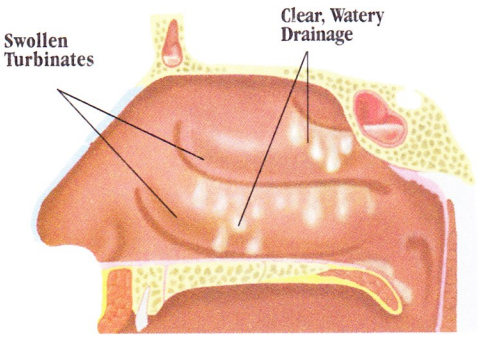
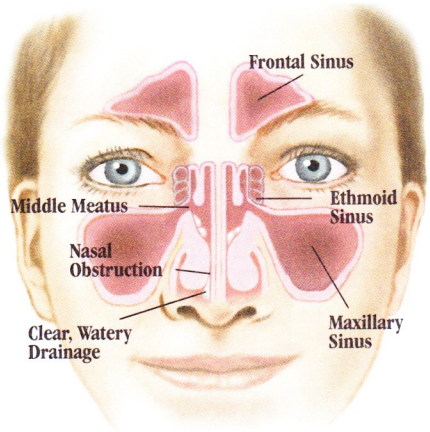
Understanding allergies





What are allergies?

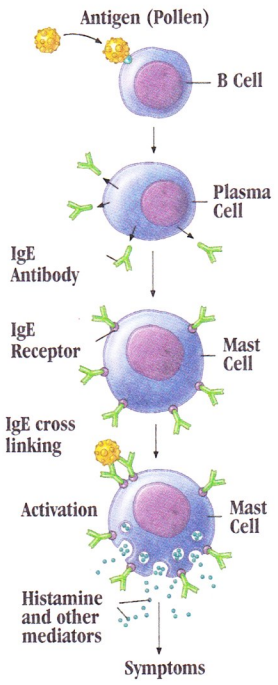
An allergy is a response by your body to a substance that you have inhaled, swallowed or touched. Your immune system recognizes this intruder and triggers a chain of reactions that cause symptoms such as sneezing, itchiness, runny nose, and nasal congestion (stuffy nose).

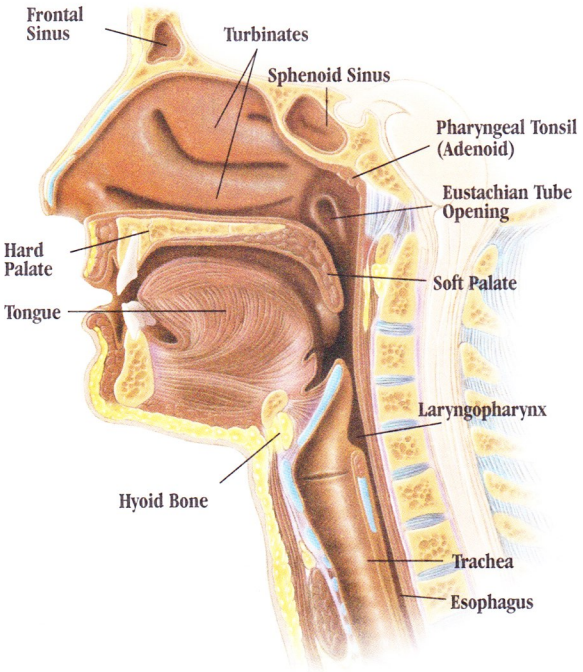
The real purpose of your immune system is to recognize harmful invaders, such as bacteria and viruses (which can cause infections), and to trigger a reaction to get rid of them. But, in people with allergies, their immune system overreacts to ordinarily harmless substances called allergens. Typical allergens include pet dander, pollen, dust, and mold.

The medical term for nasal allergy symptoms is allergic rhinitis. The term *rhinitis* comes from the ancient Greek word *rhinos* for nose; the term *itis* means inflammation. There are two types of allergic rhinitis:

Seasonal allergic rhinitis – nasal allergies that change with the seasons due to pollen from plants.

Perennial rhinitis – year-round nasal allergies, which are caused by substances such as dust mites, mold spores, feathers, or pet dander.





How an allergic reaction occurs

An allergic reaction occurs after you have become sensitized to the allergen and have developed an allergy.

STEP 1: You come in contact with the allergen again – in this case, you inhale ragweed pollen.

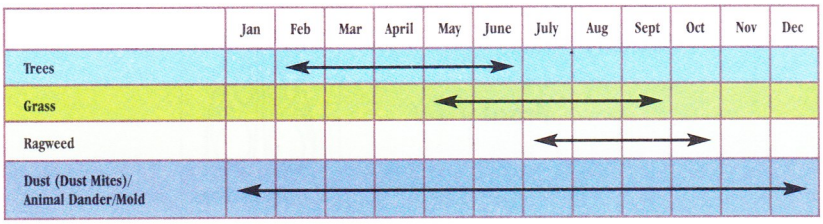
STEP 2: The IgE antibodies in your nose recognize the ragweed pollen.

STEP 3: The IgE antibodies on the mast cells and basophils capture the pollen, and in doing so, trigger a series of reactions, leading to the release of several chemicals, including histamine.

STEP 4: Histamine comes in contact with nerve endings, and causes sneezing and itching. It also comes in contact with glands that produce mucus, causing a runny nose. When histamine comes in contact with small blood vessels, it causes redness and swelling in the lining of the nose, resulting in nasal congestion (stuffy nose).

STEP 5: Other chemicals set off other chain reactions that keep the allergic reaction going. This "domino effect" is the reason why you still have allergy symptoms long after the allergen is gone.

Allergic rhinitis calendar



NASONEX®
(mometasone furoate monohydrate)
Nasal Spray, 50 mcg*
*calculated on the anhydrous basis

NASONEX® Nasal Spray is indicated for the treatment of the nasal symptoms of seasonal and perennial allergic rhinitis, in adults and pediatric patients 2 years of age and older.

Important Safety Information
Ask your doctor about NASONEX®. Talk to your doctor or health care professional to see whether NASONEX® is right for you or your child. Side effects were generally mild and included headache, viral infection, sore throat, nosebleeds, and coughing.

Please ask your health care provider for additional important safety information. NASONEX® is available by prescription only.

Allergies---What are they??

Definition

Allergies occur when your immune system reacts to a foreign substance such as pollen, bee venom or pet dander. The immune system produces proteins known as IgE antibodies. These antibodies protect you from unwanted invaders that could make you sick or cause an infection. When you have allergies, your immune system makes antibodies that identify your particular allergen as something harmful, even though it isn't. This triggers the release of histamine and other substances that cause allergy symptoms.

Allergies can cause symptoms that involve your skin, sinus or airways or digestive system. The severity of allergies varies from person to person and can range from minor irritation to anaphylaxis---a potentially life-threatening emergency. While allergies can't be cured, a number of treatments can help relieve your allergy symptoms.

Symptoms

Allergy symptoms depend on your particular allergy, and can involve the airways, sinuses and nasal passages, skin and digestive system. In most cases, an allergic reaction is a nuisance that causes irritating but minor symptoms. Severe allergic reactions can be more dangerous because they're likely to involve several of the body's organ systems. In some severe cases, allergies can trigger a lift-threatening reaction in your body known as anaphylaxis.

Hay fever, also called allergic rhinitis, may cause:

- Congestion
- Itchy, runny nose
- Itchy, watery or swollen eyes (conjunctivitis)

Causes

An allergy starts when the immune system mistakes a normally harmless substance for a dangerous invader. The immune system then produces antibodies that are always on the alert for your particular allergen. When you're exposed to the allergen again in the future, these antibodies release a number of immune system chemical, such as histamine, that causes allergy symptoms.

Treatments and drugs

Allergy treatment includes:

- **Allergen avoidance.** Your doctor will help you take steps to identify and avoid your allergy triggers. This is generally the most important step in preventing allergic reactions and reducing symptoms.
- **Medications to reduce symptoms.** Allergy medication can help reduce your immune system reaction and ease symptoms. The drugs you use depend on the type of allergy you have. They can include over-the-counter or prescription medications in the form of oral medications, nasal sprays or eye drops. Some common allergy medications include corticosteroids, antihistamines, decongestants, cromolyn sodium and leukotriene modifiers.
- **Immunotherapy.** For severe allergies or allergies not relieved by other treatment, your doctor may recommend allergy shots (immunotherapy). This treatment involves a series of injections of purified allergen extracts, usually given over a period of a few years.

Lifestyle and home remedies

Some allergy symptoms improve with home treatment

- **Sinus congestion and hay fever symptoms** often improve with nasal lavage---rinsing out the sinuses with a saline solution. We recommend the Neil Med Sinus wash kit with a specially designed bottle to flush out thickened mucus and irritants from your nose.
- **Mold allergy symptoms** may be alleviated by avoiding outdoor work in damp weather, wearing a dust mask while working outdoors, and keeping your windows closed at night
- **Household airborne allergy symptoms,** such as those caused by dust mites or pet dander, may improve by taking steps to reduce your exposure to allergens. Steps include frequently washing bedding and stuffed toys in hot water, maintaining low humidity, regularly using a vacuum with a fine filter such as a high-efficiency particulate air (HEPA) filter and replacing carpeting with hard flooring.

Anaphylaxis

Anaphylaxis is a life-threatening type of allergic reaction.

Causes, incidence, and risk factors

Anaphylaxis is a severe, whole-body allergic reaction to a chemical that has become an allergen. After being exposed to a substance such as bee sting venom, the person's immune system becomes sensitized to it.

When the person is exposed to that allergen again, an allergic reaction may occur. Anaphylaxis happens quickly after the exposure, is severe, and involves the whole body.

Tissues in different parts of the body release histamine and other substances. This causes the airways to tighten and leads to other symptoms.

Anaphylaxis can occur in response to any allergen. Common causes include:

- Drug allergies
- Food allergies
- Insect bites/stings

Pollens and other inhaled allergens rarely cause anaphylaxis. Some people have an anaphylactic reaction with no known cause.

Anaphylaxis is life-threatening and can occur at any time. Risks include a history of any type of allergic reaction.

Symptoms

Symptoms develop quickly, often within seconds or minutes. They may include the following:

- Abdominal pain
- Abnormal (high-pitched) breathing sounds
- Anxiety
- Chest discomfort or tightness
- Cough
- Diarrhea
- Difficulty breathing
- Difficulty swallowing
- Dizziness or light-headedness
- Hives, itchiness
- Nasal congestion
- Nausea or vomiting
- Palpitations
- Skin redness
- Slurred speech
- Swelling of the face, eyes, or tongue
- Unconsciousness
- Wheezing

Signs and tests

Signs include:

- Abnormal heart rhythm (arrhythmia)
- Fluid in the lungs (pulmonary edema)
- Hives
- Low blood pressure
- Mental confusion
- Rapid pulse
- Skin that is blue from lack of oxygen or pale from shock
- Swelling (angioedema) in the throat that may be severe enough to block the airway
- Swelling of the eyes or face
- Weakness
- Wheezing

Treatment

Anaphylaxis is an emergency condition that needs professional medical attention right away. Call 911 immediately.

Check the person's airway, breathing, and circulation (the ABC's of Basic Life Support). A warning sign of dangerous throat swelling is a very hoarse or whispered voice or coarse sounds when the person is breathing in air. If necessary, begin rescue breathing and CPR.

1. Call 911.
2. Calm and reassure the person.
3. If the allergic reaction is from a bee sting, scrape the stinger off the skin with something firm (such as a fingernail or plastic credit card). Do not use tweezers -- squeezing the stinger will release more venom.
4. If the person has emergency allergy medicine on hand, help the person take or inject the medication. Avoid oral medication if the person is having difficulty breathing.
5. Take steps to prevent shock. Have the person lie flat, raise the person's feet about 12 inches, and cover him or her with a coat or blanket. Do NOT place the person in this position if a head, neck, back, or leg injury is suspected, or if it causes discomfort.

DO NOT:

- Do NOT assume that any allergy shots the person has already received will provide complete protection.
- Do NOT place a pillow under the person's head if he or she is having trouble breathing. This can block the airways.
- Do NOT give the person anything by mouth if the person is having trouble breathing.

Paramedics or other health care providers may place a tube through the nose or mouth into the airways (endotracheal intubation) or perform emergency surgery to place a tube directly into the trachea (tracheostomy or cricothyrotomy).

The person may receive antihistamines, such as diphenhydramine, and corticosteroids, such as prednisone, to further reduce symptoms (after lifesaving measures and epinephrine are given).

Expectations (prognosis)

Anaphylaxis is a severe disorder that can be life-threatening without prompt treatment. However, symptoms usually get better with the right therapy, so it is important to act right away.

Complications

- Airway blockage
- Cardiac arrest (no effective heartbeat)
- Respiratory arrest (no breathing)
- Shock

Calling your health care provider

Call 911 if you develop severe symptoms of anaphylaxis. If you are with another person, he or she may take you to the nearest emergency room.