue (or throat).

Source: The Food Allergy & Anaphylaxis Network, *Food Allergy News*, Vol. 13, No. 2 [2003]

Severe Allergic Reactions

Anaphylaxis is a severe allergic reaction that happens quickly and may cause death. It may cause a student to stop breathing or experience a dangerous drop in blood pressure. You cannot predict how severe a student's reaction will be based on previous reactions. Students who previously had only "mild" reactions can later have dangerous and even life-threatening reactions.

Responding to Allergic Reactions

While not all allergic reactions result in anaphylaxis, any reaction has the potential to be life-threatening. All reactions should be taken seriously and treated immediately according to the school's emergency protocols and the student's individual plan. Never downplay the severity of a reaction, even if the symptoms appear mild. Allergic reactions are unpredictable and can suddenly turn from mild to severe.

Epinephrine is the primary treatment for anaphylactic reactions, and early administration improves the chances of survival and quick recovery. During an anaphylactic reaction, epinephrine is injected into the thigh muscle using a safe automatic device called an *auto-injector*. The medication rapidly improves breathing, stimulates the heart, reverses hives, and reduces swelling of the face, lips, and throat. It is important to administer epinephrine as soon as possible if anaphylaxis is suspected, especially when a school nurse or other licensed health care professional is not available to make an appropriate assessment.

In approximately 20% of anaphylactic reactions, symptoms go away only to return one to three hours later. When epinephrine is administered, emergency medical services must be notified and the student taken to

FACT:

Immediate access to **epinephrine** is essential in responding to food allergy emergencies.

According to a 2006 CDC study, more than half of schools allow some students with food allergies to carry and self-administer epinephrine.

What does your school allow?

Some states have laws that allow schools to keep a non-patient-specific supply of epinephrine for students without a plan, or for other emergencies.

What does your state law allow?