#### Low Dose Allergen Immunotherapy (LDA)

Forouz Jowkar uses a method of advanced immunotherapy called LDA (short for "low dose allergens", or ultra low dose enzyme activated immunotherapy) to treat patients with many types of allergies and sensitivities, including those caused by foods, pollens, molds, dust and chemicals.

LDA is a type of immunotherapy enhanced by the enzyme beta glucuronidase, which effectively treats a myriad of problems having to do with any degree of failure of the immune response. It is administered only every two months at first and less often as time progresses. LDA and EPD may be used to treat a considerable number of <u>conditions</u>, including allergies, sensitivities, and autoimmune disorders such as rheumatoid arthritis, systemic lupus, and many others.

#### How does LDA work?

LDA is a method of immunotherapy enhanced by a minute dose of the enzyme beta glucuronidase (dose is 10<sup>-13</sup>). The beta glucuronidase activates extremely minuscule doses of various allergens (10<sup>-6</sup> to 10<sup>-17</sup>) and stimulates the production of T-suppressor cells, now called T Regulator (T Reg) cells. These cells actively "switch off" helper cells that are erroneously causing illness by misidentifying normal substances in the body as allergens. T-cells may live for long periods of time in the bloodstream, so LDA needs to be given only every 2 months at first, and then less often as time passes, generally with one to three tiny (1/20c.c.) intradermal (in the first layer of skin) injections on the inner aspect of the forearm.

LDA is used to treat all types of allergy, sensitivity and intolerance to inhalants (pollens, dust, mites, danders, etc.), foods, and chemicals. It is used to treat such conditions as seasonal and perennial hay fever, asthma, all types of food allergy and <u>many other problems</u>.

### LDA Treatment

LDA is administered using intradermal injections of 0.05 (1/20) cc in the skin of the forearm or sometimes in the leg. The method of intradermal injection is quite simple, and the LDA antigens are administered exactly as you would an intradermal skin test. The average patient receives 1-2 injections (usually one on each forearm) per treatment.

The response to LDA does not take long to appear, and certainly over 60% of patients note a significant positive response with their first treatment. Most patients respond positively by the third treatment, and if no response is noted by then, we generally re-evaluate the situation. About one in 25 patients do not respond with strongly positive results until they have had 6 treatments. The overall response rate for all conditions treated with LDA is

approximately 65-95%, depending on the condition being treated. The overall failure rate (no improvement) is about 9%.

LDA includes mixtures of antigens that act quite "universally", as the antigens in LDA are cross-reactive. This means patients who are allergic or intolerant to *most substances* have responded to treatment. Available LDA mixtures include:

## 1) inhalants

- inhaled pollens, animal danders, dust and mites, insects, fungi, yeast including candida species and molds
- 2) foods and food additives

# 3) chemicals

- most common chemicals and scents, formaldehyde and detergents, except for pesticides and herbicides

### 4) woods

- a mixture of over 90 common and exotic woods, used for the treatment of contact skin sensitivity in woodworkers

Additional specific LDA mixtures which work by way of a mechanism called molecular mimicry are available to treat several specific autoimmune diseases such as rheumatoid arthritis, ulcerative colitis, ankylosing spondylitis, scleroderma and others.

LDA has a few disadvantages compared to other types of immunotherapy. For example, most patients must adhere to a very restricted diet the day before, the day of, and the day after LDA treatment. There are also a number of medications (such as antihistamines and aspirin), that may significantly reduce or destroy the effect of LDA if taken during the three weeks after treatment.

On the other hand, LDA has tremendous advantages. One distinct advantage is that it appears to effectively treat a very wide variety of disorders not generally perceived to be immunerelated or caused by allergy, including illnesses that respond poorly – or not at all – to other methods of treatment of *any* kind. This would include migraine headaches, ADD and ADHD, Tourette's, Raynaud's and many others.

It is very important to note that LDA is dramatically effective for the treatment of eczema of all kinds. LDA immunotherapy has worked well for angioedema, which consists of facial swelling, swelling of the lips or eyes or swelling of other parts of the body. Angioedema is primarily the result of acute and chronic food allergy, but can be caused by many substances. There is no safe and effective traditional immunotherapy for this condition. The best

conventional treatment can do with these conditions is to advise avoidance (when the substance is known) and use drug therapy and epinephrine to treat the problem.

Likewise, immediate food allergy, which can cause anaphylaxis (a condition that is generally life-threatening), has no effective treatment except for emergency drug treatment and avoidance of the offending food agent. This includes such potentially fatal problems as peanut and shrimp or shellfish allergy. After ten years of use, LDA appears to work well for this condition and can prevent death from accidental exposure to anaphylaxis-inducing foods such as these.

Overall, LDA immunotherapy is considered a miraculous treatment by thousands of patients across the US and Canada who rely on it for treatment of a myriad of problems.

LDA is available in the US, Canada and the U.K.

Note: LDA is not approved by the Food and Drug Administration.