akane institute
FEEL BETTER Live Your Life!
ALLERGY ASTHMA SLEEP MEDICINE

Immunotherapy (Allergy Injections)

PURPOSE:

The purpose of subcutaneous immunotherapy (allergy injections) is to decrease your sensitivity to allergy-causing substances, so that exposure to the offending allergen (pollen, mold, mites, animal dander, stinging insects, etc.) will result in fewer and less severe symptoms. This does not mean that immunotherapy is a substitute for avoidance of known allergens or for the use of allergy medications, but rather is a supplement to those treatment measures.

Allergy injections have been shown to lead to an alteration of your immune system's response to naturally occurring allergens. These alterations may permit you to tolerate exposure to the allergens with fewer symptoms. You, in effect, become "immune" to the allergen. The amount of this immunization is different for each person and is, therefore, somewhat unpredictable. There is not a guaranteed outcome of subcutaneous immunotherapy (allergy injections).

INDICATIONS:

To qualify for immunotherapy, there must be documented allergy to substances in the environment. Documentation of allergy can be either in the form of a positive skin test or positive blood test. In addition to demonstrable allergy by one of the above tests, problems such as hayfever or asthma should occur upon exposure to the suspected allergen, or you may have a history of a severe reaction to an insect sting. Due to the inherent risks of immunotherapy, avoidance measures and medical management should usually be attempted first.

EFFICACY:

Improvement in your symptoms will not be immediate. It usually requires 2 to 6 months before any relief of allergy symptoms is noted, and it may take 12 months for full benefits to be evident. About 85-90% of allergic patients on immunotherapy note significant improvement of their symptoms. This means that symptoms are reduced, although not always completely eliminated.

TYPES OF IMMUNOTHERAPY:

There are three ways of doing immunotherapy:

1. Conventional Immunotherapy
2. RUSH (Rapid Desensitization Immunotherapy)
3. Cluster Immunotherapy

PROCESS:

IMMUNOTHERAPY involves "Build up phase" and "Maintenance phase".
Build up phase involves gradually increasing the dose of the allergy vaccine till "maintenance dose" is reached and then increasing the interval between the allergy injections till a fixed interval is reached.
Maintenance phase is when the allergy vaccine is given at a fixed dose at a fixed interval. This is usually once every 4 weeks. Please note that you are required to wait for 30 min after allergy injections for observation.

CONVENTIONAL IMMUNOTHERAPY PROTOCOL:

Allergy injections usually begin at a very low dose. This dosage is gradually increased on a regular basis during the build up phase until a therapeutic dose often called the "maintenance dose" is reached. The maintenance dose will differ from person to person. Injections typically are given once or twice per week while the vaccine dose is being increased. This frequency reduces the chances for a reaction and permits the maintenance dose to be reached within a reasonable amount of time. After the maintenance dose is reached, the interval between the injections is gradually increased until the injections are given at a regular interval, usually every four weeks. TIME TO REACH MAINTENANCE DOSE IS USUALLY ABOUT 9 MONTHS.

RAPID DESENSITIZATION IMMUNOTHERAPY "RUSH" PROTOCOL:

"RUSH" immunotherapy is an alternative form of giving allergy injections. In "RUSH" immunotherapy, allergy injections are administered approximately every 30-60 minutes for about 6-8 hours during a 1 day procedure. This is followed by biweekly or weekly injections to reach maintenance dose. The first day RUSH procedure takes approximately 6-8 hours. During this time, you will be receiving a series of 7-10 injections throughout the procedure, increasing the dose strength at each set. This method allows for you to work toward the "maintenance dose" quicker. This is in contrast to conventional allergy shots which require 9 months of weekly injections to reach the "maintenance dose". The "maintenance dose" is the effective dose needed to induce your allergy cells to be tolerant to the pollens, molds, pets, and dust mite allergens in the environment. TIME TO REACH MAINTENANCE DOSE IS 3 MONTHS WITH BIWEEKLY INJECTIONS & 5 MONTHS WITH WEEKLY INJECTIONS. RISK OF ADVERSE REACTIONS IS HIGHER THAN CONVENTIONAL IMMUNOTHERAPY.

CLUSTER IMMUNOTHERAPY PROTOCOL:

This is the preferred choice by most patients as it involves a faster build up to "maintenance dose" compared to CONVENTIONAL IMMUNOTHERAPY while maintaining a lower risk of adverse reactions than "RUSH IMMUNOTHERAPY". It reduces the total number of allergy injections and visits required to reach maintenance dose thereby reducing time away from work or school. The following CLUSTER SESSIONS are usually scheduled:

3 sessions once or twice a week of 4 hours duration (Mon/Tue/Thur 9 AM to 1 PM or Mon 1 PM to 5 PM)

3 sessions once or twice a week of 3 hours duration (Mon/Tue/Thur 9 AM to 12 PM or Mon 1 PM to 4 PM)

Thereafter, about 8-10 weekly allergy shot visits lasting 30 minutes each to reach the maintenance dose. TIME TO REACH MAINTENANCE DOSE IS USUALLY 3 MONTHS.

DURATION OF TREATMENT:

Time to reach maintenance dose depends on the type of protocol chosen. The time may be longer if there are vaccine reactions or if the injections are not received on a regular basis. For this reason, it is important that the recommended schedule be followed. If you anticipate that regular injections cannot be maintained, immunotherapy should not be started. Immunotherapy may be discontinued at the discretion of the doctor if the injections are frequently missed, as there is an increased risk of reactions under these circumstances. Most immunotherapy patients continue treatment for about 5 years.

ADVERSE REACTIONS:

Immunotherapy is associated with some widely recognized risks. Risk is present because a substance to which you are known to be allergic to is being injected into you. Some adverse reactions may be life threatening and may require immediate medical attention/intervention. In order of increasing severity, the following brief descriptions explain the nature of these potential reactions:

A: LOCAL REACTIONS: Local reactions are common and are usually restricted to a small area around the site of the injection. However, they may involve the entire upper arm, with varying degrees of redness, swelling, pain, and itching. These reactions are more likely to occur as you reach the higher concentrations and higher volume injections. The reactions may occur several hours after the injection. You should notify the office if your local reaction exceeds ("baseball size") or lasts more than a day or two. All phone calls involving local reactions will be handled during office hours ONLY so that we can properly review your shot history and adjust dosing, pre-medications, and therapy as necessary.

B: GENERALIZED REACTIONS: Generalized reactions occur rarely, but are important to understand because of the potential danger of progression to collapse and death if not treated. These reactions may include:

(1) Urticarial reactions (hives) include varying degrees of rash, swelling, and/or itching on more than one part of the body. There may be mild to moderate discomfort, primarily from the itching. This uncommon reaction may occur within minutes to hours after an injection.
(2) Angioedema is a rare reaction and is characterized by swelling of any part of the body, inside or out, such as the eyes, tongue, lips, throat, intestine, hands, or feet, alone or in any combination. This may occasionally be accompanied by asthma and may progress to the most severe reaction, anaphylactic shock. In the absence of shock, the principle danger lies in suffocation due to swelling of the airway. Angioedema requires immediate medical attention.
(3) Asthma (difficulty breathing/cough) can rarely occur after an allergy injection. This is more common in people with history of asthma. This requires immediate medical attention.
(4) Anaphylactic Shock is the rarest complication, but is a serious event characterized by acute asthma, vascular collapse (low blood pressure), unconsciousness, and potentially death. This reaction usually occurs within half an hour of the injection and is extremely rare.
The above reactions are unpredictable and may occur with the first injection or after a long series of injections, with no previous warning. All generalized reactions require immediate evaluation and medical intervention which may include use of self injectable epinephrine (also known as an EpiPen or Auvi) followed by evaluation in the emergency room. If a localized or generalized reaction occurs, the vaccine dosage will be adjusted for subsequent injections. An EpiPen or Auvi is a self-injectable epinephrine. This medicine works very quickly and could save your life if you have a severe generalized allergic reaction (low blood pressure, light headedness, asthma exacerbation, redness all over, severe airway swelling, etc.)

OBSERVATION PERIOD FOLLOWING INJECTIONS:

All patients receiving immunotherapy injections are required to wait in the clinic area for 30 minutes following each injection. If you have a reaction, you may be advised to remain in the clinic longer for medical observation and treatment. If a generalized reaction (shortness of breath, chest/throat tightness, heart palpitations, etc.) occurs after you have left the clinic area, you should immediately return to the clinic or go to the nearest emergency medical facility. If you cannot wait the 30 minutes after your injection, you should not receive an immunotherapy injection. If you do not remain in the clinic area for the designated time, the doctor may recommend discontinuation of immunotherapy.

Under no circumstances will injections be permitted without the immediate availability of emergency medical treatment. If the prescribed injections are to be given elsewhere, this clinic must be provided with the name and address of the physician who will assume the responsibility for your injections. You will be asked to complete the "Request for Administration of Immunotherapy at an Outside Medical Facility Form." Our office will then contact the designated facility and confirm their availability for administration of your immunotherapy injections.

ALLERGY VACCINE PRESCRIPTION:

Your allergy vaccine prescription is individualized for you based on things you are allergic to. The vaccine vials usually expire 12 months after mixing.

PREGNANCY:

Females of child-bearing potential: If you become pregnant while on immunotherapy, notify the office staff immediately, so that the doctor can determine an appropriate dosage schedule for the injections during pregnancy. Immunotherapy doses will not be advanced during pregnancy, but may be safely maintained at a constant level.

NEW HEALTH CONCERNS/MEDICATIONS:

Please notify the office staff of any health changes or if you start any new prescription medication, particularly medication for high blood pressure, migraine headaches, and glaucoma.

PREMEDICATION BEFORE ALLERGY INJECTIONS:

It is VERY IMPORTANT that you take the following two tablets on the morning of allergy shots (at least 2 hours before your allergy injections) in order to prevent possible adverse reactions:

1. An antihistamine like Zyrtec (Cetirizine) 10 mg OR Allegra(Fexofenadine) 180mg OR Xyzal(Levocetirizine) 5mg
2. Singulair (Montelukast) 10mg for adults and children over 15yrs OR 5mg for children 6-14 yrs

It is VERY IMPORTANT that you carry your Epinephrine self injector with you if prescribed by the doctor.