



Understanding Allergies

How does immunotherapy work?

During treatment, the immune system is gradually strengthened by building tolerance through injections of small doses of specific allergenic proteins extracted from natural allergen sources: pollens (grasses, trees and weeds), house dust mites, animals, insects and more. Your immune system eventually grows accustomed to the allergens that previously caused an allergic reaction.

Among the wide variety of treatment possibilities available today, allergy immunotherapy is the only treatment that uses your own immune system to treat the cause of your allergies. For many patients, immunotherapy may work when other allergy products have failed:

- Control symptoms, such as congestion, runny nose and itchy eyes.
- Consuming less symptomatic drugs for allergies
- Freedom to participate in outdoor activities and sports during allergy season
- Fewer problems having pets at home or being around people with pets

Who could benefit?

Immunotherapy is used for people with respiratory allergies caused by tree pollens, grass pollens, weed pollens, animal dander, molds and house dust mites. It is also very effective protection against allergic reactions to insect stings. Speak with your doctor about your allergies and the treatment options available to you. If you think you may be a candidate for allergy shots, ask your doctor about it today.

You may learn to live with your allergies—but you don't have to! See your doctor to learn more about your allergies and to find out if immunotherapy is right for you.

Risks and warnings for immunotherapy

Although allergy immunotherapy has been shown to be highly effective in treating the underlying cause of allergies, patients being treated may have side effects. You may experience one or more of these common reactions:

Local Reactions

Although these local reactions may produce discomfort, they are not serious:

- During immunotherapy, some individuals may experience pain, swelling and/or redness at the site of the injection.
- Others may experience local swelling and soreness 8-12 hours after injection.

Mild to Moderate Systemic Reactions

Any of these reactions can be a sign of a more severe reaction known as anaphylaxis, and medical attention should be sought immediately:

- Itching at palms and ears
- Hives
- Swelling in face, throat, or oropharynx
- Coughing, wheezing, chest tightness or trouble breathing
- Nausea or dizziness

Rarely, these severe systemic reactions—also known as anaphylaxis—may happen.

Most serious reactions, including anaphylaxis, occur within 30 minutes of an immunotherapy treatment. Anaphylaxis is a serious life threatening allergic reaction. For this reason, patients should be observed for 30 minutes following each treatment in a facility where emergency measures and equipment—and personnel trained in their use—are immediately available. Today the risk of death from immunotherapy is very rare and can be attributed to the post-treatment observation period.

Severely allergic patients should consider talking to their doctor about the possibility of being prescribed an emergency epinephrine auto-injector during the course of treatment.



What are the types of allergies?

There are four types of allergies: respiratory allergy, skin-related allergy, food allergy and insect allergy.

RESPIRATORY ALLERGY

Respiratory allergies are the most common allergies. Symptoms include sneezing, itchy and watery eyes and nose, and wheezing. Hay fever (also known as rhinitis) and/or asthma are the most common ways for respiratory allergies to manifest themselves. The respiratory system is usually affected if you're allergic to tree pollens, grass pollens, animals, molds and house dust mites.

SKIN-RELATED ALLERGY

Eczema, also called contact allergy or contact dermatitis, is the term used for an over-reaction in the skin caused by direct contact with certain substances (allergens) in our environment. It can be either allergic or non-allergic in nature. The two reactions often look the same. The only way to distinguish between the two is to perform an allergy test.

FOOD ALLERGY

Eczema, diarrhea, nausea, swelling of the throat, hypotension and, in extreme cases, anaphylaxis are all signs of a food allergy. (Signs of an anaphylactic reaction can include itching at palms and ears, swelling in throat, difficulty breathing, coughing, wheezing, chest tightness, nausea or dizziness. Medical attention should be sought immediately.) The most common foods that cause allergies are cow's milk, egg proteins, soy, peanuts and fish.

INSECT ALLERGY

Allergy to insect stings occurs as a severe local skin reaction, exhaustion, dizziness, swelling of the throat and, in extreme cases, anaphylaxis.

WHAT CAUSES ALLERGIES?

Allergies happen when your body's immune system reacts to substances that wouldn't cause a reaction in most people.

The immune system's function is to help your body fight intruders such as parasites, bacteria or viruses. If you're allergic, your immune system reacts toward natural substances the same way it would react toward something harmful. Your immune system "misreads" something that is otherwise completely harmless. Some examples of the most common allergens are below.

OUTDOOR (SEASONAL) ALLERGENS:



Grasses

Trees

Weeds

Stinging Insect

INDOOR (PERENNIAL) ALLERGENS:



Dust Mites

Pet Dander

Foods

Molds

It is possible to have both seasonal and perennial allergies, and some people who have allergies are never actually diagnosed.

It is possible that some people do not recognize these symptoms as allergies:

- Runny nose
- Headaches
- Difficulty concentrating

- Coughing
- Loss of taste or smell
- Sleep disturbances

However, most people do know that something is interfering with their daily activities.

WHAT IS ALLERGY TESTING LIKE?

To help determine whether an allergy is involved, the doctor may perform a skin test and/or a blood test.

SKIN TESTING

A skin test involves either a gentle prick with a drop of allergen extract on the surface of your arm (or back), or an injection of a small amount of allergen extract into the skin. This method may result in mild swelling and a reddening of the skin, which tells the doctor that you have an allergy. For most patients, this method requires about one hour and is not very painful.

BLOOD TESTING

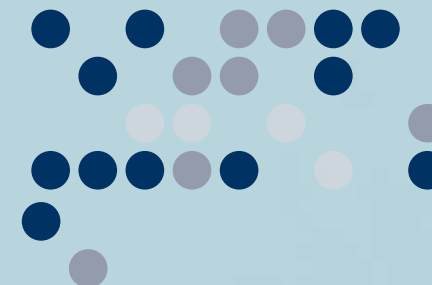
A blood test—also called *in vitro* testing—can be used on its own to confirm skin test results. If specific antibodies toward one or more allergens are found in the blood, it means that you may be allergic and would have an allergic reaction if exposed to those substances.

WHAT ARE MY TREATMENT OPTIONS?

There are a number of treatment options available that may offer some relief from allergy symptoms. These options include avoidance, prescription and over-the-counter medications, and allergy immunotherapy.

HOW DO I KNOW WHAT'S RIGHT?

The first step is to see a doctor for proper diagnosis. The doctor will start by asking you questions about your symptoms, history of allergy, exposure, family history and other related health issues.



WHAT IS ALLERGY IMMUNOTHERAPY?

Allergies happen when your body's immune system reacts to allergens in your environment by attacking them. Allergy Immunotherapy trains your body's immune system to stop attacking harmless allergens so you don't get allergic symptoms. Allergy Immunotherapy introduces small amounts of allergens into your body so your immune system can gradually learn to tolerate them better.

Allergy Immunotherapy is a natural way to help your body stop overreacting to allergens.

Allergy Immunotherapy is made of natural allergen substances that cause allergies. Substances like pollen from plants. Over time, allergy immunotherapy trains your immune system to know what causes your allergies. This way, your body will stop overreacting to them and you will have fewer symptoms. Things like runny nose, itchy and watery eyes, and sinus pressure. Allergy Immunotherapy may even reduce your chances of getting new allergies or developing breathing problems. Allergy Immunotherapy is a proven way of fighting allergies that can have long-lasting results. Speak to your doctor about which allergy immunotherapy options are right for you.

STAYING ON YOUR THERAPY

Allergy Immunotherapy is not a quick fix. But it can be a lasting one. It takes some time for your immune system to gradually build a tolerance to allergens. So it is important to stay on allergy immunotherapy for the duration of therapy. Even if you don't feel like you have symptoms anymore. If you stop taking your medication too soon, it won't have time to work.