



## What You Should Know About Anaphylaxis

Anaphylaxis is a serious allergic reaction that is rapid in onset and may cause death. It is a condition caused by an IgE-mediated reaction

### What are the common causes of anaphylaxis?

Common causes of anaphylaxis include:

- **Food:** such as peanuts, tree nuts, milk, fish and shellfish (although any food can cause a reaction)
- **Medication**
- **Insect stings:** such as yellow jackets, honeybees, wasps, hornets and fire ants
- **Latex:** natural rubber products such as condoms or latex gloves

### Typical Symptoms of a Severe Allergic Reaction

Any of these signs or symptoms may be present. Identifying anaphylaxis as soon as it starts is important. When exposed to a known allergen, involvement of any two systems of the body necessitates immediate treatment with epinephrine.

SKIN	GASTROINTESTINAL	RESPIRATORY	CARDIOVASCULAR
Hives	Cramps	Itchy, watery eyes	Drop in blood pressure
Swelling	Nausea	Runny nose	Fainting
Itchy, red rash	Vomiting	Stuffy nose	Shock
Eczema flare	Diarrhea	Sneezing	
		Coughing	
		Itching or swelling of lips, tongue, or throat	
		Change in voice	
		Difficulty swallowing	
		Tightness of chest	
		Wheezing	
		Shortness of breath	
		Repetitive throat clearing	

# Treatment of Anaphylaxis

## Preparedness and Prevention

*Any delay in the recognition of the initial signs and symptoms of anaphylaxis can result in a fatal outcome either because of airway obstruction or vascular collapse.*

### Prevention:

- School personnel should be informed about a student's history of anaphylaxis and the specific food (or foods) to which the child is allergic.
- An allergen-free environment should be constructed for the child at mealtime to prevent accidental ingestion such as might occur with shared food.
- There should be a written response plan available that can be initiated immediately if a reaction occurs.

### Preparedness:

#### *Medication storage*

- Medications should be stored in an easily accessible location. *The best place to keep medications is with the student.*
- Store medications at room temperature. Extremes in temperature may affect the medication's effectiveness.
- Check expiration dates regularly. Replace the epinephrine if it is out of date or discolored.

#### *Recognition*

- Are history and physical findings compatible with anaphylaxis?
- Are there cutaneous manifestations, specifically pruritus, flush, urticaria and angioedema?
- Is there any sign of airway obstruction involving either the upper airway or the lower airway?
- Are there gastrointestinal symptoms (ie, nausea, vomiting or diarrhea)?
- Are syncope or presyncopal symptoms present?

#### *Procedure*

- Administer autoinjectable epinephrine and other medications per doctor's instructions.
- Call 911 (even if symptoms abate). Tell the dispatcher that the individual is experiencing an anaphylactic reaction and may need epinephrine (if not given already).
- Call parents.

## Medications

**Epinephrine:** Epinephrine is the **only** medication that can reverse severe anaphylactic symptoms. It is available by prescription.

- The child's physician should provide guidance for when and how much epinephrine to use if a reaction occurs. The effects of epinephrine may stop after 15 to 20 minutes. A second dose of epinephrine may be needed if there is inadequate response to the first dose, or symptoms relapse within 15 minutes of the first dose. Multiple studies indicate 20% of acute anaphylaxis requires more than one dose of epinephrine for adequate treatment.

- All children who require epinephrine should be transported by EMS to the emergency room to monitor for late phase anaphylaxis which can occur in up to 20% of acute anaphylaxis and can be more difficult to treat.

**Antihistamines:** Antihistamines are often used to relieve the itching and dermatologic symptoms associated with anaphylaxis after epinephrine has been administered.

- Antihistamines may be administered AFTER epinephrine has been given, but NEVER instead of epinephrine, because antihistamines do not reverse cardiovascular symptoms such as hypotension and shock, nor respiratory distress.

**Asthma medications:** Asthma medications, such as bronchodilators, should never be given in place of epinephrine to treat an anaphylactic reaction, although they may be helpful for asthma symptoms after epinephrine has been administered.

**Steroids:** Steroids are often given in an attempt to protect against the “late” reaction that can occur several hours after the allergic reaction. Steroids do not reverse the acute symptoms of anaphylaxis; the effects of steroids may take hours.

- For some patients, particularly those with asthma, this late reaction could be even more severe than the initial reaction.