Environmental Allergens

Allergies to Dust, Mold and Pollen

A Patient’s Guide
Our environment, at home or outdoors, can be a potent source of allergens causing itchy, puffy and watery eyes, sneezing, a runny nose or nasal congestion, as well as hives or skin rashes in the case of skin contact. Dust, mold and pollen are some of the most common culprits.

An allergy is your body’s way of saying “I don’t like it” to a substance to which you are hypersensitive. Such substances, which are normally harmless, are called allergens. Allergens cause your body’s immune system to produce antibodies, called IgE, to protect you. The IgE antibodies, in turn, cause the release of inflammatory chemicals such as histamines, resulting in allergy symptoms from mild to life-threatening.

The IgE antibodies responsible for allergic reactions are specific to each allergen — for example, the IgE antibody to pollen from a birch tree is different from the IgE antibody to pollen from ragweed or any other allergen such as dust, mold or a specific food.

Allergy testing allows your doctor to find out what is causing your allergic reaction. Your doctor may order a skin test — your skin is pricked and exposed to potential allergens to see if you develop a raised bump or reaction. Or your doctor may order a blood test.

Blood testing tells your doctor which IgE antibody or antibodies your body is producing and therefore which allergens are likely to cause a reaction. A small sample of your blood is mixed with different allergens to look for chemical reactions. The reaction is recorded and analyzed by a computer and reported to your doctor. Blood testing can determine how much of a specific IgE your body is producing. This helps the doctor gauge the extent of your allergy and is important if immunotherapy (allergy shots) is used.

Blood testing has some other advantages, too. It is more convenient. Since one blood sample can be used to test for many allergens, it may require fewer visits to your doctor’s office. For children, it means one needle stick for a blood test rather than multiple sticks for skin tests. Also, blood testing does not require introducing suspected allergens to the skin, as skin testing does. This avoids any potential interactions with medications you may be taking.

Allergy medications can help symptom relief or long-term control in the case of asthma. Antihistamines and inhaled corticosteroids can reduce inflammation and control symptoms of allergic rhinitis. Nasal sprays containing cromolyn sodium can help reduce symptoms. Similarly, leukotriene modifiers reduce inflammation and decrease mucus production by blocking the action of certain immune system chemicals.

Immunotherapy (allergy shots) is an option if you have hay fever symptoms or allergic asthma that doesn’t improve with medications or if you aren’t able to take allergy medications without side effects. Immunotherapy desensitizes you to specific allergens by administering gradually stronger doses of allergy extracts.
**Dust mite allergy** is your immune system’s reaction to protein produced by a microscopic mite that thrives in dust, especially in warm environments such as bedding, upholstered furniture and carpeting in your home. This reaction triggers inflammation in the lining of the nasal passages (allergic rhinitis), causing sneezing, runny nose and other signs and symptoms associated with hay fever. For some people, dust mite allergy may cause inflammation and contraction of airways of the lungs (asthma), resulting in wheezing, shortness of breath and other breathing difficulties.

**Mold allergy** is your immune system’s overreaction to mold spores you inhale. Like dust mite allergy, mold allergy can make you cough, make your eyes itch and cause other symptoms that make you miserable. In some people, mold allergy is linked to asthma, and exposure causes restricted breathing and other airway symptoms.

**Symptoms of dust mite allergy and mold allergy** are similar.

- Sneezing, runny or stuffy nose
- Itchy eyes, nose and throat
- Cough and postnasal drip
- Facial pressure and pain
- Swollen, blue-colored skin under your eyes
- In a child, frequent upward rubbing of the nose

Certain allergies caused by mold can be more severe, resulting in **asthma** or **allergic fungal sinusitis** (“fungal ball”). **Allergic bronchopulmonary aspergillosis**, a fungal infection of the lungs, can occur in people with asthma or cystic fibrosis. **Hypersensitivity pneumonitis**, a rare condition in which mold spores cause the lungs to become inflamed, can be triggered by exposure to allergy-causing dust at work.

**See your doctor if symptoms persist.** Some signs and symptoms of dust mite or mold allergy, such as a runny nose or sneezing, are similar to those of the common cold. If symptoms persist for more than one week, call your doctor. If your signs and symptoms are severe — such as severe pain, difficulty sleeping, or wheezing — call your doctor right away. Seek emergency care if wheezing or shortness of breath rapidly worsens or if you are short of breath with minimal activity.

**Prevention is the best medicine.**

- **Eliminate dust collectors** such as upholstered furniture, carpeting, wall hangings and drapes from rooms where you spend most of your time. Choose plastic, metal, wood or washable stuffed toys. Wet-mop and vacuum frequently.
- **Eliminate allergen sources from bedding** by choosing allergen-proof materials, avoiding wool or down bedcovers that trap dust easily, and changing sheets and pillowcases regularly.
- **Reduce humidity.**
  - Dehumidify and heat your basement
  - Keep a light on in damp closets
  - Ventilate crawl spaces
  - Vent the clothes dryer to the outside
  - Don’t leave damp clothes sitting in the washing machine
  - Reduce the number of plants and terrariums
- **Prevent mold growth** by cleaning dehumidifiers, humidifiers and air conditioners regularly. Paint damp areas with mold-inhibiting paint.
- **Avoid spreading allergens** throughout the house by maintaining clean, adequate filters for home heating and air conditioning systems.
- **Use air filtration systems** to purify the air. However, air purifiers will not remove dust mites because dust mites are too heavy to remain airborne long enough to be filtered.
**Pollen** is the tiny, egg-shaped male cells of flowering plants including trees, grasses and weeds. These microscopic, powdery granules are necessary for plant fertilization and can remain airborne for hundreds of miles. Pollen can enter your home through cracks around doors and windows. It can be carried into your home on pets or your clothing, and it can be stirred up again when you vacuum or walk through your house.

Pollen can get into your airways (mouth, nose, throat and lungs) through your breathing or the lining of your eyes. Pollen is one of the most common causes of hay fever, a strong immunological response also called allergic rhinitis. The most common symptoms are itchy, puffy and watery eyes, sneezing, and a runny nose or nasal congestion. In more severe cases, airborne allergens can cause reduced lung capacity and difficulty breathing. Contact allergens can manifest in hives or skin rashes.

**Risk factors** for pollen allergy include family history, frequent exposure to pollen, especially during pregnancy or an illness, and other allergic conditions such as eczema or asthma and nasal polyps (small, non-cancerous growths in the lining of the nose).

Depending on where you live in the United States, the pollen season can begin as early as January. Generally, the pollen season lasts from February or March through October.

- **Trees**, including birch, oak, cottonwood, American elm and maple, pollinate earliest, from late February through May.
- **Grasses** follow next in the cycle, beginning pollination in May and continuing until mid-July. This category includes Bermuda grass, bluegrass, johnsongrass, ryegrass, timothy and velvet grass.
- **Weeds**, including ragweed, lamb’s-quarter, mugwort, nettle, pigweed and goldenrod, usually pollinate in late summer and early fall.

**Prevention is the best medicine.**

- **Learn about the pollen cycles in your area;** many newspapers, television news broadcasts and websites report pollen counts. You can download pollen maps for nine different U.S. regions at www.hycorbiomedical.com
- **Close doors and windows** during pollen season. Make sure windows are caulked and sealed. Use air-conditioning in your house and car if possible.
- **Remain indoors** in the mornings (5 AM to 10 AM) when pollen levels are highest, when humidity is high, and on windy days.
- **Do not dry clothes outdoors.**
- **Avoid mowing the grass** or other yard work.
- **Wear face masks** designed to filter out pollen if you must work outdoors.
- **Wash your hair, face, arms and legs** after performing outdoor tasks.
- **Keep gardening or other outdoor clothing outside.**
- **Bathe pets frequently;** they can bring pollen inside on their fur.
- **Take a vacation during the height of the pollen season** in a more pollen-free area, such as the beach.
- **Ask your doctor for recommendations about air purifiers** and other products that may reduce pollen levels in your home.

**Talk to your doctor** if you think you may have an allergy. Your doctor can perform a number of simple, painless and quick tests to determine your current level of sensitivity to different allergens and your risk of developing an allergy in the future. Your doctor can also provide an effective treatment plan for your symptoms and helpful hints to make living with your allergy easier.