

**Thomas Chacko, M.D.**  
**Pediatric and Adult Allergy and Immunology**  
**Northside ENT**

1360 Upper Hembree Rd Suite 201  
Roswell, GA 30076  
770-475-3361 Fax 770-664-4431

1400 Northside Forsyth Dr.  
Suite 320, Cumming GA 30041  
770-888-1651 Fax 770-886-0733

993 Johnson Ferry Rd.  
Suite 115 Bldg. C Atlanta GA 30332  
404-256-7532 Fax 404-252-8781

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**Tips to Remember: What are “allergy shots”?** Adapted from the American Academy of Allergy, Asthma and Immunology website ([www.aaaai.org](http://www.aaaai.org))

**What is immunotherapy?**

Allergen immunotherapy is a form of treatment aimed at decreasing your sensitivity to substances called allergens. These allergens are identified by allergy testing, and are the substances that trigger your allergy symptoms when you are exposed to them. Allergen immunotherapy involves injecting increasing amounts of an allergen to a patient over several months. 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 long-lasting relief of allergy symptoms after treatment is stopped.

**Who should be treated with immunotherapy?**

Immunotherapy is only recommended for allergic asthma, allergic rhinitis and conjunctivitis, and stinging insect allergy. The decision to begin immunotherapy will be based on several factors including:

- Length of allergy season and severity of symptoms
- How well medications and/or environmental interventions control allergy symptoms
- Desire to avoid long-term medication use
- Time: immunotherapy will require a significant time commitment

**Can children receive immunotherapy?**

Five is the youngest recommended age to start immunotherapy. *Recent studies have suggested immunotherapy may prevent the development of new allergies in children and also may prevent the development of asthma in children who have rhinitis.*

**Where should immunotherapy be given?**

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 done in the allergist/immunologist's office.

**How does immunotherapy work?**

Allergen immunotherapy works like a vaccine. Your body responds to the injected amounts of a particular allergen, given in gradually increasing doses, by developing an immunity or tolerance to the allergen (s).

As a result of the immune changes, immunotherapy can lead to decreased, minimal, or no allergy symptoms when you are exposed to the allergen(s) included in the allergy vaccine.

There are generally two phases to immunotherapy: a build-up phase and a maintenance phase.

- **Build-up Phase:** involves receiving injections with increasing amounts of the allergens. The frequency of injections during this phase generally ranges from 1 to 2 times a week, though more rapid build-up schedules are sometimes used. The duration of this phase depends of the frequency of the injection but generally ranges from 3 to 6 months.
- **Maintenance phase:** This phase begins when the effective therapeutic dose is reached. The effective maintenance dose is different for each person, depending on their level of allergen sensitivity (how

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“allergic they are” to the allergens in the vaccine) and their response to the immunotherapy build-up phase. Once the maintenance dose is reached, there will be longer periods of time between immunotherapy treatments. The intervals between maintenance immunotherapy injections generally range from every 2 to every 4 weeks.

The benefits of immunotherapy, in terms of reduced allergy symptoms, can begin during the build-up phase but may take as long as 12 months on the maintenance dose. Improvement with immunotherapy may be progressive throughout the immunotherapy treatment period. Effectiveness of immunotherapy appears to be related to length of treatment and the dose of the allergen.

**When should immunotherapy be stopped?**

If immunotherapy is successful, maintenance treatment is generally continued for 3 to 5 years. 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.

**What are the possible reactions?**

**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.

Our office is trained to identify and treat systemic reactions.

**Summary:**

Allergy immunotherapy is a proven effective treatment for allergic rhinitis, allergic asthma, and stinging insect allergy. It also may be effective in some individual with atopic dermatitis (eczema) if they have allergies to airborne allergens. Immunotherapy may play a preventive role in pediatric allergic diseases, in terms of development of asthma or new allergies. Adverse reactions to immunotherapy are rare but do require immediate medical attention and this is why immunotherapy should be administered in a medical facility appropriately equipped to deal with a systemic reaction.

Any questions, please ask Dr. Chacko.