

Danbury Hospital Patient Education Sheet**What Causes an Allergic Reaction?****What causes an allergic reaction?**

An allergic reaction is a highly sensitive response to a substance either in the environment or a substance that has been eaten or drunk. This substance is sometimes referred to as a "trigger" or "allergen." Not everyone will be sensitive or allergic to the same triggers. Severity of allergic reactions may range from very mild to severe. Severe allergic reactions are called anaphylaxis (an-u-full-acks-is) and can be life-threatening.

There are several causes of allergic reactions. Examples include:

- Environmental triggers such as dust, pollen, and mold
- Chemicals that are either inhaled or come in contact with the skin
- Medications
- Some foods, such as eggs, peanuts, berries, and seafood.

What is an allergic skin reaction?

Allergic skin reactions may be caused by many things and can take several forms. Typical symptoms of a skin allergic reaction include skin that is:

- Itchy
- Red
- Scaly or flaky
- Bumpy
- Swollen

Hives are red, itchy, swollen areas on the skin that vary in size and can appear anywhere on the body. Hives are often caused by allergies to a food, medication, or a contact substance such as latex. These reactions often occur within minutes to an hour after swallowing or exposure. Hives will usually go away on their own when the allergen is removed.

Allergic contact dermatitis is an itchy, red, blistered reaction that occurs after contact with plants such as poison ivy, poison oak, or poison sumac; or from other substances such as nickel, perfumes, dyes or latex. These reactions occur within 24 to 48 hours after contact with the plant or substance; and once the reaction starts, it takes 2 to 3 weeks to resolve.

Irritant contact dermatitis is a painful and sometimes itchy reaction to a substance that comes in contact with the skin. This may be detergents, soaps, or other cleaning agents, as well as caustic chemicals. The more concentrated the chemical, the worse the reaction. Irritant contact dermatitis will often appear on the hands.

Atopic dermatitis or eczema is a red, scaly, itchy rash that at times oozes and at other times appears very dry. Eczema is common in individuals with a history of asthma or hay fever (allergic rhinitis). There are several triggers that affect eczema, such as wool, pets, soaps, detergents and cleaning products.

What is allergic rhinitis or hay fever?

Allergic rhinitis or hay fever is an allergy to pollen. This is very common and affects individuals during the spring, summer, and fall months when plants release pollen into the air. Symptoms of hay fever will often mimic respiratory infections, such as:

- Sneezing
- Runny or clogged nose
- Watery eyes
- Coughing
- Itchy eyes, nose, throat
- Red, swollen eyes

Your physician will diagnose allergic rhinitis through skin tests and blood tests. Both test for antibodies or disease-fighting cells that determine what is causing the allergic reactions. Treatment includes avoiding

the allergens, using antihistamine medications, and sometimes allergy shots to desensitize the body.

What is an anaphylaxis reaction?

Anaphylaxis is a severe allergic reaction that can be life-threatening. It occurs within seconds to minutes of exposure to an allergen to which you are hypersensitive. Anaphylaxis occurs when large amounts of chemicals are released by the immune system. This causes a subsequent drop in blood pressure, narrowing of air passageways, and shock. Symptoms of anaphylaxis include:

- Weak, rapid pulse
- Skin rash
- Difficulty breathing
- Nausea
- Vomiting
- Loss of consciousness

Allergens that cause anaphylaxis in some people include:

- Certain medications, such as penicillin
- Foods, such as peanuts, walnuts, shellfish, eggs
- Insect stings from bees, yellow jackets, wasps, and hornets
- Latex
- Medications used in general anesthesia
- Dyes used during medical testing, such as during X-Ray imaging and CT scans.

What to do in an emergency:

If you are with someone who is having an anaphylactic reaction, it is extremely important to get help right away. This would include:

- ✓ Calling 9-1-1
- ✓ Checking the person's pulse and breathing, and administering CPR if necessary
- ✓ Giving the person any medication they may be caring to counteract the reaction, such as epinephrine.

How is anaphylaxis treated?

During an anaphylaxis reaction, emergency personnel may need to administer CPR if breathing has stopped. They may also administer the following:

- Epinephrine or adrenaline to reduce the body's allergic response
- Oxygen
- Intravenous antihistamines to reduce inflammation of the breathing passages
- Albuterol to relieve difficulty breathing
- Steroid medications to prevent further symptoms.

Prevention Methods

The best way to prevent further episodes of anaphylaxis is to avoid the substance that triggers the episodes. Also, it is important to:

- ✓ Wear a medic alert bracelet to alert others that you have the allergy
- ✓ Keep a properly stocked emergency kit, including carrying epinephrine, if ordered by your physician, in the event of a reaction.
- ✓ Move away slowly from stinging insects and avoid slapping at them. Always wear footwear outside to prevent stepping on stinging insects.
- ✓ Carefully read all food labels if you have food allergies. When eating out, ask questions regarding ingredients in foods if not written on menus.
- ✓ Be sure to tell your health care providers of any allergies you may have to medications, foods, or triggers in the environment.

Source:

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Mayo Clinic. (2008). Anaphylaxis. Retrieved from www.mayoclinic.com
U.S. Food and Drug Administration. (2005). Allergies to hay fever. Retrieved from www.fda.gov

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