



- Asthma
- Environmental Allergies
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- Food Allergies
- Insect Allergy
- Atopic Dermatitis
- Contact Dermatitis
- Drug Allergy
- Immunodeficiency
- Occupational Allergy
- Anaphylaxis
- Bronchitis
- Chronic Cough
- Allergic Rhinitis
- Immunotherapy

## Immunotherapy (Allergy Shots)

Allergy shots are a means of reducing the symptoms of allergic rhinitis (hay fever, sinusitis) and asthma, and in some cases reversing an allergic process. If started on a timely basis, they may also be effective in preventing asthma. Most patients choose to treat their allergic symptoms by avoiding allergy triggers and/or with medications (nose sprays, pills, ect.) but some find this too difficult, costly, and tedious over many years. Some patients simply do not like to take medications or become frustrated because the medications do not alter the course of allergies over time. The allergy injections are then the preferred alternative. It is a method that has been used for 80 years and, in recent years; improvements in the science of allergy have made this technique even more effective.

### Who Might Consider Immunotherapy?

Immunotherapy is appropriate for patients who have **allergy symptoms** lasting longer than six (6) to eighty (8) weeks each year. It is also helpful for asthma, insect allergy and chronic sinusitis. Immunotherapy is not recommended for food allergies. It is not proven useful for less well-defined areas such as intestinal and emotional problems, arthritis, headaches unrelated to sinus problems or hives.

### How Does It Work?

Who Immunotherapy is a process in which an allergic patient can become desensitized to those pollens and inhalants that trigger allergic rhinitis (nasal congestion,) allergic conjunctivitis, asthma and insect reactions. Small doses of **the actual allergic substance** are injected weekly. Each week the dose is increased. Patients usually stay on a weekly schedule for approximately 9 months, and then is every 4 weeks once a maintenance dose is reached. Gradually a protective antibody known as Immunoglobulin G (IgG) is formed to block the allergic reaction. When someone has an allergy, they have high levels of the allergic antibody Immunoglobulin E (IgE), in their blood. This IgE is activated by the allergen (dust mites, ragweed, cat, ect.), and it attaches itself to the “mast” cells that release histamine. The histamine causes swelling and congestion. It causes a tightening of the airways to create asthma.

The change induced by immunotherapy is gradual. Many patients notice an improvement within six (6) months at which time the patient should schedule a 6-month evaluation appointment. Progress is evaluated every six (6) months to one (1) year. Immunotherapy does not work in about 5% of patients who were correctly diagnosed to have significant allergies.

Source: <http://sneezedoctors.com/sites/default/files/Immunotherapy%20Handout%202014.pdf>

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## How Long Should Someone Receive Immunotherapy?

If therapeutic doses of immunotherapy have been achieved, one should notice a significant improvement in symptoms.

Many patients see some improvement during the build up period, but it can take up to 2 years to determine the effectiveness of treatment. Usually patients continue on a maintenance or top dose of immunotherapy for three to five years on a monthly basis.

At year 4 or 5, a trial of discontinuing treatment is often attempted. After immunotherapy is stopped symptoms may return at a rate of 5% in the first (1<sup>st</sup>) year, and 10% in the second (2<sup>nd</sup>) year and up to 35% in the third (3<sup>rd</sup>) to fifth (5<sup>th</sup>) years.

### Immunotherapy and Pregnancy

Allergy shots are not started for women during pregnancy, though there is no medical reason not to do so. The beginning of immunotherapy has a greater chance of allergic reactions to the shots (see reactions to shots). If a woman has been receiving immunotherapy and becomes pregnant, **she may safely continue the shots during pregnancy. Immunotherapy has been used for eighty (80) years and does not harm the baby.**

### Reactions to Allergy Shots

**There are two (2) kinds of reactions to the allergy shot: Local and Generalized (Systemic)**

- **Local:** Reactions occur at the site of the injection on the arms (where the shots were given). Redness and itching are frequent and are not a reason to hold or decrease the dose. Swelling or a lump that is irritating are reasons to hold or decrease the dose. This might occur in the office during the 30 minute waiting period, or at home over the next 24 hours. Patients are asked to tell the doctor or nurse before the next injection about any swelling. We want to know how large it is...is it the size of a dime, nickel, quarter, half-dollar or larger? We can adjust the dose of further injections. **An ice pack and antihistamine**, such as Benadryl, can be used to reduce any swelling. Patients are asked to call the office during office hours to report these reactions.

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- **Generalized (Systemic):** reactions occur when there is any chest tightness, breathing difficulty, throat or lip swelling, hives, dizziness, nausea, vomiting, diarrhea, stomach cramps or an overall feeling of warmth to the face and body. This usually occurs in the first 10 minutes after the injection but can occur over the first hour. This is a strong reaction, not a minor feeling, which sometimes starts with a general feeling of itchiness. Other times it starts with a tickle or tingling in the throat. **One should return to the office during office hours or go directly to the emergency room for evaluation and treatment of this reaction.** If someone else can drive you, this would be best. Patients are requested to have Epinephrine Auto injector and an antihistamine with them. Vigorous exercise should be avoided for 2 hours after shots.

**\*\*\*We must be informed or any medication changes while on Immunotherapy. Drugs Not To Be Taken While On Immunotherapy**

If any other physician wants to put you on any of the following medications which all contain a family of drugs called **Beta-blockers**, it is important to notify him/her that you are on immunotherapy and have been told you are **not** supposed to take them.

- If you are currently taking a Beta-Blocker, please notify your doctor or nurse. There is some evidence that patients who are taking these medications are more likely to experience reactions or more severe allergy symptoms. Also Beta-Blockers can interfere with epinephrine (Adrenaline) which is the most important drug used to treat severe reactions to Immunotherapy.

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Beta-Blockers are often used to treat high blood pressure, glaucoma, migraine, headache or irregular heartbeat: they may be in tablet or eye drop form.

**Examples include: Generic Names/ Brand Names**

Acebutolol(Sectrol)  
Atenolol (Tenoretic, Tenormin)  
Betaxolol(Kerlone)  
Bisoprolol (Zebeta, Ziac)  
Carteolol (Cartrol)  
Carvedilol (Coreg, Coreg SR)  
Esmolol (Brevibloc)  
Nadolol (Corgard, Corzide)  
Nebivolol (Bystolic)  
Penbutolol (Levatol)  
Pindolol (Visken)  
Sotalol (Betapace, Sorine)  
Propranolol (Inderal, Inderal LA, Inderide, InnoPran XL)  
Betaxolol (Betopic, Betopic S) for the eyes Labetalol (Normadyne, Trandate)  
Timolol (Blocadren, Timolide)  
Timolol (Betimol, Istalol, Timoptic, Timoptic XE for the eyes)  
Levobunolol (Batagan) for the eyes Metoprolol (Lopressor, Toprol, Toprol XL)  
Metipranolol (OptiPranolol) for the eyes

If you feel that you need allergy shots to overcome whatever is stopping you, or if you feel like you might be a good candidate, Please give us a call to schedule an appointment at (516) 822-6655

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