



Adult Allergy

Pediatric Allergy

Clinical Immunology

Nathan Schultz, M.D.  
David Cook, M.D.  
Barbara Karpel, MD. P.C.  
Joshua Jacobs, M.D.  
Nancy Mozelsio, M.D.  
Matthew Lodewick, M. D.  
Fannie Su, M.D.  
Allyson Tevrizian, M.D.  
James Nickelsen, M.D.  
Karna Gendo, M.D.  
Shilpi Anand, M.D.

## ALLERGEN IMMUNOTHERAPY

Allergen immunotherapy, or allergy shots, is a treatment for allergies that involves injections of gradually increasing amounts of purified substances to which you are allergic (dust mite, mold, pollens, animal dander, or stinging insect venom). These injections are typically used in patients who have allergic rhinitis, allergic conjunctivitis, allergic asthma, or who have had severe reactions to insect stings. Nine out of ten patients receiving this form of treatment experience a significant reduction in their symptoms. While allergy medications treat only symptoms, allergen immunotherapy is the only treatment that actually changes your immune system to be less sensitive, and will also decrease your chance of developing future allergies or asthma.

Injection of the extracts causes a decrease in allergy symptoms by several different mechanisms. First, the allergy cells in your body become less responsive when they come in contact with the substances to which you are allergic. Allergy injections decrease the amount of chemicals, like histamine, secreted by these cells that cause allergy and asthma symptoms. Also, the cells that protect you from allergies increase in number during allergy injections.

Your physician will discuss with you whether you are a good candidate for allergy shots, taking into account your skin test results and history, as well as the risks and expected benefits. Most patients who have had a severe allergic reaction (anaphylaxis) from an insect sting should be treated with immunotherapy. Other good candidates include those patients whose allergy symptoms are not well controlled with medications, or those who have side effects from medicines or dislike taking daily medications. You will still need to be on medications for your symptoms early in the treatment period and, while your medication requirements will likely significantly decrease as the result of allergy shots, you may continue to require some form of medication during your most severe allergy season.

Patients who are not good candidates for allergy shots include those with serious immunodeficiency and autoimmune disease, malignant cancers, severe uncontrolled asthma, severe heart disease, and those on beta-blockers or MAO-inhibitors. Beta-blockers are often used orally to treat high blood pressure, some types of heart conditions, migraine headaches, and by eye drops to treat glaucoma. MAO-inhibitors are medications that are occasionally used to treat depression. Your doctor will review your medications with you in order to determine whether you are taking a beta-blocker or MAO-inhibitor. Be sure to notify your allergist or injection nurse of any changes in your medications. Pregnant women already on immunotherapy may continue to receive allergy shots, but should not be on an escalating dosage schedule. Please let your allergist or injection nurse know if you are pregnant or are contemplating pregnancy in the near future.

Depending on the number of substances to which you are allergic and the severity of your allergies, you will receive one to four injections per visit. These injections are given into the subcutaneous

Diplomates of the American Board of Allergy and Clinical Immunology

130 La Casa Via. Building 2, Suite 209 . Walnut Creek, CA 94598 . 925/935-6252  
2305 Camino Ramon. Suite 225 . Bishop Ranch 11 . San Ramon, CA 94583 . 925/327-1450  
5575 West Las Positas . Suite 230 . Pleasanton, CA 94588 . 925/463-9400  
350 John Muir Parkway. Suite 180 . Brentwood, CA 94513 . 925/513-3140  
3010 Colby St. Suite 221 . Berkeley, CA 94705 . 510/644-2316

tissue of your upper arm, in the layer just below the skin. Allergy shots are much less painful because they are not injected deep into the muscle like influenza vaccine and other types of injections. In the beginning of your treatment period, you will come into our office as frequently as every other day as the amount of each substance in your shots is gradually increased. It takes most patients on a twice-weekly shot schedule between four to six months to reach the maximum (maintenance) dosage. At that point, you will receive the injections less frequently and then most patients can be tapered to injections every four weeks. It is important that you come in for your injections regularly and according to schedule in order to build up to and remain at your maintenance dose. If you come in less frequently than recommended for your shot, your previous injection dose may need to be repeated or, depending on how late you are, your dose may even need to be reduced. Thus, the more punctual you are, the quicker you will get relief from your allergy symptoms. Most patients do not remain on shots indefinitely and can discontinue them once they have been at the maintenance dose for three to five years. Your allergist will tailor the duration of your immunotherapy to your individual symptoms and progress in order to provide a long-term remission of your allergies. Those receiving allergy shots for insect stings often remain on a maintenance dose indefinitely.

Adverse reactions, while unusual, may occur as a result of the allergy injections. The vast majority of reactions are mild and consist of local swelling, redness and itching at the injection site. Larger local reactions occasionally occur and are treated with ice, antihistamines and anti-inflammatory medications, such as ibuprofen. During a three to five year course of immunotherapy, less than 1% of patients experience a more severe systemic (total body) reaction that requires immediate treatment in our office. Symptoms of a systemic reaction are usually similar to your normal allergy symptoms. However, they are occasionally more severe and may include itchy eyes, nose, and throat as well as a skin rash or skin itching, nausea and vomiting, wheezing, chest and throat tightness, and rarely, dizziness and fainting. Systemic reactions are serious and, without rapid and proper treatment, can be life-threatening. If you experience any of these symptoms, you need to report them immediately to our office staff. Each of our offices has the training, medications, and equipment to treat these reactions. To minimize your risk of adverse reactions, we ask that you do not come in for an allergy shot when you are ill with a fever or increased asthma symptoms. In addition, it is imperative that you remain in our office waiting room for thirty minutes after receiving your shot and that you check out with the shot nurse once your waiting period has passed. Lastly, we discourage any strenuous exercise immediately after your shot.

We hope that this information has been useful and that you will consider allergen immunotherapy as a treatment for your allergies. If you have any further questions, please do not hesitate to bring them to our attention.