

SHORELINE ALLERGY & ASTHMA ASSOCIATES, LLP

23 CLARA DRIVE
MYSTIC, CT 06355
860-536-2995

314 FLANDERS ROAD
EAST LYME, CT 06333
860-739-3011

ALLERGEN IMMUNOTHERAPY: KEY POINTS

What is immunotherapy?

- Allergy immunotherapy is a form of treatment aimed at decreasing your sensitivity to substances called allergens.
- Allergy shots contain small amounts of the things that you are allergic to.
- The goal is to increase your tolerance to the allergens, and to reduce your allergy symptoms.

Who benefits from immunotherapy?

- Immunotherapy is recommended for people age 6 and older with:
 - Allergic asthma
 - Allergic rhinitis (itchy, runny, or stuffy nose)
 - Allergic conjunctivitis (itchy, watery, or red eyes)
 - Allergies to stinging insects.

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 a tolerance to the allergen(s).
- Two phases to immunotherapy:
 - Buildup phase:
 - Patient receives injections 3 – 10 days apart, with gradually increasing amounts of allergens over approximately 6 months
 - Maintenance phase:
 - Begins when effective therapeutic dose is reached
 - Patient receives injections every 2 – 4 weeks
 - Patient receives injections for 3 – 5 years

What are the possible risks of immunotherapy?

- Local reactions
 - Redness, swelling or pain at the site of the injection, immediately or several hours after the treatment.
- Systemic reactions
 - Much less common than local reactions, usually mild and responsive to medications
 - Usually develop within 30 minutes of the allergy injection and this is why it is recommended you wait in the office for 30 minutes after your injection.
 - Symptoms can include: sneezing, nasal congestion or hives
 - Rarely, anaphylaxis can occur.
 - Symptoms can include: swelling in the throat, wheezing, tightness in the chest, hives or itchy palms, difficulty breathing

What are the benefits of immunotherapy?

- You may need less allergy medicine.
- You may be sick less often and miss less work or school because of illness.
- You may feel better in general.
- The injections may help prevent children with allergies from developing asthma.

Immunotherapy: Allergy Injection Therapy

What is Immunotherapy?

There are three cornerstones of allergy therapy: *avoidance*, *medications*, and *immunotherapy*. Immunotherapy consists of a series of injections that gradually normalizes your immune system's excessive response to harmless allergens such as pollens or dust mites. Sometimes, all three categories are necessary to achieve maximum control of your symptoms. While the first two categories, avoidance and medications, are sufficient in many cases, each has its limitations: avoidance may be difficult to achieve, and medications may have side effects or fail to adequately control symptoms.

In some ways, the third option, immunotherapy, is a more definitive and long-term solution. Unlike oral or inhaled medications, which only treat the symptoms, immunotherapy has the advantage of treating the underlying cause. It is a non-drug form of therapy consisting of extracts of the allergens that actually trigger your symptoms. Immunotherapy begins with a highly diluted vaccine that is slowly increased in concentration as it progressively increases your tolerance to allergens.

Immunotherapy works in part by decreasing the quantity of allergy antibody in the blood and tissues. This antibody, called immunoglobulin E or IgE, is responsible for triggering allergy symptoms ranging from sneezing to wheezing to hives. The result of this treatment is a significantly greater tolerance to allergens such as pollens, molds, dust, and animal danders.

Pros and Cons of Immunotherapy

There are three main disadvantages to immunotherapy. First, it can be a nuisance, particularly during the first year or so when injections are given once or twice weekly. Secondly, the beneficial effects are not immediate. There is usually a lag phase of several months to a year before any improvement becomes apparent. Third, immunotherapy has the potential to cause allergic reactions. These reactions can range from hives to asthma flare-ups to even more serious generalized anaphylactic reactions, which can be fatal in an estimated 1 out of every 2.5 million injections. However, such serious reactions are rare, and since you receive the injections in the doctor's office, any potential reaction will be treated promptly.

On the other hand, there are five advantages to immunotherapy:

1. It usually helps. In the case of pollen allergies, for example, immunotherapy is helpful in approximately 85% of cases
2. While immunotherapy is not exactly a cure, it's more akin to one than just taking medications: unlike medications which treat only the symptoms, immunotherapy is the only available therapy that treats the underlying cause of your allergies
3. Patients with hay fever have an approximately three-fold increased risk of developing asthma. Recent studies show this risk may be substantially reduced by immunotherapy
4. Studies also show immunotherapy may reduce the risk of developing sensitization to *new* allergens, which is common in people with allergies
5. Finally, immunotherapy is the only allergy treatment that continues to work long after it's stopped

The Logistics of Immunotherapy

Allergy immunotherapy vaccines consist of extracts of the allergens that trigger your symptoms (animal dander extracts are sometimes used but are not routinely included). Because you are allergic to these allergens, the procedure begins with very diluted extracts. The concentration is gradually increased to a maintenance dose that is maximally effective and safe for you. During the initial “build-up” process, you should come for your injections once or twice weekly (your health plan may impose restrictions on frequency of injections, and if you receive injections outside of our offices you should get them on a weekly basis). The doctor will assess your progress periodically to determine when the injection frequency can be decreased to every two weeks, then eventually every three or four weeks. Each person has unique responses to the injections, but the usual duration of immunotherapy is about five years. After this period of time, the tolerance induced by immunotherapy is usually long lasting.

For safety reasons, you must remain in the office for thirty minutes after receiving the injection. Because the vaccine contains extracts to which you are allergic, it is possible, but not likely, that you could have an allergic reaction. The most important potential reactions are those that occur away from the site of the injection, such as:

- Feeling hot or flushed
- Itching, hives, or welts
- Swelling of the lips, tongue, or throat
- Cough, chest tightness, or wheezing
- A more serious generalized allergic reaction (anaphylaxis)

Fortunately, reactions of this nature are extremely rare. They can be uncomfortable, though, and may require medications to counteract the symptoms. Significant reactions usually occur within the first twenty to thirty minutes after the injection, but can rarely begin later.

One can also have local reactions at the injection site consisting of itching, swelling, redness, tenderness, and warmth. These reactions may last for several hours or even a couple of days. While they are not dangerous, you should report them to your nurse before the next injection, since it may be necessary to adjust your dose.

The likelihood of a reaction is greater if you have increased asthma or allergy symptoms, a respiratory infection, if you had a significant reaction to your previous injection, or if you started a type of medication called a beta-blocker. To minimize any risk, you will be given a short series of reminder questions before each injection. Some asthmatic individuals will also need to have their lung function checked (a peak flow rate) before each injection.

The Bottom Line

There’s no question that the decision to begin immunotherapy is a significant commitment. It is not a substitute for avoiding exposure to the allergens that trigger your symptoms, nor does it take the place of medications. However, if these measures have failed to control your symptoms or if you are uncomfortable with the idea of treating your allergies primarily with medications, immunotherapy can be a sound alternative. If you are a responder, you should expect to see a tangible improvement in your symptoms usually within the first year of therapy. While immunotherapy cannot exactly “cure” your allergies, it is realistic to expect significantly fewer symptoms with less medicine. It is important you understand these risks and benefits of immunotherapy before deciding to start. If you have any questions or concerns, please do not hesitate to ask your doctor.