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## PROGRAM OF ALLERGY INJECTIONS

Initially, the patient receives injections once weekly. **Sometimes more often if the treatments are started late** during the pollen seasons. Once a "top dose" is reached, usually five to six months, injections are typically given every 2 weeks months 6-12, every 3 weeks months 12-18 and if the patient is tolerating therapy well, increased to 4 week intervals. It is not advisable to space injections further apart than once every four weeks in most patients because of the chance of reactions which may be serious. **During the time patients have increased symptoms, as for example** during pollen season, it is often necessary to give injections more frequently, usually weekly. The necessity for changes in injection routines are usually decided at **the times of periodic re-evaluation visits**. Allergy injections need rarely go on "forever" but can usually be stopped after a patient has been completely free of symptoms and has required no medication for two complete years while on a schedule of one injection every four weeks.

Dosage increases can only be made if an injection is received within 7 to 14 days of preceding injection. If longer than 14 days since the preceding injection, the previous dose is to be repeated. Please follow guidelines on **Allergen Immunotherapy Injections** Sheet.

The main reason for postponing an allergy injection is serious illness such as that **accompanied by a fever**. Minor colds, hay fever, etc., are not reasons for missing injections. Generally speaking, a patient well enough to come to the office may receive an injection. If an illness require antibiotics, you must be on your antibiotics 24 hours.

### REACTIONS TO INJECTIONS

#### REACTIONS ARE AN INDICATION FOR DECREASING THE DOSAGE BUT NOT FOR DISCONTINUING INJECTIONS

If reactions occur, please report to your physician and to this office **BEFORE** the next injection is due; appropriate advice will be given.

**1. LOCAL REACTIONS:** Most patients have a slight redness or soreness at the site of the injection. These are not of any significance and if bothersome may be treated with an ice pack held against the arm for a few minutes at a time or by taking a dose of antihistamine medicine or both. If necessary an over the counter cortisone cream may be applied.

Should a swelling **LARGER THAN A FIFTY-CENT PIECE** last for more than 24 hours, it should be reported at the time that patient comes for the next injection since this would be an indication for not increasing the injection dosage at the time or possibly even lowering the dosage slightly.

**2. GENERAL REACTIONS:** These reactions are more serious than local reactions. They occur less frequently and usually begin within 30 minutes of receiving an injection. For this reason, every patient **MUST** wait in the physicians office for at least 30 minutes after receiving injections. Since strenuous exercise increases the chances of developing a generalized reaction, it is important that the patient does not have increase activity for one hour before and two hours after receiving allergy shots. The most common signs of a general reaction are itching of the skin, sudden itching of the nose or throat, hives, wheezing, coughing or sudden plugging of the nose. If any of these occur or increase in severity after an injection, it should be reported at once to the doctor or nurse who gave the injection.

If a general reaction occurs more than 30 minutes after an injection is given, it is usually much less serious than if it occurs within the first 30 minutes. The patient should be given a dose of an antihistamine medicine and if the symptoms do not decrease shortly thereafter or if they become any worse, the physician of whose office the injection was administered should be consulted immediately. In case of doubt always do this.

Beta blockers may increase the difficulty of treating anaphylaxis. ACE inhibitors may increase the likelihood of generalized reactions for patients on venom immunotherapy. Please inform AAIR staff of all medication use and changes during immunotherapy.

## Allergen Immunotherapy Injections (Allergy Shots)

### Length Of Therapy:

1. Maximal clinical benefit usually occurs within 12 to 24 months after reaching adequate maintenance doses.
2. Continuation of treatment depends on the response of the patient.
3. The average patient receives 3 to 5 years of therapy.
4. If after 2 years of therapy there is no apparent clinical benefit, treatment is modified or discontinued.
5. Injections can usually be stopped after a patient has been completely free of symptoms and has required no medication for two complete years while on a schedule of injections every four weeks.

**Failure Of Immunotherapy:** A therapeutic failure occurs when a patient does not experience a noticeable decrease of symptoms within 12 to 24 months, an increase in tolerance to known allergens, and a reduction in the use of medication. Failures may be due to one or more of the following:

1. Inadequate environmental controls.
2. Inadequate doses of allergens.
3. Development of new sensitivities.
4. Presence of other contributing conditions.
5. Failure to recognize and include a significant allergen.
6. Unrealistic patient expectations, causing premature judgment of failure.
7. Failure of the treatment method itself.

**Re-evaluation Schedule:** (Should be regularly scheduled by the patient with the responsible allergist. ALLERGEN IMMUNOTHERAPY RECORDS should be brought to the allergist by the patient. They will be reviewed along with an interval history.)

1. After first year of injections.
2. After the second year of injections.
3. At least every two years thereafter.
4. Whenever there are any problems, questions or concerns that can not be solved or answered during regular injection office visits.

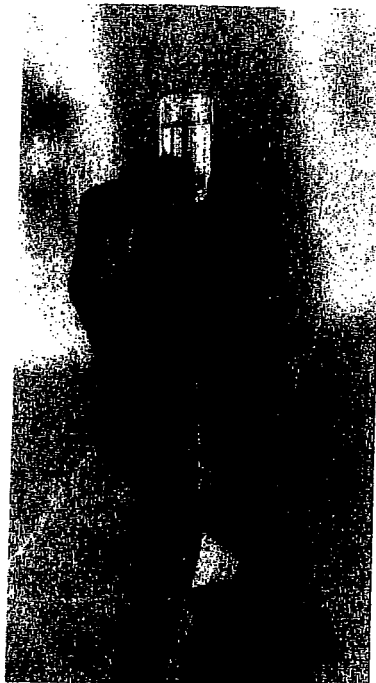
### AAIR EXTRACT BILLING POLICY

We participate with a number of insurances (please see patient financial policy for a listing). If you are insured with any of those listed, we will submit your claim and begin preparation of your extract material. If you are a Blue Choice member, your benefit for "new" extracts is **limited to one build-up every five years**. Refills of the same extract will be covered.

If you are paying privately or have a commercial insurance, your extract must be paid for in advance. We will provide you with a claim form suitable for insurance submission.

All outstanding balances must be paid prior to all extract preparation. If you have any questions regarding this extract policy, please contact our business office at 585-442-0150 option 5. All insurance questions should be directed to your individual insurance carrier.

# Immunotherapy can provide lasting relief



Immunotherapy treatment (allergy shots) is based on a century-old concept that the immune system can be desensitized to specific allergens that trigger allergy symptoms. These symptoms may be caused by allergic respiratory conditions such as allergic rhinitis (hay fever) and asthma.

While common allergy medications often control symptoms; if you stop taking the medication(s), your allergy symptoms return shortly afterward.

Allergy shots can potentially lead to lasting remission of allergy symptoms, and it may play a preventive role in terms of development of asthma and new allergies.

## The Process

Treatment involves injecting the allergen(s), causing the allergy symptoms. These allergens are identified by a combination of a medical evaluation performed by a trained allergist/immunologist and allergy skin or allergy blood tests.

The treatment begins with a build-up phase. Injections containing increasing amounts of the allergens are given 1 to 2 times a week until the target dose is reached. This target dose varies from person to person. The target dose may be reached in 3 to 6 months with a conventional schedule (one dose increase per visit) but may be achieved in shorter period of time with less visits with accelerated schedules such as cluster that administers 2-3 dose increases per visit.

The maintenance phase begins when the target dose is reached. Once the maintenance dose is reached, the time between the allergy injections can be increased and generally range from every 2 to every 4 weeks. Maintenance immunotherapy treatment is generally continued for 3 to 5 years.

Some people have lasting remission of their allergy symptoms but others may relapse after discontinuing immunotherapy, so the duration of allergen immunotherapy varies from person to person.

Risks involved with the immunotherapy approach are rare, but may include serious life-threatening anaphylaxis. For that reason, immunotherapy should only be given under the supervision of a physician or qualified physician extender (nurse practitioner or physician assistant) in a facility equipped with proper staff and equipment to identify and treat adverse reactions to allergy injections.

The decision to begin immunotherapy will be based on several factors:

- Length of allergy season and severity of symptoms
- How well medications and avoiding allergens control allergy symptoms
- Desire to avoid long-term medication use
- Time. Immunotherapy will require a significant time commitment during the build-up phase, and a less frequent commitment during the maintenance phase
- Costs may vary depending on region and insurance coverage. Yet, allergy shots can be a cost-effective approach to managing allergy symptoms.

## Allergen Immunotherapy: still working after 100 years

In 1911, both allergen immunotherapy and the electrical ignition system for cars were introduced. Although unrelated, these events share a common outcome. One paved the way for advances in transportation, the other led to advances in the treatment of allergies.

The earliest published successes for allergen immunotherapy were based on the work of two English scientists, Leonard Noon and John Freeman. Recognizing that pollen was the cause of hay fever, these scientists thought that they could induce immunity and tolerance by injecting hay fever patients with the pollen to which they were allergic.

This idea was based on the positive results of vaccines that produced protection against infectious disease such as small pox.

Over the years, we've learned much more about allergen immunotherapy including long-term benefits and what protocols are needed to make it very beneficial. Among the most important findings are that immunotherapy can provide long-term symptom relief for years after treatment is discontinued, and that it is a cost-effective approach to treating many allergies.

Research has demonstrated that allergy immunotherapy can be effective in treating:

- Allergic asthma
- Allergic rhinitis and conjunctivitis
- Stinging insect allergy
- Atopic dermatitis

## New frontier

Currently, immunotherapy for food allergies is not recommended and strict avoidance of the food is advised although investigations with oral desensitization for food allergies are in progress in the United States.



AMERICAN ACADEMY OF ALLERGY  
ASTHMA & IMMUNOLOGY  
[www.aaaai.org](http://www.aaaai.org)

## **What is immunotherapy and how does it work?**

Allergen immunotherapy, also known as allergy shots, is a form of treatment that is aimed at decreasing sensitivity to substances called allergens. Allergens are the substances that trigger allergy symptoms when someone is exposed to them.

Immunotherapy has been shown to prevent the development of new allergies and, in children, it can prevent the progression of the allergic disease from allergic rhinitis to asthma. Allergen immunotherapy can lead to the long-lasting relief of allergy symptoms after treatment is stopped.

Immunotherapy is recommended for people with allergic asthma, rhinitis, conjunctivitis and allergies to stinging insects. Immunotherapy for food allergies is not recommended. The best option for people with food allergies is to strictly avoid that food.

Children can receive immunotherapy as well. Five is the youngest recommended age to start immunotherapy in the United States for several reasons, including the difficulties younger children may have in cooperating with the immunotherapy program.

There is no upper age limit for receiving immunotherapy. In considering immunotherapy in older persons, consideration must be given to the other medical conditions (such as cardiac disease) that are more frequent in older individuals, which could potentially make immunotherapy more risky.

An allergist/immunologist will base the decision to begin immunotherapy on:

- Length of allergy season and severity of symptoms.
- How well medications and/or environmental controls control allergy symptoms.
- Desire to avoid long-term medication use.
- Time: immunotherapy will require a significant time commitment.
- Cost: may vary depending on region and insurance coverage.

Immunotherapy should be given under the supervision of a physician in a facility equipped with proper staff and equipment to identify and treat adverse reactions to allergy injections. Ideally, immunotherapy should be given in the prescribing allergist/immunologist's office but if this is not possible, the patient's allergist/immunologist should provide the supervising physician with comprehensive instructions about their immunotherapy treatment.



### **How does immunotherapy work?**

Allergen immunotherapy works like a vaccine. Patients receiving allergen immunotherapy are injected with increasing amounts of an allergen over several months. The body responds to the injected amounts of the allergen by developing an immunity or tolerance to it. As a result, allergy symptoms can be decreased or minimized when the patient is exposed to that allergen in the future.

There generally are two phases to immunotherapy:

- **Build-up phase:** This involves receiving injections with increasing amounts of the allergens, generally about 1 to 2 times per week, though a more rapid build-up schedule is sometimes used. The length of this phase depends on how often the injections are received, but generally ranges from three to six months.
- **Maintenance phase:** This phase begins once the effective therapeutic dose is reached. The effective maintenance dose depends on the patient's level of allergen sensitivity and his or her response to the immunotherapy build-up phase. During the maintenance phase, there will be longer periods of time between immunotherapy treatments, ranging from two to four weeks. Your allergist/immunologist will decide what range is best for you.

Patients may notice decreasing symptoms during the build up phase but it may take as long as 12 months on the maintenance dose to see an improvement. The effectiveness of immunotherapy treatments appears to be related to how long the treatment lasts and the dose of the allergen.

Failure to respond to immunotherapy may be due to several factors including:

- Inadequate dose of allergen in the allergy vaccine.
- Missing allergens not identified during the allergy evaluation.
- High levels of allergen in environment (i.e. inadequate environmental control).
  - Significant exposure to non-allergic triggers (i.e. tobacco smoke).

If a patient hasn't seen improvement after a year of maintenance therapy, he or she should work with their allergist/immunologist to discuss possible reasons treatment failed and other treatment options.

If immunotherapy is successful, maintenance treatment is generally continued for 3 to 5 years. The decision to stop immunotherapy should be discussed with the allergist/immunologist after 3 to 5 years of treatment. Some individuals may experience lasting remission of their allergy symptoms but others may relapse after discontinuing immunotherapy. Therefore, the decision to stop immunotherapy must be individualized.

#### **Possible risks with immunotherapy**

There are two types of adverse reactions that can occur with immunotherapy:

- **Local reactions:** are fairly common and present as redness and swelling at the injection site. This can happen immediately, or several hours after the treatment.
- **Systemic reactions:** are much less common than local reactions. Systemic reactions are usually mild and respond rapidly to medications. Symptoms can include increased allergy symptoms such as sneezing, nasal congestion or hives. Rarely, a serious systemic reaction, called anaphylaxis, can develop after an immunotherapy injection. In addition to the symptoms associated with a mild systemic reaction, symptoms of an anaphylactic reaction can include swelling in the throat, wheezing or a sensation of tightness in the chest, nausea, dizziness or other symptoms.

Systemic reactions require immediate treatment. Most serious systemic reactions develop within 30 minutes of the allergy injections and this is why it is recommended you wait in the office for 30 minutes after your allergy injections.

Your allergist/immunologist is trained to monitor for such reactions and his or her staff is trained to identify and treat systemic reactions.

Resource: [www.aaaai.org/patients](http://www.aaaai.org/patients)



**ALLERGY ASTHMA IMMUNOLOGY OF ROCHESTER PC**

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**Immunotherapy Patient Financial Consent Form**

Insurance plans have become highly variable regarding coverage of immunotherapy treatment. There are two costs to consider: the cost to prepare the allergy extracts from the recipe specific to you and the weekly injection administration.

**Before deciding to start immunotherapy, please contact your insurance carrier to verify coverage.** It is important to understand your insurance coverage and know the cost for which you may be responsible. Some insurance plans cover immunotherapy in full, while other plans may have deductibles, co-insurances, and co-pays. **For patients whose insurance does not cover immunotherapy, or those with high-deductible plans, out-of-pocket costs can be expensive.** Cost is dependent upon what you are allergic to and the frequency of injections. After verifying coverage with your insurance carrier, you may contact our billing office at (585) 442-0150 option 5 to confirm costs prior to committing to treatment.

**Your allergy extracts will not be prepared until we receive your signed consent form. Your signed consent may be returned by fax at (585) 271-8704 or by mail in the postage paid envelope provided to you.**

*I acknowledge the fact with my signature that I am authorizing the office to bill my insurance company for the allergy extracts made for me, even if, for some reason, I decide not to initiate the allergen immunotherapy program after the extracts have been made. I acknowledge that any costs incurred for this method of treatment that is not covered by my insurance carrier, such as deductibles, co-insurances, or co-pays will be my responsibility. I acknowledge that my allergy extracts will not be prepared until this signed consent is returned to my physician.*

\_\_\_\_\_  
Physician Name

\_\_\_\_\_  
Patient Name

\_\_\_\_\_  
Date of Birth

\_\_\_\_\_  
Patient/Guardian Signature

\_\_\_\_\_  
Date