What is immunotherapy?

Allergies are caused by your immune system overreacting toward harmless substances the same way it would react toward something harmful like bacteria or a virus. Allergy immunotherapy slowly strengthens your immune system so you can develop tolerance or immunity to these substances upon exposure.

Allergy Immunotherapy is a clinically documented treatment that may reduce or potentially remove your allergy symptoms and the need for traditional, symptom-relieving medication. This kind of treatment has been in use worldwide for over 100 years with many clinical studies showing it is both safe and effective.²

Why consider **immunotherapy?**

Among the wide variety of treatment possibilities available today, allergy immunotherapy (allergy shots), according to the World Health Organization, is the only treatment

that targets the cause of allergy and alters the natural course of the disease.¹ Many patients experience:

- An improved quality of life
- Less symptomatic drugs in the case of respiratory allergies
- Ability to enjoy outdoor activities during allergy season
- Fewer problems having pets at home or visiting family or friends with pets
- Immunotherapy has a long-standing effect after it is discontinued. Research suggests that results are maintained for 5 to 10 years after the course of allergy shots has been completed.¹

How does immunotherapy **work?**

Immunotherapy occurs in two distinct phases: buildup and maintenance.

Build-up:

The build-up process begins with injecting a weak concentration of an allergen extract. Injections of increasingly stronger concentrations are given until you reach the maximum dose. This process typically takes several months but can vary based on your sensitivity to the injections and your specific treatment plan.

Maintenance:

Once you have reached your maximum dose, you enter the "maintenance" phase of treatment. Immunotherapy is recommended for 3-5 years.² However, the length of treatment is determined by your degree of symptom severity and your physician's recommendation.

What goes into my **treatment?**

Your treatment team will review your skin or blood test results and determine which allergy triggers should be selected for immunotherapy. The most commonly treated allergens include house dust mites, pollens (from grasses, trees and weeds), dander from pets and other animals, and molds. The products mixed for your allergy shots are called allergenic extracts. These are natural, purified preparations made from the actual allergen source and are approved for clinical treatment.

Many allergenic extracts can be mixed together while others are best treated separately. Therefore, depending on the number and type of allergens included in your treatment, you may receive two or more injections for each visit.

Is **immunotherapy** right for me?

Immunotherapy is usually recommended for those patients who:

- Have moderate to severe symptoms that occur for more than 2-3 months out of the year
- Take symptomatic medications but have not noticed significant improvement in their symptoms
- Cannot easily avoid the allergens triggering their symptoms
- Prefer natural immunotherapy treatment over longterm drug treatment

What are my next steps?

- Check with your insurance provider regarding coverage for allergy immunotherapy.
- Discuss your treatment options with your doctor.
- Consider the time commitment you will need to make to achieve the best possible results.
- Work with your doctor to build a treatment plan that best suits you, and stick to it.

Immunotherapy **helps** reduce symptoms in up to 85% of people being treated for hay fever.⁷

WHEN WILL I BEGIN TO FEEL BETTER?

Many patients begin to see results as early as 3-6 months or shortly after reaching maintenance. Your need for antihistamine drugs may decrease, and your symptoms may become less severe.

Research has suggested that allergy shots may prevent the onset of other allergies and the development of asthma.³ Also, the treatment has a long-standing effect after it is discontinued. The most recent findings show that the benefits of allergy shots are maintained years after completing treatment. For some people, symptom relief may persist indefinitely.²

The key to success is to **BE PATIENT.** Your chances of seeing improvements in your allergy symptoms drastically increase the closer you follow your physician's treatment plan.



Be Compliant

Sticking to your treatment plan increases your chances of success.

Be Committed

The long term nature of treatment can be overwhelming, but the results can be life-changing.

Tips for Success

Be **Patient**

Symptom relief can vary between patients.

Be Involved

Report any signs of a reaction to your physician so they can track your progress and make adjustments.

What happens when miss an appointment?

Immunotherapy is a commitment and may be difficult to fit into an active schedule. In the case of a busy schedule, your physician will have a plan to manage conflicts. Missing one or two scheduled injections should not affect the long term outcome of your treatment. However, compliance is one of the most important factors for success.

Missing numerous scheduled visits will only delay the potential benefits of your treatment. As a safety precaution, your treatment team may require that you repeat a previous dose to ensure that your tolerance to the allergens has not decreased. The closer you follow your treatment plan, the sooner you will experience benefits from your immunotherapy!

What will my appointment be like?

You will work with your Allergy Specialist to develop a treatment plan. This plan will determine the frequency of your visits. Typically, patients beginning immunotherapy have 1-2 visits per week until reaching the maintenance phase. When you have reached maintenance, appointments will be less frequent, occuring once every 4-6 weeks. Until your immune system has had time to adjust, you may still need the medication you are already using for symptomatic relief.

During your visit, you will be given 1-3 shots depending on the number of allergens treated. Some people report minor discomfort at the site of injection, but the nursing staff will have topical treatments to lesson any irritation or pain following a shot.

Once you have received your injections, you will be asked to wait for 30 minutes in your doctor's office to be observed for an allergic reaction. Any reaction, no matter how minor, should be described to your physician so it can be documented appropriately.

Risks and warnings for immunotherapy

Although immunotherapy has been shown to be highly effective in treating the underlying cause of allergies, patients being treated may have side effects. You may experience one or more of these common reactions:

Local reactions

Although these local reactions may produce discomfort, they are not serious:

- During immunotherapy, some individuals may experience pain, swelling and/or redness at the site of the injection.
- Others may experience local swelling and soreness 8-12 hours after injection.

Systemic reactions

Any of these reactions can be a sign of a more severe reaction known as anaphylaxis, and medical attention should be sought immediately:

- Itching at palms and ears
- Swelling in throat
- Coughing, wheezing, chest tightness or trouble breathing
- Nausea or dizziness

Rarely, these severe systemic reactions—also known as anaphylaxis—may result in death.

Most serious reactions including anaphylaxis occur within 30 minutes of an immunotherapy treatment. For this reason, patients should be observed for 30 minutes following each treatment in a facility where emergency measures and equipment—and personnel trained in their use—are immediately available. Today the risk of death from immunotherapy is very rare and can be attributed to the post-treatment observation period.

Severely allergic patients should consider talking to their doctor about the possibility of being prescribed an emergency epinephrine auto-injector during the course of treatment.

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