

Allergy Testing for Persons with Asthma

Frequently Asked Questions

What are allergies?

Allergy problems (“allergies”) happen when a person’s immune system overreacts to an allergen. An allergen is any substance that causes the immune system to overreact (“allergic reaction”).

How do allergies affect asthma?

For persons with asthma and allergies, exposure to allergens can increase asthma symptoms and trigger asthma attacks. In these individuals, exposure to allergens can also cause symptoms such as sneezing, stuffy nose, or itchy eyes.

Why is allergy testing for inhalant allergens important in asthma?

Inhalant allergens (e.g., pollens, molds, animal dander, and house dust mites) appear to be the most important for children and adults with asthma. Allergic individuals with asthma often experience chest, nose, or eye symptoms soon after they are exposed to inhalant allergens. Food allergens are not a common cause of asthma symptoms.

When should allergy testing be administered in persons with asthma?

The recommendation is that children and adults with persistent asthma receive allergy testing, particularly for indoor inhalant allergens (animal dander, house dust mites, cockroaches, and certain molds). Also, allergy testing can be considered for persons with intermittent asthma.

What does allergy testing look for?

Allergy testing looks for a substance in the body called Immunoglobulin E (IgE). IgE is a cause of allergies. Some individuals have IgE for only one type of allergen (e.g., cat), other individuals have IgE for multiple types of allergens (e.g., cat, cockroach, and ragweed), and others have no IgE for any allergens. Allergy testing can show whether an individual has IgE for zero, one, or more than one allergen.

Allergy testing for persons with asthma usually looks for IgE for inhalant allergens that are known to commonly affect asthma symptoms. Some inhalant allergen sources can be present in any season, such as animal dander, indoor mold, and cockroach. In contrast, levels of pollens and outdoor mold can vary by season, depending on the geographic region.

Also, allergens tested during inhalant allergy testing can vary by geographic region, because some allergens are found only in certain parts of the United States.

How is allergy testing administered?

Allergy testing can use skin testing or blood testing to look for IgE for allergens. Each method has its benefits and its drawbacks.

Compared to blood testing, allergy skin testing provides results more quickly (within one hour). However, not all health-care providers have the resources and knowledge to conduct allergy skin testing. Also, some individuals with asthma cannot receive skin testing because of certain medical problems they have or because of certain medications they take.

If allergy skin testing is not possible, blood testing for allergies can be used. Waiting for allergy blood test results usually takes longer than waiting for allergy skin test results. Persons who receive allergy blood testing usually wait at least one day (or several days or weeks) for their test results.

How are allergy test results used?

Both allergy test results and asthma symptoms are important information for persons with asthma. Because allergies found during allergy testing do not always trigger asthma symptoms, health-care providers can find out if an individual's asthma symptoms relate to his or her allergy test results. Sometimes, allergens found during allergy testing can affect an individual's asthma without him or her realizing it. Health-care providers can use their expertise to assess which allergy test results are most important for each individual with asthma.

If one or more allergens appear to affect an individual's asthma, the recommendation is that the individual reduce or avoid exposure to those allergens. For example, during peak pollen times and peak pollen seasons, persons with asthma who are allergic to pollens are advised to stay indoors with windows closed in an air-conditioned environment.

Another recommendation is that these individuals take multiple actions to avoid exposure to allergens, because single actions alone are not as effective. For example, an integrated pest management program is recommended for persons with asthma who are allergic to cockroaches. Integrated pest management includes: blocking cockroach entry into the home by sealing cracks and holes; removing sources of cockroach food by using sealed food containers and disposing of trash frequently; and, when necessary, applying low-toxicity pesticides (out of the reach of children and pets).

Additional Resources

Centers for Disease Control and Prevention

- Asthma: Basic Information: <http://www.cdc.gov/asthma/faqs.htm>
- Asthma: A Presentation of Asthma Management and Prevention (Slide Presentation and Speaker Notes): <http://www.cdc.gov/asthma/speakit/default.htm>
- Mold website: <http://www.cdc.gov/mold/default.htm>

Centers for Disease Control and Prevention and the Task Force on Community Preventive Services

- Home-based Multi-trigger, Multi-component Environmental Interventions: <http://www.thecommunityguide.org/asthma/index.html>

National Heart, Lung, and Blood Institute

- National Asthma Education and Prevention Program: Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma (July 2007 update): <http://www.nhlbi.nih.gov/guidelines/asthma/index.htm>