



Education

Severe Allergic Reaction (Anaphylaxis)

What is anaphylaxis?

Anaphylaxis is a severe allergic reaction that may occur when you come into contact with something you are allergic to (called an allergen). Symptoms of the reaction usually start within minutes to an hour or two after contact with the allergen. In rare cases, symptoms may occur up to 4 hours later. Examples of substances that can cause some people to have a severe allergic reaction are penicillin and bee stings.

How does it occur?

If you have a severe allergy to a substance, contact with that allergen causes your blood vessels to leak fluid into the area around them. As a result, your blood pressure may drop suddenly. Because there is less blood flow, less oxygen reaches your brain and other vital organs. Since these organs do not function properly with a lack of oxygen, your body goes into shock. In addition, your body responds to the allergen by releasing chemicals such as histamines, which cause swelling of the skin, a red rash, and severe itching.

Complications of anaphylaxis can include brain damage, kidney failure, and death.

Anaphylaxis can be caused by an allergic reaction to:

- food or food additives
- insect stings and bites
- allergy shots
- medicines
- anesthetics
- vaccines
- in rare cases, pollens, dust, perfume, chemicals, pet dander, or other substances in the air (including the smoke from burning poison ivy).

What are the symptoms?

Symptoms of a severe allergic reaction include:

- itchy, blotchy, raised rash called hives
- feeling dizzy or faint
- trouble breathing, including wheezing
- trouble swallowing
- tightness in the throat or chest
- nausea, vomiting, or diarrhea
- stomach cramps
- swelling of the lips, tongue, throat or another part of the body
- red, watery eyes
- sense of doom
- hoarse voice.
- loss of consciousness, even death.

How is it diagnosed?

If you are conscious, your health care provider will ask you about contact with substances you may be allergic to. Then your provider will examine you for symptoms of shock by checking your:

- blood pressure
- pulse and heart rate
- breathing
- skin condition and color
- alertness and mental status.

Your provider may recommend tests to determine the cause of your condition and its seriousness.

How is it treated?

Treating yourself:

If you have a known severe allergy, such as to bee stings or a food such as peanuts, which you might accidentally contact, ask your health care provider about carrying EpiPen. EpiPen is a single-dose injection kit of epinephrine. With the kit you can give yourself a shot of medicine to counteract the allergic reaction until medical help arrives. While you wait for help, lie down and raise your legs above the level of your chest to increase the blood flow to your heart and brain.

Treating someone who is having a severe allergic reaction

Anaphylaxis requires emergency medical attention. If you suspect someone is having a severe allergic reaction, call 911.

Check to see if the person has stopped breathing or if his or her heart has stopped beating. If so, give cardiopulmonary resuscitation (CPR) until the person is breathing and has a pulse or until paramedics arrive.

If the person is conscious and breathing, make sure the person is lying down comfortably. If the person is conscious and has a clear airway (has nothing in his or her mouth or throat), raise the person's legs above the level of his or her chest to increase blood flow to the heart and brain. If they are vomiting or feel like they are going to vomit, they need to be on their side to prevent choking on vomit.

See if they are carrying a medical card or wearing a bracelet or necklace that has information about their allergies.

When a doctor or paramedic arrives, he or she may give the person a shot of epinephrine (adrenaline) right away after verifying anaphylaxis or a less severe allergy reaction. In addition, the health care provider may:

- give the person drugs such as antihistamines or cortisone-like drugs, usually into a muscle or vein
- give fluids through the veins to increase fluid volume inside the blood vessels
- hospitalize the person for observation to be sure that his or her blood pressure and heartbeat are restored to normal levels and that the symptoms do not recur.

How long will the effects last?

How long the effects of anaphylaxis last depends on how quickly you get treatment. The symptoms may last from a few minutes to several hours. Without immediate medical treatment, the result can be death, but early treatment can help prevent serious complications.

How can I take care of myself?

Do not delay seeking help.

If you have had a previous severe allergic reaction:

- Tell your health care provider about all past allergic reactions you have had.
 - Avoid foods, chemicals, and other substances that have caused allergic reactions. For example, if shrimp causes an allergic reaction, don't eat shrimp or any food that might contain shrimp. If you have drug or food allergies, always check labels before taking medicines or eating foods. This includes nonprescription medicines.
 - Ask your health care provider to prescribe medicine kits for treating anaphylaxis. Make sure you review the
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instructions with your provider. Check the expiration dates. Carry one kit with you in your briefcase, sports bag, or handbag, and keep one at home. Do not keep kits in the car. The medicines are not stable in heat or cold and will not work well if they get too hot or cold.

- Be prepared to give yourself a shot in case of an emergency. Think of the shot as something you can do to keep yourself alive long enough to get medical attention.
- Wear a bracelet or necklace that warns of your allergy and tells what to do in case of an emergency. Tell your family, friends, and co-workers what they should do if you have a severe allergic reaction.
- Consider having immunotherapy, in which your immune system is gradually exposed to the toxic substance to make it less harmful to you. Immunotherapy is very effective for insect allergies but not for food allergies.
- Tell all pharmacists, health care providers, and dentists who treat you about any allergies you have. Some medicines contain ingredients that may cause an allergic reaction for you.
- For more information, contact: The Food Allergy & Anaphylaxis Network (FAAN) Phone: (800) 929-4040 Web site: <http://www.foodallergy.org>.

How can I help prevent a severe allergic reaction?

Learn what substance causes your reaction and avoid that substance. Ask your health care provider if desensitization treatments, such as allergy shots, might help you.

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