

Allergic Reaction, Severe (Anaphylaxis)

KEY POINTS

- A severe allergic reaction (anaphylaxis) is life threatening. Call 911 or local emergency services for help right away.
 - A severe allergic reaction usually needs to be treated with epinephrine first, then with other medicines to lessen the effects of the reaction.
 - Learn what substances cause you to have an allergic reaction and avoid those substances.
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What is a severe allergic reaction?

A severe allergic reaction (anaphylaxis) is your body's reaction to a substance that is normally harmless. With allergies, your body sees the substance as harmful or foreign and your immune system reacts to the substance. Substances that can cause an allergic reaction are called allergens.

A severe allergic reaction is life threatening.

What is the cause?

Your immune system is your body's natural defense against bacteria, viruses, and other foreign substances. Before you can have a reaction to a particular substance, your immune system must first be sensitive to it. Usually this means your body must have been exposed to the substance at least once before. Once it is sensitive to it, your body will react every time you have contact with the substance.

A severe allergic reaction is caused by your whole body overreacting to a substance you are allergic to. The reaction causes blood vessel walls to relax and leak fluid into body tissue. This can cause swelling in your airway and trouble breathing. It can also make your blood pressure drop suddenly and cause you to go into shock.

A severe allergic reaction may be caused by many things. Common causes include:

- Food such as nuts, peanuts, shellfish, or food additives
- Insect stings and bites
- Medicines
- Latex, which is a liquid from rubber trees that is used in many products such as gloves and toys
- Anesthetics (medicine given to prevent pain during surgery)
- In rare cases, pollens, dust, perfume, chemicals, animal dander (dried skin flakes) or other substances in the air such as the smoke from burning poison ivy, poison oak, or poison sumac

What are the symptoms?

Symptoms usually start within seconds to minutes, rarely hours, after contact with the substance. Symptoms may include:

- Severe trouble breathing, including wheezing
- Swelling of your lips, tongue, or throat
- Hives (raised, red, itchy areas on your skin)
- Pale, cool, damp skin
- Fast or pounding heartbeat
- Nausea and vomiting
- Feeling intense fear that something terrible is about to happen
- Drowsiness, confusion, or fainting

How is the cause diagnosed after the emergency has been treated?

Your healthcare provider will ask about your symptoms and medical history and examine you. The cause may be clear, such as if you had a bee sting, for example.

Tests may include:

- Blood tests
- A skin prick test, which uses a drop of allergen extract (liquid) put under your skin using a needle
- Elimination diet, which means you avoid eating certain foods for a few weeks to see if allergy symptoms go away
- Food challenge test, which is eating food that is a possible allergen to see if you have a reaction. This test is done only by a healthcare provider who is ready to treat you if you have a serious reaction to the food.

How is it treated?

A severe allergic reaction is life-threatening and usually needs to be treated with epinephrine. Epinephrine relaxes the muscles in your airways and throughout your body. It is usually given as a shot. You may need more than one shot to decrease your symptoms.

If you are known to have severe allergic reactions, your provider may want you to carry an emergency kit. You or someone with you can give you the epinephrine shot.

Even if you have epinephrine, call 911 or your local emergency services right away for all severe allergic reactions.

You may receive oxygen through a small tube placed in your nose or through a mask placed over your face. In very severe cases, you may need a tube put into your windpipe to help you breathe.

You may have an IV in your arm for fluids and medicines. Along with the epinephrine shot, other kinds of medicines may be used to treat a severe allergic reaction:

- Antihistamines to block the effect of histamine and help reduce your symptoms. Histamine is a chemical your body makes when you have an allergic reaction. Do

not give antihistamines to children under the age of 4. If your child is between the ages of 4 and 6, ask your healthcare provider before giving antihistamines.

- Steroids help to lessen irritation and swelling in your body. By lessening the swelling, you will have fewer symptoms and be able to breathe better.
- Bronchodilators to open your airways and make it easier to breathe.

You may need to stay in the emergency room or hospital to make sure that your blood pressure and heartbeat go back to normal. You will also be watched to make sure that the allergy symptoms don't come back as the effect of the medicines wears off.

If someone else is having a severe allergic reaction:

- Call 911 or local emergency services for help right away.
- If you know CPR, check for breathing and a pulse and start CPR if necessary.
- Turn the person on their side if they start to vomit.
- See if the person is wearing a medical ID bracelet or necklace that says what kind of allergy they have.

How can I take care of myself and prevent a severe allergic reaction?

You may have a higher risk if you have had a prior severe allergic reaction, a history of asthma or allergies, or a family history of anaphylaxis. To prevent some types of severe allergic reactions, your healthcare provider may recommend immunotherapy. This treatment includes shots or pills containing small amounts of the substances you are allergic to. It may be recommended if your allergy symptoms cannot be controlled with medicine. It may take several months of treatment before your symptoms get better.

Follow the full course of treatment prescribed by your healthcare provider. In addition:

- Learn what substances cause you to have an allergic reaction and avoid those substances. If you have drug or food allergies, always check labels before taking any prescription or nonprescription medicines or eating any foods. Always read labels and ask about ingredients in restaurant or cafeteria foods.
- Tell all pharmacists, healthcare providers, and dentists who treat you about any allergies you have and your reactions. Some medicines contain ingredients that might cause an allergic reaction.
- If you were prescribed an emergency kit, carry it at all times. Use it as directed by your provider. Check the expiration date for the medicine and replace it as needed to make sure it will work.
- Wear a medical alert bracelet or necklace that warns of your allergy and tells what to do in case of an emergency. Teach family members and coworkers how to help you if you have a severe reaction.

Ask your provider:

- How and when you will get your test results
- If there are activities you should avoid and when you can return to normal activities
- How to take care of yourself at home

- What symptoms or problems you should watch for and what to do if you have them

Make sure you know when you should come back for a checkup. Keep all appointments for provider visits or tests.

For more information contact:

- The Food Allergy & Anaphylaxis Network (FAAN)
800-929-4040
<https://www.foodallergy.org/>

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