

Allergens and Immunotherapy

Your immune system controls how your body defends itself. If you have an allergy to dust mite, pollen, mold or animal your body identifies it as an invader or **allergen**. Your immune system overreacts by producing allergic antibodies called immunoglobulin E (IgE). These antibodies travel to your cells that release chemicals, causing an allergic reaction. This reaction usually causes symptoms such as sneezing, stuffiness, a runny nose, or itchiness in your nose, the roof of your mouth, throat or ears.

Examples of allergen:

Pollen: Pollen is tiny grains needed to fertilize many kinds of plants. Many plants have flowers which produce a powder like pollen that are spread by the wind. Pollination can be year- round.

Dust mite: They can be found throughout the house, these microscopic creatures thrive in warm, humid environments such as bedding, upholstered furniture and carpeting. Encase mattresses, box springs and pillow in special allergen proof fabric covers or airtight zippered plastic covers. Bedding should be washed weekly in hot water (130 degrees Fahrenheit) and dried in hot dryer. Allergen-proof covers are available for comforters and pillows that can't be regularly washed. Throw rugs should be washed regularly.

Pet allergens: Contrary to popular opinion there are no “hypoallergenic” breeds of dogs or cats. That is because people are not allergic to animal hair, but to an allergen found in the saliva, dander (dead skin flakes) or urine of an animal with fur. If your pet is already considered a part of the family, try to minimize contact and keep the pet out of the bedroom or other rooms where you spend a great deal of time. Vacuum carpets often, or replace carpet with a hardwood, tile or linoleum floor.

Indoor molds: Mold and mildew need dampness typically found in bathrooms or anywhere with leaks. Get rid of mold growth on hard surfaces with water, detergent and if necessary, 5% bleach (do not mix with other cleaners). Then dry the area completely. For clothing, washing with soap and water is best. All rooms, especially the bathroom, and kitchen require ventilation and cleaning to deter mold and mildew growth.

Outdoor molds: Molds can be almost anywhere, in soil, plants, and rotting wood. Their spores float in the air, much like pollen. They can be found year round.

Cockroaches: They are found everywhere. This does not mean that you have a dirty house or living area. Block all areas where roaches can enter the home. This includes cracks, crevices, wall cracks and windows. Keep food in lidded containers and put pet food containers away after your pet is done eating.

How Your Allergy Injections Work

Allergen immunotherapy, also known as allergy shots, is a form of long-term treatment that decreases symptoms for many people with allergic rhinitis, allergic asthma, or conjunctivitis (eye allergy). Allergy shots decrease sensitivity to allergens and often lead to lasting relief of allergy symptoms even after treatment is stopped.

Both children and adults can receive allergy shots, although it is not typically recommended for children under age five. This is because of the difficulties younger children may have in cooperating with the program and in articulating any adverse symptoms they may be experiencing.

Allergy shots are not used to treat food allergies. The best option for people with food allergies is to strictly avoid that food.

Allergy shots work like a vaccine. Your body responds to injected amounts of a particular allergen, given in gradually increasing doses, by developing immunity or tolerance to the allergen.

There are two phases:

Build up phase: This involves receiving injections with increasing amounts of the allergen once a week. The length of time depends upon how often the injections are received, generally ranges within 4 to 6 months if you are consistent with coming in for your weekly injections. Consistency is the key. *Your vials will expire every 3 months.*

Maintenance phase: This begins once the effective dose is reached. The effective maintenance dose depends on your level of allergen sensitivity and your response to the build-up phase.

You may notice a decrease in symptoms during the build-up phase, but it may take as long as 12 months on the maintenance dose to notice an improvement. If allergy shots are successful then maintenance treatment is generally continued for three to five years. Any decision to stop allergy treatment should be discussed with your allergist.

Allergy shots have been shown to decrease symptoms of many allergies. It can prevent development of new allergies and in children it can prevent the progression of allergic disease from allergic rhinitis to asthma.

Risk: A typical is redness and swelling at the injection site. This can happen immediately or several hours after the treatment. In some instances, symptoms can include increase allergy symptoms such as sneezing, nasal congestion or hives.

Serious reactions are rare. When they do occur, they require immediate medical attention. Symptoms of an anaphylactic reaction can include swelling in the throat, wheezing or tightness in the chest, nausea and dizziness. Most serious reactions develop within 30 minutes of the allergy injections. This is why it is recommended that you wait in your doctor's office for at least 30 minutes after you receive the allergy injections. It is very important to report the reaction to your allergist as soon as possible so that a plan of care can be established.

How Injections are Administered

Injections are recorded by dose, date, reaction and location. At regular intervals the dosage and dilution will be increased. Build up treatment is administered once a week. Your first dose will be a vial test (SVT), you will receive a test dose of 0.05cc of the indicated dilution in your vials. You will confirm you vial number, date of birth and your name on the vial bottle. You will be required to wait ten minutes. The injection sites will be inspected for local reactions and that information will be recorded. If SVT reactions are smaller than a half dollar size then full allergy dose will then be administered and you be required to wait twenty minutes.

Injection dose increasing protocol:

FIRST DOSE	0.10cc indicated dilution
SECOND DOSE	0.20cc indicated dilution
THIRD DOSE	0.30cc indicated dilution
FOURTH DOSE	0.40cc indicated dilution
FIFTH DOSE	0.50cc indicated dilution

Allergy injections are given in the outer aspect of the upper arms, midway between the shoulder and elbow. Avoid scratching the area. Hydrocortisone cream can be applied to the affected area to help with itching. It is suggested that allergy patients take allergy medication 30 minutes to 1 hour prior to getting allergy shots. You will be required to remain in the office under observation for 30 minutes. The injection sites will be inspected for local or systemic reactions. Severe reactions would commonly begin within this period of time. Severe reactions are rare. Once a dilution is complete, the dilution is increased to the next higher concentration and the dosage schedule is repeated.

Escalation Phase

- 1 week from last dose (5-10 days): Dose will be increased as scheduled
- 2 weeks from last dose (14th day and up) weeks from last dose : Dose will be cut back by 0.10cc
- 3 weeks from last dose : Dose will be cut back by 0.20cc
- 4-8 weeks from last dose: SVT, Dose will be cut back by 0.30cc
- 2-3 months from last dose (9-12 weeks): Go back 1 dilution, SVT, and re-escalate per protocol.
- 3-6 months from last dose (13-24 weeks): Go back 2 dilutions, SVT, and re-escalate per protocol.

Maintenance Phase

- 1 week from last dose (5-10 days): Dose will be increased as scheduled
- 2 weeks from last dose (14th day and up) : Last dose will be repeated
- 3 weeks from last dose: Dose will be decreased by 0.10cc
- 4-8 weeks from last dose: SVT, decrease last dose by half and minus 0.05 due to SVT
- 2-3 months from last dose (9-12 weeks): SVT, re-escalate per protocol.
- 3-6 months from last dose (13-24 weeks): Go back 1 dilution, SVT, and re-escalate per protocol

It is very important to come in for your injections consistently in order to reach your therapeutic maintenance.

SUBLINGUAL DROPS: We offer Sublingual drops as an alternative, however it would be an out of pocket expense as it is not a covered service with insurance companies. The cost is between \$100 and \$150 every 5 to 6 weeks if you are using them consistently. We are unable to submit claims to your insurance company. You may submit your claim for reimbursement but we cannot guarantee coverage. Sublingual drops are a method of treating allergies by placing drops underneath the tongue. This is done at home. They are similar to allergy shots and they involve placing a set amount of physician-dosed antigens under the tongue to build up the body's tolerance over time.