

Role of the Allergist/Immunologist

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If you have been diagnosed with asthma or allergies, your physician will likely refer you to an allergist/immunologist for care. You may wonder: What is allergic disease? How can an allergist/immunologist help? This brochure is intended to provide information on allergic disease and on the role that an allergist/immunologist plays in the appropriate management and treatment of these diseases.



What is allergic disease?

Approximately 50 million Americans suffer from some form of allergic disease. Allergic disease can develop at any age, and heredity plays a key role in who will develop it. If one parent has allergic disease, the estimated risk of the child to develop allergies is 48%, and the child's risk grows to 70% if both parents have allergies.

Symptoms of allergic disease are the result of events occurring in your immune system - the body's defense mechanism against harmful substances. The body of an individual with allergic disease identifies some substances, called allergens, as harmful. These substances, which are harmless to most people, trigger allergic reactions within that person's immune system.

When someone predisposed to allergic disease encounters an allergen to which they are sensitive, a chain of events occurs. The primary culprit instigating these events in people with allergies is an antibody called Immunoglobulin E, or IgE. IgE "defends" the body by seeking to remove the offending allergen(s) from the body's tissues and bloodstream. The first time an allergen enters an allergic person's body, IgE antibodies are produced in response. These antibodies then travel to cells called mast cells, attach themselves to these cells, and wait for the next time the allergen(s) enters the system.

When they do, the IgE antibodies "capture" the allergens, essentially removing them from circulation. The mast cells then assist further by releasing special chemicals called mediators. These mediators produce the classic symptoms of allergic reactions - swelling of body tissues, sneezing, wheezing, coughing and other symptoms. Due to the complexity of allergic disease, it is not yet fully understood why some substances trigger allergies and others do not, nor why every person does not develop an allergic reaction after exposure to allergens.

Types of allergic disease

Common allergic diseases include:

- *Allergic rhinitis*, or "hay fever." In the United States, approximately 35 million people suffer from this disease, which is characterized by sneezing, congestion, itching and dripping of the nose, and itchy, watery eyes.
- *Asthma*, a chronic lung disease characterized by coughing, chest tightness, shortness of breath and wheezing. Asthma affects more than 17 million Americans, and asthma cases appear to be increasing annually. Asthma symptoms may be triggered by allergens or other, non-allergic stimuli, such as respiratory tract infections, cold air or tobacco smoke.
- *Sinusitis and otitis media*, common allergic diseases often triggered by allergic rhinitis. Sinusitis is an inflammation of the nasal sinuses, which are hollow cavities within the cheek bones found around the eyes and behind the nose. This condition affects over 15% of the U.S. population. Otitis media - or common ear infections - is the most common childhood disease requiring physician care.

- *Atopic dermatitis*, also called *eczema*. Symptoms of this allergic skin condition include itching, reddening, and flaking or peeling of the skin. This rash is usually seen in young infants, but can occur later in individuals with personal or family histories of *atopy*, meaning asthma or allergic rhinitis.
- *Urticaria*, also known as *hives*, and *angioedema*. Hives are itchy, red bumps that appear on the surface of the skin. They can occur in clumps and range in size, and can be either *chronic* - appearing and disappearing for no reason - or *acute*. Triggers of acute hives include infection or ingestion of some foods or medications. Often appearing with hives, *angioedema* is a non-itchy swelling in the deeper layers of the skin.
- *Anaphylaxis*, a severe, systemic allergic reaction generally caused by substances that are injected or ingested (eaten), including some foods and medications, insect stings and latex. Symptoms can include a feeling of warmth, flushing, tingling in the mouth, a red, itchy rash, feelings of light-headedness, shortness of breath, severe sneezing, anxiety, stomach or uterine cramps, and/or vomiting and diarrhea. In severe cases, a drop in blood pressure results in a loss of consciousness and shock. Without immediate treatment - an injection of epinephrine (adrenalin) and expert care - anaphylaxis can be fatal.

Role of the allergist - management and treatment

An allergist/immunologist is a physician specially trained to manage and treat allergies and asthma. Becoming an allergist/immunologist requires completion of at least nine years of training. After completing medical school and graduating with a medical degree, a physician will then undergo three years of training in internal medicine (to become an internist) or pediatrics (to become a pediatrician). Once physicians have finished training in one of these *specialties*, they must pass the exam of either the American Board of Pediatrics (ABP) or the American Board of Internal Medicine (ABIM). Internists or pediatricians who wish to focus on the *subspecialty* of allergy/immunology then complete at least an additional two years of study, called a fellowship, in an allergy/immunology training program. Allergist/immunologists who are listed as ABAI-certified have successfully passed the certifying examination of the American Board of Allergy and Immunology (ABAI), following their fellowship.

As a result of this extensive study and training, an allergist/immunologist is the best-qualified medical professional to effectively manage the comprehensive needs of patients with allergic disease.

Allergist/immunologists are trained in the prevention, diagnosis, and treatment of immune system problems such as allergies, asthma, inherited immunodeficiency diseases, autoimmune diseases and even AIDS. Unlike a cold, allergic disease is not a condition that someone can just "get over." The help of a trained allergist/immunologist can reduce how often patients need to stay home from work or school due to symptoms. Studies show that those under the care of an allergist/immunologist also make fewer visits to emergency rooms, and are better able to daily manage their allergies and asthma.

If you are enrolled in a managed care organization, your insurer will have a specific set of guidelines that help your primary care physician decide when to refer you to an allergist/immunologist. Once you are referred, the allergist/immunologist will work to accurately diagnose your condition by taking a thorough patient history, including information about your symptoms, family history, and home and work environments. Your allergist/immunologist will also conduct allergy skin testing and any other needed tests. Combining specific information from your history and tests, the allergist/immunologist will be able to make an accurate diagnosis. To help prevent symptoms, he or she will work with you to develop an appropriate management plan and will prescribe the most cost-effective treatment, including recommendations for particular medications and/or devices, and any needed environmental control measures. Your allergist/immunologist and allied health staff will not only prescribe medications and devices, but will also show you how and when to use them.

Role of the patient - communication

To ensure optimal care, patients with allergies and asthma must take an active role in their treatment by asking questions, learning about triggers of their condition, and understanding reasons for various methods of treatment. Open communication is a necessary, successful part of allergic disease management. As a patient, you may want to ask these questions:

- Is the physician who is treating me or my family specifically trained to make an appropriate diagnosis and provide effective management and treatment of allergic disease?
- Has my physician completed a fellowship in allergy and immunology?
- Does my physician regularly attend continuing medical education programs in allergy and immunology?
- What does the diagnosis and treatment of my allergies and/or asthma entail? What are my options? Do my symptoms meet insurance guidelines for allergy referral?
- Has the diagnosis and treatment plan my physician prescribed been proven effective by virtue of accepted standards for scientific evaluation?

You and your allergist/immunologist can work together so that you can make appropriate changes in your environment and take medications as prescribed. With appropriate diagnosis and effective management of your allergic disease, you should be able to experience the optimal quality of life that you deserve.

Your allergist/immunologist can provide you with more information on the management and treatment of allergic disease.

The content of this brochure is for informational purposes only. It is not intended to replace evaluation by a physician. If you have questions or medical concerns, please contact your allergist/immunologist.

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