Low Dose Allergen Immunotherapy (LDI/LDA)



Allergies, food sensitivities, and autoimmunity are reflective of a loss of immune 'tolerance'; when our immune system loses tolerance we become highly reactive, experiencing reactions to otherwise benign substances such as foods, airborne particles, and even our own tissue.

What is Low-dose Allergen Immunotherapy?

Low-dose allergen immunotherapy (LDI or LDA) aims to retrain the immune system, restoring tolerance to a hyperactive system.

During LDI treatments, extremely dilute amounts of antigens are combined with an enzyme solution containing B-glucuronidase and injected intradermally in the skin of the forearm.

The antigen combination may include extremely low dose amounts of inhalants, foods, chemicals, bacteria, and/or woods.

How It Works

The combination of antigen and B-glucuronidase is presented to dendritic cells in the skin, subsequently signaling to the thymus via lymph nodes to produce specific white blood cells, known as T-regulator cells (Treg cells). (1,2,3)

These T-reg cells regulate CD4 and CD8 T-cells that were mis-alibrated to produce inappropriate, or overreactive responses to many substances such as food, bacteria, and airborne substances. T-reg cells have a half-life of about 40-80 days. Injections of LDI are provided at 7-8 week intervals in order to produce more and more T-reg cells, slowly building up greater regulation and tolerance within our immune system.

LDI intradermal injections are administered every 7-8 weeks initially, with frequency decreasing with subsequent injections. With each additional injection, the accumulated number of T-regulator cells increases. Eventually, immunotherapy may either be discontinued or will occur with very long intervals between injections (1-5 years or more).

Who Can Be Treated with LDI/LDA?

Many conditions and symptoms are related to a loss of immune tolerance. As a result, there are many cases in which an LDI treatment plan may be indicated. These include, but are not limited to:

- Seasonal allergies
- Asthma
- Chronic sinusitis
- Repeated ear infections
- Food allergies/intolerances/sensitivities
- Chemical intolerances/sensitivities
- istamine intolerance
- Anaphylaxis
- Migraines
- Eczema
- Contact dermatitis
- Urticaria
- Arthritis of any variety
- IBS
- Interstitial cystitis
- Chronic fatigue syndrome (CFS)
- Fibromyalgia
- Candida/fungal-related illness
- Hyperactivity/ADD/ADHD
- Autism
- Autoimmune conditions including Crohn's and Ulcerative Colitis.(3)

What to Expect

If you are a good candidate for LDI, your doctor will recommend either a basic or advanced protocol. The basic program includes 3 treatment sessions and 1 follow-up, spread out over 6-8 months.

The advanced program includes 5 treatment sessions and 2 follow-ups, spread out over 10-12 months. Initially, treatments occur 7-8 weeks apart, but the distance between visits may be extended depending on your response to treatment.

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The injections are given superficially, in the dermal layer of the skin, and involve a very small amount of fluid. You may receive up to 5 injections per treatment session. Immediate benefits are expected but the full effect can take 6-8 treatment sessions. Some patients improve immediately following an injection and notice improvements with each subsequent injection.

Others may notice a worsening of symptoms initially prior to improvement, including but not limited to local skin reactions, a flare up of systemic skin reactions, increased reactions to sensitivities, or food 'unmasking' (reactions to previously tolerated foods).

Our immune system response is not linear and we cannot truly gauge how you will respond long-term until we have completed at least 3 injections.

Preparing for Treatment

In order to bolster results, a specific diet must be followed the day before, the day of, and the day after each injection (known as the 'critical period') in an effort to keep the immune system as calm as possible. For this reason, the use of certain medications is prohibited leading up to and after the injection.

Additionally, certain vitamins, medications, or intravenous protocols may be prescribed to enhance the effects of the injection. Your doctor will outline a complete pre- and post-injection plan with you.

Sources:

- 1.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC184 2014/pdf/brmedj02136-0079e.pdf
- 2.McEwen L.M: Enzyme Potentiated Hyposensitisation V: Five case reports of patients with acute food allergy. Annals of Allergy 1975. 35: 98-103. Case reports of five patients successfully hyposensitised to foods including one lady highly sensitive to eggs. Other cases were sensitive to eggs, milk, fruit and nuts.
- 3.http://www.feingold.org/Research/PDFstudies/Shra der2001-open.pdf



Notes

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