

Anaphylaxis

Overview

Anaphylaxis is a severe, potentially life-threatening allergic reaction. It can occur within seconds or minutes of exposure to something you're allergic to, such as peanuts or bee stings.

Anaphylaxis causes your immune system to release a flood of chemicals that can cause you to go into shock — your blood pressure drops suddenly and your airways narrow, blocking breathing. Signs and symptoms include a rapid, weak pulse; a skin rash; and nausea and vomiting. Common triggers include certain foods, some medications, insect venom and latex.

Anaphylaxis requires an injection of epinephrine and a follow-up trip to an emergency room. If you don't have epinephrine, you need to go to an emergency room immediately. If anaphylaxis isn't treated right away, it can be fatal.

Anaphylactic Shock

Signs and symptoms of Anaphylaxis

- Swelling of the conjunctiva
- Runny nose
- Swelling of lips, tongue and/or throat
- Heart and vasculature
 - fast or slow heart rate
 - low blood pressure
- Skin
 - hives
 - itchiness
 - flushing
- Pelvic pain
- Central nervous system
 - light-headedness
 - loss of consciousness
 - confusion
 - headache
 - anxiety
- Respiratory
 - shortness of breath
 - wheezing or stridor
 - hoarseness
 - pain with swallowing
 - cough
- Gastrointestinal
 - crampy abdominal pain
 - diarrhea
 - vomiting
 - Loss of bladder control

Treatment:

- EpiPen (Epinephrine)
- Histamine (pharmaceutical drug)
- 911

How to Prevent it:
The most common cause of this kind of shock are allergic reactions. To counteract the severity of the reaction in the future, immunotherapy is the way to go. The person is gradually vaccinated with progressively larger doses of the allergen, small enough so that the body's immune system can counteract it on its own, conditioning the body.

Glogster by Nick Termini and Zack Assenmacher

Symptoms

Anaphylaxis symptoms usually occur within minutes of exposure to an allergen. Sometimes, however, it can occur a half-hour or longer after exposure. Signs and symptoms include:

- Skin reactions, including hives and itching and flushed or pale skin
- Low blood pressure (hypotension)
- Constriction of your airways and a swollen tongue or throat, which can cause wheezing and trouble breathing

- A weak and rapid pulse
- Nausea, vomiting or diarrhea
- Dizziness or fainting

When to see a doctor

Seek emergency medical help if you, your child or someone else you're with has a severe allergic reaction. Don't wait to see if the symptoms go away.

If the person having the attack carries an epinephrine autoinjector, administer it right away. Even if symptoms improve after the injection, you still need to go to an emergency room to make sure symptoms don't recur, even without more exposure to your allergen. This second reaction is called biphasic anaphylaxis.

Make an appointment to see your doctor if you or your child has had a severe allergy attack or signs and symptoms of anaphylaxis in the past.

The diagnosis and long-term management of anaphylaxis are complicated, so you'll probably need to see a doctor who specializes in allergies and immunology.

Causes

Your immune system produces antibodies that defend against foreign substances. This is good when a foreign substance is harmful, such as certain bacteria or viruses. But some people's immune systems overreact to substances that don't normally cause an allergic reaction.

Allergy symptoms aren't usually life-threatening, but a severe allergic reaction can lead to anaphylaxis. Even if you or your child has had only a mild anaphylactic reaction in the past, there's a risk of more severe anaphylaxis after another exposure to the allergy-causing substance.

The most common anaphylaxis triggers in children are food allergies, such as to peanuts, and tree nuts, fish, shellfish and milk. Besides allergy to peanuts, nuts, fish and shellfish, anaphylaxis triggers in adults include:

- Certain medications, including antibiotics, aspirin and other over-the-counter pain relievers, and the intravenous (IV) contrast used in some imaging tests
- Stings from bees, yellow jackets, wasps, hornets and fire ants
- Latex

Although not common, some people develop anaphylaxis from aerobic exercise, such as jogging, or even less intense physical activity, such as walking. Eating certain foods before exercise or exercising when the weather is hot, cold or humid also has been linked to anaphylaxis in some people. Talk with your doctor about precautions to take when exercising.

If you don't know what triggers your allergy attack, certain tests can help identify the allergen. In some cases, the cause of anaphylaxis is never identified (idiopathic anaphylaxis).

Risk factors

There aren't many known risk factors for anaphylaxis, but some things that might increase your risk include:

- **Previous anaphylaxis.** If you've had anaphylaxis once, your risk of having this serious reaction increases. Future reactions might be more severe than the first reaction.
- **Allergies or asthma.** People who have either condition are at increased risk of having anaphylaxis.
- **Certain other conditions.** These include heart disease and an abnormal accumulation of a certain type of white blood cell (mastocytosis).

Complications

An anaphylactic reaction can be life-threatening — it can stop your breathing or your heartbeat.

Prevention

The best way to prevent anaphylaxis is to avoid substances that cause this severe reaction. Also:

- **Wear a medical alert necklace or bracelet** to indicate you have an allergy to specific drugs or other substances.
- **Keep an emergency kit with prescribed medications available** at all times. Your doctor can advise you on the contents. If you have an epinephrine autoinjector, check the expiration date and be sure to refill your prescription before it expires.
- **Be sure to alert all your doctors** to medication reactions you've had.
- **If you're allergic to stinging insects, use caution around them.** Wear long-sleeved shirts and pants; don't walk barefoot on grass; avoid bright colors; don't wear perfumes, colognes or scented lotions; and don't drink from open soda

cans outdoors. Stay calm when near a stinging insect. Move away slowly and avoid slapping at the insect.

- **If you have food allergies, carefully read the labels** of all the foods you buy and eat. Manufacturing processes can change, so it's important to periodically recheck the labels of foods you commonly eat.

When eating out, ask how each dish is prepared, and find out what ingredients it contains. Even small amounts of food you're allergic to, can cause a serious reaction.

Be prepared

Even if you're careful, at some point you'll likely be exposed to what you're allergic to. Fortunately, you can respond quickly and effectively to an allergy emergency by knowing the signs and symptoms of an anaphylactic reaction and having a plan to quickly treat those symptoms.