

Education

Allergies

What are allergies?

Allergies are a reaction by the body's immune system to harmless substances that it sees as harmful. The allergy-causing substances are called allergens.

How do they occur?

Your immune system is your body's natural defense against infection and other foreign material. Before you can have a reaction to a particular substance, your immune system must first be sensitized to it. This means your body has to have been exposed to the substance at least once before. Once sensitized, your body will react every time you have contact with that substance. Many substances can cause an allergic reaction. The most common are:

- pollen
- mold
- animal dander
- dust and dust mites
- latex
- medicines
- insect stings
- foods.

The allergens may cause different kinds of allergic reactions. The most common allergic conditions are hay fever, asthma, and skin allergies.

- Airborne allergens such as mold and the pollen of trees, grasses, and weeds cause hay fever.
- Pollens, molds, and house dust can trigger asthma attacks.
- Allergic reactions of the skin can have many possible causes. Examples of irritants that can cause allergic reactions when they touch your skin are hair or skin care products, nickel in jewelry and belt buckles, dyes in leather or fabric, and poison ivy or poison oak. Eczema is a skin condition that causes itching, dryness, fine scales or flaking, and sometimes mild redness. The cause of eczema is usually not known.

It is also possible to have an allergic reaction to sunlight or temperature extremes.

Common foods that may cause allergy symptoms are shellfish, eggs, milk, nuts, and peanuts. Food allergies often occur in children, who may outgrow them.

It is not known why some people develop allergies to certain substances. Allergies run in families, but not every family member may be allergic to the same thing.

Sometimes an allergic reaction may be severe. This is called anaphylaxis. It is a life-threatening emergency that can affect breathing and circulation within several minutes. Insect stings, certain foods, and drugs such as penicillin are some of the more common causes of severe allergic reactions.

What are the symptoms?

The symptoms of an allergic reaction depend on the type and severity of the reaction. Common symptoms of an allergy are:

- sneezing
- watery eyes
- stuffy or runny nose
- itching
- swelling

- a rash or hives (raised, red, itchy areas on the skin)
- stomach cramps
- diarrhea.

Some of the symptoms of a severe allergic reaction are:

- fast pulse
- trouble breathing, including wheezing
- nausea and vomiting
- swelling of the lips, tongue, or throat
- hives
- pale, cool, damp skin
- drowsiness, confusion, or loss of consciousness.

How are they diagnosed?

Your health care provider will ask about your history of symptoms and examine you.

You may have tests to find out which allergens are causing your symptoms. For most people the best tests are skin scratch or prick tests. For these tests your provider looks for reactions to tiny amounts of suspected allergens placed under your skin. In some cases you may have blood tests to help find what you are allergic to.

To identify a food allergy, your provider may suggest that you try to find which foods cause a reaction by not eating certain foods for a while. Then you can carefully try eating these foods again, one by one, to see if your symptoms come back.

How are they treated?

Mild symptoms may not need treatment. Or, depending on the type of allergy you have and your symptoms, your health care provider may prescribe:

- decongestants
- antihistamines
- steroid medicine
- quick-acting, inhaled bronchodilators to treat breathing problems
- other types of inhaled medicines to prevent breathing problems.

In some cases, your provider may suggest allergy shots. A mixture is prepared that contains the allergens identified in your allergy tests. The mixture is injected into your skin in tiny but increasing amounts over the course of many months. Over time, the shots make you less sensitive to the allergens. Usually after 4 to 6 months of allergy shots you will begin to have relief from your allergies. However, you will probably need to continue the shots for 2 to 3 years or longer.

If you have severe allergies, your provider may prescribe an emergency kit for you to carry with you at all times. Examples of brand names for these kits are EpiPen and Ana-Kit. These kits contain a ready-to-use syringe of epinephrine. If you have a severe allergic reaction, someone with you can give you a shot of this medicine to counteract the allergy symptoms until you get medical care. These kits are not intended as the sole treatment of an allergic reaction. Rather, they "buy" time to get to treatment.

If you have a severe allergic reaction, call 911 right away. Use an EpiPen or Ana-Kit if you have one. Once you know that you have a severe allergy, always carry an Epi-pen or Ana-Kit. Teach family members and coworkers how to help you if you have a severe reaction.

How long will the effects last?

The effects of an allergic reaction depend on how much you have been exposed to an allergen and how severe your allergy is. You may have symptoms for several minutes, hours, or days. Some people outgrow their allergies. Others may have allergies all their life.

How can I take care of myself?

- Follow your health care provider's instructions.
- Try to avoid the things you are allergic to.
- If you tend to have severe allergy reactions, ask your provider about carrying medicine with you, such as an EpiPen or Ana-Kit, for emergency use. Wear an ID, such as a Medic Alert bracelet, that lists your severe allergies.

How can I help prevent allergies?

There is no known way to prevent allergies. However, some research has shown that breast-fed babies may be less likely to develop allergies and asthma. Also, if your family has a very strong history of allergies, you might try to avoid your family's most common allergens. For example, you may need to stay away from cats. This might help stop you from developing severe symptoms.

Cigarette smoke can make hay fever and asthma symptoms worse. You can help your symptoms by not smoking. It also helps to avoid being around others who are smoking.

Where can I get more information?

Many organizations provide support and information for people with allergies and asthma. Here are a few:

- The American Academy of Allergy, Asthma & Immunology offers a variety of services. They can provide educational materials, pollen count reports and maps, and a physician referral directory. Call 800-822-2762 or visit their Web site at <http://www.aaaai.org>.
- The Asthma and Allergy Foundation of America offers educational programs and services. They also offer asthma and allergy support groups across the country for adults, parents, teens, and caregivers. Call 800-727-8462 or visit their Web site at <http://www.aafa.org>.
- The American Lung Association offers educational materials and support group information. Check your local telephone listings for a chapter near you, call 800-586-4872, or visit their Web site at <http://www.lungusa.org>.
- The Food Allergy & Anaphylaxis Network is a worldwide network that provides educational materials, allergy alerts, and research studies related to food allergies. Call 800-929-4040 or visit their Web site at <http://www.foodallergy.org>.

For more information about local support groups in your community, contact your health care provider or local hospital.

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