

# Allergy Immunotherapy: The Therapeutic Approach and Symptomatic Treatment of Allergic Reactions

#### Corral Marta\*

Department of Immunotherapy, University of Moulay Ismail, Meknes, Morocco

## DESCRIPTION

Allergy immunotherapy, often referred to as allergy shots or sublingual tablets, is a medical treatment aimed at desensitizing the immune system to specific allergens. This therapeutic approach has provided significant relief to millions of individuals suffering from allergic rhinitis, allergic asthma and insect sting allergies. It represents a shift from symptomatic treatment to a more permanent solution by targeting the underlying cause of allergic reactions.

#### Understanding allergies and their impact

Allergies occur when the immune system overreacts to substances that are typically harmless, such as pollen, dust mites, animal dander, mold and certain foods. This overreaction can lead to a range of symptoms, including sneezing, itching, nasal congestion and more severe reactions like asthma attacks and anaphylaxis. The chronic nature of allergies can significantly impair the quality of life, leading to sleep disturbances, reduced productivity and ongoing discomfort.

#### Mechanism of allergy immunotherapy

The principle behind allergy immunotherapy is to gradually expose the immune system to increasing amounts of the allergen, thereby inducing a state of tolerance. This is achieved through a series of injections or sublingual tablets administered over a period of time, usually spanning several years.

**Subcutaneous Immunotherapy (SCIT):** SCIT involves regular injections of allergen extracts under the skin. The treatment begins with a buildup phase, where injections are given weekly or bi-weekly with gradually increasing doses. Once the maintenance dose is reached, injections are spaced out to monthly intervals. The treatment typically continues for 3-5 years.

**Sublingual Immunotherapy (SLIT):** SLIT involves placing a tablet containing the allergen under the tongue, where it dissolves and is absorbed. This method is preferred by some due to its convenience and reduced risk of systemic allergic reactions

compared to SCIT. Like SCIT, SLIT also requires a buildup phase followed by a maintenance phase.

#### Benefits of allergy immunotherapy

**Long-term relief:** One of the most significant advantages of allergy immunotherapy is its potential to provide long-term relief even after the treatment has ended. Many patients experience sustained improvement in their symptoms, reducing their dependence on medications.

**Prevention of new allergies:** Immunotherapy not only helps with existing allergies but also has the potential to prevent the development of new allergies. This is particularly beneficial in children, who are at a higher risk of developing multiple allergies over time.

**Reduction in asthma symptoms:** For individuals with allergic asthma, immunotherapy can lead to a substantial reduction in asthma symptoms and the need for asthma medications. It can also decrease the likelihood of severe asthma attacks.

#### Safety and side effects

Allergy immunotherapy is generally safe, but like any medical treatment, it carries some risks. The most common side effects are localized reactions at the injection site, such as redness and swelling. Systemic reactions, though rare, can occur and include symptoms like hives, respiratory issues and anaphylaxis. Therefore, SCIT is typically administered in a medical setting where emergency care is available.

SLIT has a more favorable safety profile with fewer systemic reactions, but it can still cause local reactions like itching or swelling in the mouth. Both forms of immunotherapy require regular monitoring by an allergist to manage and mitigate any adverse effects.

#### Eligibility and considerations

Not everyone is a candidate for allergy immunotherapy. Ideal candidates are those with severe allergies not well-controlled by

Correspondence to: Corral Marta, Department of Immunotherapy, University of Moulay Ismail, Meknes, Morocco, Email: marta\_corrla@medu.com

Received: 27-May-2024, Manuscript No. IMT-24-31428; Editor assigned: 31-May-2024, PreQC No. IMT-24-31428 (PQ); Reviewed: 14-Jun-2024, QC No. IMT-24-31428; Revised: 21-Jun-2024, Manuscript No. IMT-24-31428 (R); Published: 28-Jun-2024, DOI: 10.35248/2471-9552.24.10.249

Citation: Marta C (2024) Allergy Immunotherapy: The Therapeutic Approach and Symptomatic Treatment of Allergic Reactions. Immunotherapy (Los Angel). 10:249

**Copyright:** © 2024 Marta C. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

#### Marta C

medications or those who wish to reduce their long-term medication use. Immunotherapy is also considered for individuals with a high risk of severe reactions, such as those allergic to insect stings.

Before starting treatment, a comprehensive evaluation by an allergist is essential. This includes a detailed medical history, allergy testing and consideration of factors like age, overall health and the specific allergens involved.

#### **Future directions**

Ongoing many studies in allergy immunotherapy is focused on improving the efficacy and safety of treatments. Novel approaches such as peptide immunotherapy, which uses small synthetic peptides to induce tolerance without causing allergic reactions and Deoxy Ribo Nucleic Acid (DNA) vaccines are being explored. Additionally, personalized immunotherapy based on genetic and molecular profiling of patients may become a reality, offering making treatments for better outcomes.

### CONCLUSION

Allergy immunotherapy represents a assuring solution for individuals suffering from chronic allergic conditions. By addressing the root cause of allergies, it offers the potential for long term relief and improved quality of life. As studies advances, the future of immunotherapy looks bright, with the possibility of more effective and personalized treatments on the horizon. For those struggling with persistent allergies, consulting an allergist about the potential benefits of immunotherapy could be a transformative step towards better health and wellbeing.