

Anaphylaxis

What is Anaphylaxis?

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Anaphylaxis, or an anaphylactic reaction, is a severe, life-threatening allergic reaction. When anaphylaxis occurs, it must be treated immediately, or it can be fatal.

Any allergic reaction can be scary, but anaphylaxis is a heightened allergic reaction to an allergen. When exposed to an allergen, the body overreacts and releases chemicals, which then causes classic allergy symptoms. However, when the response is severe, anaphylaxis can occur.

General symptoms of allergies include:

- Runny nose
- Itchy eyes
- Watery eyes

These symptoms can still occur during anaphylaxis. However, other symptoms will also likely occur. These symptoms include:

- Skin reactions, such as hives, itchiness, flushing, or pallor
- Hypotension (low blood pressure)
- Constriction of the airways and swelling of the tongue, which causes difficulty breathing as well as wheezing
- A weak and rapid pulse
- Gastrointestinal symptoms, such as diarrhea, nausea, and vomiting
- Dizziness and fainting

Anaphylaxis typically occurs within five minutes after exposure to an allergen, but it may occur up to thirty minutes post-exposure – or even longer.

What Causes Anaphylaxis?

Anaphylaxis is caused by exposure to an allergen. Anything can be an allergen, but there are triggers that are much more common than others.

The most common anaphylaxis triggers in children are food allergies, and these include:

- Peanuts and tree nuts
- Fish
- Shellfish
- Milk

The most common anaphylaxis triggers in adults are:

- Peanuts and tree nuts
- Fish
- Shellfish
- Latex
- Stings from bees, fire ants, hornets, wasps, and yellow jackets
- Certain medications, such as antibiotics, over-the-counter pain medications, aspirin, and intravenous contrast dye that is used in imaging studies

Your risk of anaphylaxis is increased if you have had anaphylaxis in the past. In addition, future instances of anaphylaxis can become more severe. People with allergies or asthma are also at increased risk, as are people with heart disease and those with mastocytosis, which causes an abnormal accumulation of white blood cells.

How is Anaphylaxis Treated?

The single most effective treatment for anaphylaxis is epinephrine. Epinephrine is an emergency medication that is administered as an injection in a large muscle, often the thigh.

For people with severe allergies, a physician will prescribe epinephrine – generally two doses. Often, two doses (or more) are required to treat symptoms. Both doses should be carried at all times.

The epinephrine injection has an expiration date – check the expiration dates often. It should be replaced once it is expired. However, in an emergency, expired epinephrine should be administered rather than taking no epinephrine.

After receiving epinephrine, emergency treatment is typically required. This may include intravenous fluids, as well as medications to prevent shock to the circulatory system. Antihistamines and corticosteroids may also be prescribed.

Although not always possible, prevention of anaphylaxis is desirable. Here are tips for prevention of anaphylaxis:

- **Know your allergies.** Sometimes the first symptom of an allergy is anaphylaxis. If this happens, making an appointment with an allergist for allergy testing is of the utmost importance.
- **Wear a medical alert bracelet.** It should specify the type of allergy or allergies.
- **Keep a kit with emergency medications available at all times.** This should include epinephrine, and an antihistamine, and your physician can recommend other medications. Review the kit regularly for expiration dates.
- **Read labels.** If you have food labels, read labels often. The process by which packaged foods are made changes often, and this means that “safe” foods may no longer be safe. The only way that you will know is if you continually read labels.

The most important thing that you can do is to have a plan. Regardless of your allergy, you will likely be exposed to it at some point in time – even with the best of intentions. Knowing what to do when this happens can be life-saving. ■

Resources

- Cleveland Clinic. (2016, March 16). *Anaphylaxis: management and treatment*. Retrieved from <https://my.clevelandclinic.org/health/diseases/8619-anaphylaxis/management-and-treatment>
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