



ASTHMA & ALLERGY CENTER

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Allergy Injections / Allergy Shots

What is Respiratory Allergy?

Allergy is an abnormal immune response to proteins ('allergens') we inhale with the air. Normal persons have Th1/IgG response, which means they can 'tolerate' the allergen. Allergic people have an intolerant Th2/IgE response, which leads to chronic inflammation of the respiratory passages resulting in Allergic Rhinitis, Sinusitis and Asthma.

How Do We Treat Allergies?

Decreasing exposure to allergens helps. So if you are allergic to horses and you quit riding classes you are cured. But what if you are allergic to your dog or cat, or to pollens and molds. You can decrease your exposure but you cannot eliminate it. Allergy pills and nose sprays help reduce the symptoms by suppressing inflammation. They are extremely useful in reducing your suffering. However they don't desensitize you to your allergens.

What is Desensitization?

Allergy vaccines, given in gradually increasing doses, block the Th2/IgE response, changing it back to the Th1/IgG response so you can tolerate the allergens and thus they do not cause the inflammation. This is a slow process. It takes six months to a year before you can get to the dose that works and then it starts showing any benefit. However, unlike medications, which can only control the symptoms, desensitization provides the only possibility of a "cure" for the underlying problem.

What is Allergy Vaccine?

Guided by your skin test results we prepare a mixture of your allergens specifically for you. Starting with a very dilute solution we give you a dose that is small enough to cause a mild local reaction. The allergens are transported to your lymph nodes where they interact with the Th1 cells that are responsible for

immune-tolerance. This tolerance must then be build up by increasing doses, while watching for local and systemic reactions to the vaccine.

How Are Allergy Shots Given?

Since the final dose of allergy vaccine is many hundred times the amount that caused those reactions on your skin tests, it is necessary to build up gradually. Depending on severity of your allergy, it takes 30 to 50 doses to get you to the full dose that works. The doses can be given in many different ways:

1. **Standard Way**: You get weekly injections in increasing doses. At this rate it takes eight to twelve months to get to the effective dose. Each visit you spend 30 – 45 minutes in our office. Until recent years, this was the only way health insurance companies covered the allergy injections. The injections must be given a doctor's office, our office or at your Primary Care Physician's office.
2. **Cluster Immunotherapy**: A much faster way to get to the effective dose is called cluster method, where we can give up to three or four increasing doses at half hour intervals, in the office, under constant supervision. You reach the full dose in 8 to 12 weeks, if you come in weekly; and in 5 to 7 weeks if you come in twice a week. Each visit will last about 2 ½ hours. Thereafter you are on maintenance schedule and you spend 30 – 45 minutes in the office for each injection visit. We will be happy to check with your insurance company if they cover Cluster method.
3. **Immunotherapy at Home**: Due to a real, though very small risk of serious reaction, we do not permit injections at home. An alternative that is considered safe for administration at home is the **ORAL ALLERGY DROPS**, also called **SLIT (for Sub Lingual Immuno-Therapy)**. These drops are placed under the tongue for two minutes and then you spit them out. They **WORK AS WELL AS THE INJECTIONS**. However most health insurance companies **Do Not Cover** this method, (not even towards your deductible!). So you have to pay in full for the vaccine. For people with Health Savings Accounts it works out well. We will be happy to give

you more details and charges, if you are interested. In this method it takes about six weeks of daily dosage to reach the full effective dose.

During the build up phase you will need to see the doctor here every two to three months and thereafter every three to four months. After a year or two, as you get better, and don't need prescriptions or dose adjustments, the doctor will see you every six months. Summary instructions for the injections will be enclosed with the extract and if you, or the physician giving the injections, have any questions, please call us.

Detailed safety instructions for patients and for physicians and nurses giving allergy injections are on our website (asthmaweb.com) under the title 'allergy injections' in the patient education tab.

What Are The Reactions?

The allergy injection dosage schedule is designed to decrease the chances of serious reaction. An overdose of allergen may produce a generalized reaction, including hives, swelling, breathing difficulty, asthma, drop in blood pressure, which if uncontrolled can be fatal. Thus, we start with a dose you can tolerate and increase slowly as your protection builds up. However, the potential for a serious reaction is always there. Therefore, we insist that you get these injections in a physician's office or clinic where emergency medications and equipment to treat reaction are available. Most serious reactions occur within the first 20-25 minutes after the injection is given. It is reasonably safe to go home after 30 minutes, if you are feeling OK. A 'mosquito bite' type itchy red swelling up to 2 inches in diameter at the injection site is an acceptable reaction if there are no other symptoms. If the reaction is any larger, please tell the nurse giving the injection.

With the first few injections, you may notice increase in allergy symptoms that evening or the next day. This usually goes away as the protection builds up.

What If You Have Questions?

Ask us when you are in the office or CALL US at **304-343-4300**. Check out the Patient Education Page of our website (Asthmaweb.com) for more information on any and many aspects of Allergy and Asthma Care.