

Peninsula Allergy & Asthma Associates

Board Certified Allergy Care

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ANAPHYLAXIS

What is Anaphylaxis?

Anaphylaxis is a severe allergic reaction. Symptoms involve several parts of the body and in some cases anaphylaxis can be life threatening. Allergic reactions are caused by the body's immune system over-reacting to a substance ordinarily considered harmless. In order to cause anaphylaxis, a substance generally must be injected (such as a bee sting), or swallowed. The most common causes of anaphylaxis are foods (most commonly peanuts, tree nuts, cow's milk, shellfish, eggs, soy, and wheat), insect stings, latex, medications, blood product transfusions and intravenous X-ray contrasts. In rare cases, exercise or cold water can trigger anaphylaxis. Occasionally no external trigger is identified and the attacks appear to be spontaneous. This is termed *idiopathic anaphylaxis* and may be initiated by an as yet unknown internal imbalance of the body's chemistry

What are symptoms of Anaphylaxis?

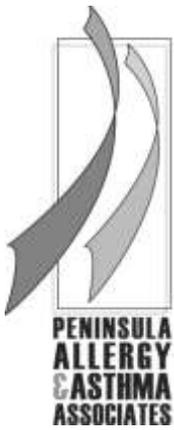
Symptoms are variable and may include several or all of the following: hives, swelling, itching, flushing, anxiety, clamminess, pallor, nausea, vomiting, abdominal cramps, diarrhea or an urgency to have a bowel movement, chest tightness, wheezing, coughing, lightheadedness, dizziness, fainting, disorientation or (especially in children) strange or bizarre behavior. Severe episodes may skip over many of these symptoms and progress rapidly to unconsciousness (from a drop in blood pressure) and can cause death from cardiac arrest. Symptoms always occur a short time after the offending exposure. Symptoms usually start within a few minutes after exposure and almost always start within two hours.

What is the mechanism of Anaphylaxis?

Anaphylaxis is an over-reaction of the body's immune system to exposure to a foreign substance. The reaction starts when the foreign substance, generally a protein, enters the body's tissues and blood stream and encounters immune system cells called mast cells and basophiles. Using a specialized molecule called IgE, these cells can detect the presence of a foreign substance, and respond by releasing a variety of "alarm" signals that marshal the immune system and the body's defense to fight off the intruder. The chief signal used is a hormone named histamine. In anaphylaxis, excessive quantities of histamine are released, causing the above symptoms. In idiopathic anaphylaxis, histamine is released, but the reason the mast cells and basophiles signal an alarm is unknown.

How is Anaphylaxis treated?

Two lines of defense are used. The first and most critical step in treating anaphylaxis is to avoid the triggering agent. If a food causes anaphylaxis, then that food must be completely avoided. Even tiny quantities can cause reactions, so ingredient labels must be monitored. If an insect caused the reaction then high-risk activities (such as walking barefoot outside) should be avoided. Of course, even with the utmost care, accidentally exposures do occur, so a second line of defense is necessary. In fact, a survey of patients with anaphylaxis found that 60% of patients had had an episode of anaphylaxis even after they knew what to avoid. The second line of defense is treating with medications after an exposure to the triggering substance.



FOOD ALLERGY ACTION PLAN

Date: _____

ALLERGY TO: _____

Name: _____ DOB: _____

Asthmatic ___ Yes** ___ No ** (high risk of severe reaction)

SIGNS OF AN ALLERGIC REACTION

- MOUTH*** itching & swelling of the lips, tongue or mouth
THROAT* itching and/or sense of tightness in the throat, hoarseness and hacking cough
SKIN* hives, itchy rash and/or swelling about the face or extremities
GUT* nausea, abdominal cramps, vomiting and/or diarrhea
LUNG* shortness of breath, repetitive coughing and/or wheezing
HEART* “thready” pulse, “passing-out”

YOUR TREATMENT PLAN

In the event of an exposure (don't wait for symptoms to begin) or if itching or hives develop, take the following steps immediately:

- 1) **Take Benadryl** (Diphenhydramine) _____ mg (= _____ tsp. or _____ 25 mg capsules)
- 2) **Locate your Epi-Pen/Epi-Pen Jr.** and review the instructions on the side of the pen
- 3) **Make sure help is available.** Proceeding to the hospital parking lot or emergency room waiting area is a sensible precaution if reactions have previously been severe.

If a severe reaction develops (a severe reaction involved any of the following: widespread hives, nausea, vomiting, diarrhea, trouble breathing, coughing, wheezing, lightheadedness, dizziness or disorientation/unconsciousness)

- 1) **Use Epi-Pen/Epi-Pen Jr.** If you're not sure if a reaction is severe, it is best to go ahead and use the Epi-Pen (it is better to over treat than to delay therapy)
- 2) **Take Benadryl**(Diphenhydramine) _____ mg (if not taken already)
- 3) **Proceed to emergency care. Call 911 if needed** - Make sure the emergency personnel and triage nurse understand you are experiencing ANAPHYLAXIS.
- 4) The **Epi-Pen/Epi-Pen Jr.** may be repeated in 5 minutes if there is no response, or in 15 minutes if symptoms persist and emergency care is not yet available.

*Epi-Pen Expiration Date: _____