

The Principles, Methods, Benefits and Considerations of Allergy Immunotherapy

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DESCRIPTION

Allergies affect millions of individuals worldwide, causing discomfort, impairment and in severe cases, life-threatening reactions. While medications can alleviate symptoms, they often provide only temporary relief and do not address the underlying cause of allergies. Allergy immunotherapy however, offers a promising long-term solution by desensitizing the immune system to allergens. In this study, we explore the principles, methods, benefits and considerations of allergy immunotherapy.

Understanding allergies

Allergies occur when the immune system overreacts to harmless substances, such as pollen, dust mites, pet dander or certain foods. When exposed to these allergens, the immune system produces antibodies called Immunoglobulin E (IgE), activating the release of histamines and other chemicals that cause allergy symptoms. These symptoms can range from mild sneezing and itching to severe anaphylactic shock.

The principles of immunotherapy

Allergy immunotherapy, also known as desensitization or allergy shots, works by gradually exposing the immune system to increasing amounts of allergens. This exposure helps the immune system develop tolerance to the allergens, reducing or eliminating allergic reactions over time.

Methods of allergy immunotherapy

There are two main methods of allergy immunotherapy: Subcutaneous Immunotherapy (SCIT) and Sublingual Immunotherapy (SLIT).

Subcutaneous Immunotherapy (SCIT): SCIT involves injecting small amounts of allergens under the skin, typically in the arm. These injections are administered by a healthcare professional in a controlled setting. Over time, the dosage is gradually increased, allowing the immune system to build tolerance to the allergens.

Sublingual Immunotherapy (SLIT): SLIT involves placing a small amount of allergen extract under the tongue and holding it there for a specified period before swallowing. Unlike SCIT, SLIT can be self-administered at home after receiving initial guidance from a healthcare provider. SLIT is available in tablet or liquid form for different types of allergies.

Benefits of allergy immunotherapy

Long-term relief: Unlike medications that only provide temporary relief, allergy immunotherapy can offer long-lasting benefits. Many patients experience a significant reduction in allergy symptoms even after treatment is discontinued.

Reduced reliance on medications: Immunotherapy may reduce the need for allergy medications, leading to cost savings and a better quality of life.

Prevention of allergic asthma: Allergy immunotherapy has been shown to prevent the development of allergic asthma in children with allergic rhinitis.

Considerations before starting immunotherapy

Before starting allergy immunotherapy, patients should consider the following factors:

Allergy testing: It is essential to undergo allergy testing to identify the specific allergens triggering symptoms. This information helps healthcare providers make immunotherapy treatment to the patient's needs.

Time commitment: Allergy immunotherapy requires a significant time commitment, as treatment typically lasts three to five years. Patients must be willing to adhere to the treatment schedule for optimal results.

Potential side effects: While allergy shots are generally safe, they can cause localized reactions at the injection site, such as redness, swelling or itching. In rare cases, more severe reactions, including anaphylaxis may occur.

Cost: Allergy immunotherapy may involve upfront costs for allergy testing, treatment materials and healthcare visits.

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However, many insurance plans cover a portion of the costs associated with immunotherapy.

CONCLUSION

Allergy immunotherapy offers a proactive approach to managing allergies by forwarding the underlying cause of allergic reactions. By gradually desensitizing the immune system to allergens,

immunotherapy can provide long-term relief and improve the quality of life for allergy sufferers. However, it is essential to consult with a healthcare provider to determine if immunotherapy is the right treatment option based on individual allergy activates, medical history and lifestyle factors. With proper guidance and commitment, allergy immunotherapy can be a transformative solution for those seeking relief from allergies.