

National Institute of Allergy and Infectious Diseases

Leading research to understand, treat, and prevent infectious, immunologic, and allergic diseases.

What Is Anaphylaxis?

If you have a food allergy, there is a chance that you may experience a severe form of allergic reaction known as anaphylaxis. Anaphylaxis may begin suddenly and may lead to death if not immediately treated.

Symptoms

Anaphylaxis includes a wide range of symptoms that can occur in many combinations. Some symptoms are not life-threatening, but the most severe restrict breathing and blood circulation. Many different parts of your body can be affected:

- Skin—itching, hives, redness, swelling
- Nose—sneezing, stuffy nose, runny nose
- Mouth—itching, swelling of lips or tongue
- Throat—itching, tightness, difficulty swallowing, hoarseness
- Chest—shortness of breath, cough, wheeze, chest pain, tightness
- Heart—weak pulse, passing out, shock
- Gastrointestinal (GI) tract—vomiting, diarrhea, cramps
- Nervous system—dizziness or fainting

How soon after exposure will symptoms occur?

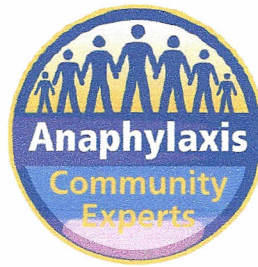
Symptoms may begin within several minutes to several hours after exposure to the food. Sometimes the symptoms go away, only to return two to four hours later or even as many as eight hours later. When you begin to experience symptoms, seek immediate medical attention because anaphylaxis can be life-threatening.

Can anaphylaxis be predicted?

Anaphylaxis caused by an allergic reaction to a certain food is highly unpredictable. The severity of a given attack does not predict the severity of subsequent attacks. The response will vary depending on several factors, such as the following:

- Your sensitivity to the food
- How much of the food you are exposed to
- How the food entered your body

Any anaphylactic reaction may become dangerous and must be evaluated immediately by a healthcare professional.



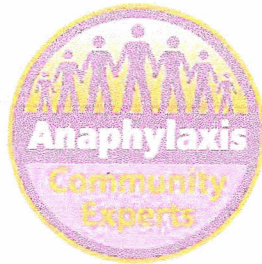
What can cause anaphylaxis?

Food allergy is the leading cause of anaphylaxis; however, medications, insect stings, and latex can also cause an allergic reaction that leads to anaphylaxis.

How do you know if a person is having an anaphylactic reaction?

Anaphylaxis is highly likely if at least one of the following three conditions occurs:

1. Within minutes or several hours of the onset of an illness, a person has skin symptoms (redness, itching, hives) or swollen lips and either difficulty breathing or a drop in blood pressure.
2. A person was exposed to an allergen likely to cause an allergic reaction and, within minutes or several hours, two or more of the following symptoms occur:
 - o Skin symptoms or swollen lips
 - o Difficulty breathing
 - o A drop in blood pressure
 - o GI symptoms such as vomiting, diarrhea, or cramping
3. A person exposed to an allergen that is previously known to cause an allergic reaction in that person experiences a drop in blood pressure.



Epinephrine: Two Dose Rationale

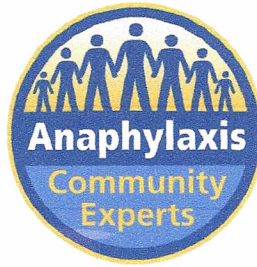
There is no way to predict anaphylaxis severity or duration of anaphylaxis, but there are a few rules that apply in all cases.

1. Patients should have access to two epinephrine auto-injectors at all times in case a second dose is needed or a dose is lost.
2. **First** use the auto-injectable epinephrine. **Call 911 or take to the Emergency Department** immediately following injection.
3. **Observe** 4-6 hours following reaction.
4. All patients need to **follow up** with their healthcare provider as soon as possible following an anaphylactic reaction.

Uniphasic	Biphasic
<i>symptoms resolve within minutes or hours after treatment and do not reoccur</i>	<i>symptoms reoccur 1-10 hours after resolution of initial symptoms</i>
<p>Epinephrine auto injector (IM in outer thigh) 22-55 pounds use 0.15mg. 55 pounds and over use 0.3 mg</p> <p>Give 2nd dose of epinephrine if symptoms don't improve in 5-10 minutes</p>	<p>Epinephrine auto injector (IM in outer thigh) 22-55 pounds use 0.15mg. 55 pounds and over use 0.3 mg</p> <p>Give 2nd dose of epinephrine if symptoms don't improve in 5-10 minutes</p>

The healthcare provider may order additional medications after initial treatment with epinephrine:

- Diphenhydramine (Benadryl ®)
- Albuterol or Levalbuterol Inhaler
- Corticosteroid such as Prednisone



Food Allergy Fact Sheet:

- In 2007 approximately 3 million children under age 18 years (3.9 %) were reported to have a food or digestive allergy in the past 12 months.
- Eight foods that account for 90% of all food-allergy reactions cow's milk, egg, peanut, tree nuts (for example, walnuts, pecans, almonds, and cashews), fish, shellfish, soybeans, and wheat
- 3.3 million Americans are allergic to peanuts or tree nuts
- 6.9 million are allergic to seafood
- Combined, food allergies cause 30,000 cases of anaphylaxis and 150 deaths annually.
- Four out of every 100 children have a food allergy.
- In 2007, the reported food allergy rate among all children younger than 18 years was 18% higher than in 1997.
- Approximately 27% of children with food allergy had reported eczema or skin allergy, compared with 8% of children without food allergy.*
- Over 30% of children with food allergy also had reported respiratory allergy, compared with 9% of children with no food allergy.*
- Hospital discharges with a diagnosis related to food allergy increased significantly over time from 1998–2000 through 2004–2006.
- The median time to respiratory or cardiac arrest for food allergy: 30 min*
- The median time to respiratory or cardiac arrest for venom allergy: 15 min*
- The median time to respiratory or cardiac arrest for drug allergy: 5 min*

Guidelines for the Diagnosis and Management of Food Allergy in the United States 2010
CDC National Health Interview Survey June 2009 last updated 2011

*Pumphrey, RS. Clin Exp Allergy. 2000; 30(8):1144-50