Low Dose Allergen (LDA) and Low Dose Immunotherapy (LDI) for allergies, autoimmune disorders, Lyme Disease and more

Introduction to LDA and LDI

Allergy and autoimmunity represent a loss of appropriate immune "tolerance". The idea behind LDA and LDI is to retrain your immune system to become tolerant to specific microbes, chemicals, proteins, pollens, allergens, hormones, tissues, etc. These "antigens" as they are called, trigger an immune response that leads to allergies, autoimmunity, immune activation, and inflammation. It is the result of this immune response to antigens that causes, contributes, and perpetuates the symptoms of many chronic infections and diseases. This is basic immunology as taught to every health care professional.

A key difference between autoimmunity and allergy is that if an allergic individual avoids whatever triggers their allergies (eg-foods, pollens, dusts, animals, insects, etc.), they do not become or stay sick. However, an individual with an autoimmune disorder will remain symptomatic even after the trigger has been removed. In other words, with autoimmunity once the fire has been set it continues to burn. Most often the match that lights the autoimmune fire is an infection. With LDA and LDI, the strategy is to use the right triggering antigens at the right dose at the right interval in the right solution to put out the autoimmune fire and essentially manage many autoimmune diseases with remarkable effectiveness.

LDA (short for "low dose allergens") is a method of immunotherapy enhanced by a very minute dose of the enzyme, beta glucuronidase, which stimulates the production of T Regulator (T_{REG}) lymphocytes. T_{REG} cells actively "switch off" lymphocytes that erroneously cause patients to be ill by misidentifying "normal" substances in the body to be allergens and/or antigens. As a result, LDI and LDA are useful for all types of allergy, sensitivities, intolerances, and immune reactions to a wide variety of substances ranging from inhalants (pollens, dusts, mites, molds, danders, etc.) to foods, chemicals, viruses, bacteria, yeasts, parasites, hormones, etc. It has been successfully used to treat an ever-growing number of conditions, some of which are listed below. Even better, because T_{REG} cells may live for long periods of time in the bloodstream, LDA only needs to be administered every 2 months at first, and then less often as time passes. Accelerated regimens for LDI are also possible by adjusting the concentration and the amount administered at a time.

What is the difference between LDA and LDI compared to allergy injections or sublingual drops?

Low Dose Immunotherapy (LDI) and LDA are profoundly different from conventional immunotherapy used for environmental allergies. First, LDA and LDI are far **safer than conventional immunotherapy** as administered by allergists. With LDA and LDI, the doses are much, much lower and thus it is no surprise that there has never been a reported case of anaphylaxis from LDA or LDI. It is estimated that over 700,000 doses have been administered worldwide yet life-threatening reactions have never been reported. In contrast, serious allergic/immune reactions are not uncommon with antigens given during conventional allergy shots. Adverse responses to LDA and LDI can occur when first initiating treatment but typically involve a mild to moderate exacerbation of existing sensitivity symptoms. LDA and LDI are much more patient convenient because the **dosing is given far less often** than with traditional allergen immunotherapy. Because T_{REG} lymphocytes individually have a life span ranging 7-8 weeks; and they don't appear to like being told what to do more than once, the full maintenance dosing of LDA and LDI are typically spaced at least 8 weeks apart*. Despite some information on internet sites, oral LDA and LDI is reported to often be comparable when **given orally under the tongue** rather than by injection under the skin. Because immune cells are not only concentrated in the skin but also in the mucus membranes of the mouth, LDA and LDI given under the tongue enables exposure to the mucus membranes where an abundance of T_{REG} lymphocytes reside. If allowed adequate exposure, the mucus membrane under the tongue is thin enough to allow adequate interaction between the LDA and LDI antigen and the immune cells. LDI and LDA are also able to **address many more conditions** than conventional allergy therapy, which primarily addresses allergic eyes, nose, and respiratory tract symptoms. For example, LDA and LDI have been reported to be very **effective for autoimmune and chronic immune-inflammatory diseases** (see list below). Finally, many **patients for whom allergy shots or drops were unsuccessful**, using LDA they found much better results.

**Certain situations prompt earlier or later LDI dosing and dosages based on the clinical response to a given dose may be warranted as determined by the doctor.*

What makes LDI and LDA so effective?

Based largely on the work of Leonard McEwen, MD in Great Britain, it appears the enzyme, beta glucuronidase, signals certain lymphocytes to establish tolerance of the immune system to foreign antigens. We know some bacteria in the human gut produce this enzyme, and it is suspected that the immune system relies in part on the presence of beta-glucuronidase to label an antigen as "friend" rather than "foe." In other words, this enzyme promotes tolerance to antigens encountered in the gut. Fortunately adding a very tiny amount of this enzyme to an antigen that the body previously considered a "foe" appears to retrain the immune system to not over-react in terms of autoimmunity, allergic reaction, or inflammation. Dr. McEwen termed the addition of beta-glucuronidase to very minute amounts of various antigens, "Enzyme Potentiated Desensitization" (EPD). EPD was used in the U.S. for a number of years before the FDA decided they would no longer allow

importation. William Shrader, MD and College Pharmacy in the 1990's reformulated and resumed the process, which is essentially similar to what is available today as LDA. Ty Vincent, MD and other practitioners have expanded the work of Drs. Shrader and McEwen to include viruses, bacteria, fungi, yeasts, parasites, etc. with personalized dosing approaches and this is called LDI. Unfortunately, because LDI and LDA involve premixed combinations of a many different allergens/antigens, LDI and LDA are not FDA "approved" and it is unlikely they ever will be despite having an unblemished safety record and an exceptional response rate even when administered by hundreds of different doctors throughout the world.

What are some of the conditions that LDA and/or LDI have reportedly been helpful?

- ❑ Allergies, intolerances, hypersensitivity, and anaphylaxis to food, inhalant, animal danders, chemicals, etc.
- ❑ Nasal symptoms ("rhinitis") from seasonal or year-round allergies; nasal polyps, lack of smell ("anosmia"), post nasal drip
- ❑ Eye symptoms ("conjunctivitis") including allergies, itchy/watery eyes, recurrent infections
- ❑ Ear symptoms ("otitis") including plugged ears, "glue ear", recurrent infections, Meniere's
- ❑ Sinus symptoms ("sinusitis") including chronic infections, fluid collection, mucosal thickening, pain
- ❑ Headaches including migraines
- ❑ Asthma and related bronchial symptoms ("reactive airways"); chronic cough, laryngitis, pharyngitis
- ❑ Skin symptoms ("dermatitis") including itching, eczema, psoriasis, acne, contact dermatitis, dermatographia, hives, swelling (angioedema)
- ❑ Joint symptoms ("arthritis") including pain, osteoarthritis; RA, ankylosing spondylitis, reactive arthritis
- ❑ Chronic fatigue, CFIDS, CFS or ME, fibromyalgia, muscle pains, polymyositis
- ❑ Urogenital Symptoms including interstitial and recurrent cystitis, vulvovagidynia, recurrent UTI or vaginitis
- ❑ "Candida" or fungal-related illness whose symptoms respond clinically to antifungals
- ❑ Repeated chest infections, sarcoidosis, Wegener's Granulomatosis, Churg Strauss
- ❑ Mood issues including depression, insomnia, emotional/behavior problems
- ❑ Neurological symptoms including autism, ASD, OCD, mental confusion (brain "fog," confusion, etc.) hyperactivity, ADD, ADHD, PDD, epilepsy, Tourette's, tics, multiple sclerosis, PANS, PANDAS
- ❑ Gastrointestinal symptoms including Ulcerative colitis, Crohn's disease, "Irritable bowel", "spastic colon" or chronic diarrhea, constipation, gut "fermentation" (bloating after most meals, especially sugar), chronic anal irritation/itch, autoimmune hepatitis
- ❑ Cardiovascular symptoms including hypertension, Raynaud's
- ❑ Metabolic/Hormonal symptoms including diabetes, pre-menstrual syndrome (PMS)
- ❑ All autoimmune diseases including Hashimoto's thyroiditis, RA, AS, ITP, MS, Sjogren's Syndrome

An excellent example with a long record of successful treatment through LDA is rheumatoid arthritis (RA). Most patients with RA have a particular HLA tissue type (e.g. HLA-DRB1 or HLA-DR4), have been colonized with Proteus bacteria, and had some event or circumstances set off chronic immune activation against the bacteria. Because of their tissue type, their own joint tissues cross-react with the target bacterial proteins. Even if the bacterium is completely eradicated from the patient, the autoimmune attack persists because it has now become a set reaction against "self" proteins.

This is the nature of many autoimmune diseases. A great many of them are initially triggered by immune activation against a microorganism or a food protein (most commonly gluten) or both. An important difference between "allergy" and "autoimmunity" in this regard is the persistence of disease symptoms after eradication of the triggering agent. If a child with eczema stops consuming dairy and his skin clears up, that's "allergy." But, if a child with recurring Strep pharyngitis develops guttate psoriasis, eradicating the bacteria with penicillin will not resolve his skin condition. Treating that child with LDI using the Strep antigen WILL stop the skin reaction.

With the right dose for the right patient, improvements have been seen within minutes. Nerve pain, headache, palpitations, air hunger, tremors, limb dysfunction, and other symptoms have improved before patients leave the office (even if they were present for years!). It is much more typical that symptoms will begin to improve the next day, or possibly as far out as 5-7 days after their dose.

If the dose given is too strong, symptoms (whatever effects they tend to have) will typically flare up within 24-48 hours. These flares sometimes last just a few hours or a few days, followed by dramatic improvement from their baseline or possibly just a return to their baseline. In other cases, they have persisted greater than two weeks, or even longer than a month. For this reason, it is critical to have the patient report the effects or lack of effect of a particular dose.

How do I get started with LDI and/or LDI?

While there are a few practitioners trained in LDI and LDA, our office is uniquely qualified because of Dr. Kaslow's extensive training and certification in Allergy and Immunology combined with our specialized equipment and experience with homeopathy. Call to schedule a "BRT-LDI session" with Vanessa in our office at 714-565-1032 or e-mail her at Vanessa@drkaslow.com. Dr. Kaslow will review your situation and provide her the initial information to get started.