

WELLNESS RESOURCE

NEWSLETTER OF THE WELLNESS RESOURCE MEDICAL CLINIC


Edition 2

Winter 2004

The Wheal never lies...

Provocation/neutralization allergy testing is a very powerful medical tool in both diagnosing and treating patients with allergies and environmental sensitivities. But being part scientist (O.K. a very small part) I could not understand how it is possible to give one dose of allergen to a sensitive patient and invoke a wheal (and sometimes even symptoms of allergy), and then, by giving them a smaller dose of the same stuff, turn them off.

At the last Environmental Medicine Conference I cornered the guest lecturer who gave me the latest and greatest THEORY on the subject. It was quite eye-opening.



About 60,000 years ago humans started eating raw meat. This plagued humans with a new form of disease - giant parasitic worms- which were quickly killing off our species. We humans were ill-equipped to combat this new predator that our immune systems had never seen. Through natural selection, we developed a new branch of the immune system. In short, the new triggering cells, called TH2 cells, are clumsy cells which initiate a rapid-acting immune cascade to fight and kill the parasites. To activate this pathway required a lot of cellular energy (no wonder fatigue is one of the most common symptoms of allergy) and many other symptoms caused by a swarm of immune cells and mediators.

Normally our immune system has many checks and balances in place but TH2 doesn't play by the rules. How does this apply to provocation (Cont. on next page)

Principles of Environmental Medicine

(a quarterly series)

ADAPTATION

"Our bodies ability to adjust to a changing environment and to tolerate stress".

Even though we are all made up of the same working biological parts, our ability to adapt to changing environments varies greatly between individuals. Our immune system "learns" by repeated exposures to substances and deciphering what is food, what is self, and what is non-self. This builds a "memory" for substances (this is how a vaccination works also). There is a category of substances which are nonself and not food that don't require a mounted immune response. When our bodies respond to these substances inappropriately (i.e. allergens), symptoms and disease can result. Our bodies response to allergens is broken down into the following stages.

1. **Pre-adapted**- no previous exposure. No symptoms.
2. **Non-adapted**- first time response to a stressor. This is not always allergy related (for instance when you are stung by a bee for the first time or inhale a large amount of noxious smoke, you may feel sick even though your immune system hasn't "seen" this allergen before).
3. **Masked**- Physiological adaptation. Your immune system is "sensitized" to the certain trigger but the immune system response is not causing symptoms. This is seen with constant low levels of allergen (Cont. on next page)



When to Test, when to Retest

By Mitzy Murray
Health Educator and Director of Antigen Testing

First time testing of antigens for environmentally triggered illness can be nerve racking for the patient but also exciting. To discover what has been triggering symptoms or causing illness (sometimes for years!!) can produce a great amount of relief and set you on the path to a new and improved you.

If your symptoms are minor or infrequent, or the trigger to your symptoms is clear and can be easily avoided (avoidance is still the most effective way to stop environmentally triggered illness) then simple treatments are usually all that is required. This includes occasional antihistamines, decongestants, nasal sprays and washes, or possibly air filtration, rotation diets, lotions, bedding and mattress encasings and other environmental controls.

"Testing and retesting is never fun but very informative and may be required if the history suggests or symptoms are continuing" - Mitzy

Some symptoms which are less commonly thought to be environmentally triggered (premenstrual symptoms, chronic fatigue, headaches, "IBS", etc) require a traditional work-up by your regular doctor before allergy testing would be recommended. This may include a physical exam, various lab tests (a low thyroid is a great masquerader of disease), imaging of the brain and bowels (like a CT scan of the brain or sinuses or colonoscopy).

Patients who are having symptoms which cycle depending on the weather, season, or types of foods which are eaten are good candidates for allergen testing and treatment for environmentally triggered illness. (Cont. on next page)

(The Wheal never lies cont.)
tion neutralization? The TH2 cells predominate in the skin where patients are tested and a wheal is produced in allergenic patients. Deeper below the skin (i.e. subcutaneous tissues) lives the much tamer and controlled (and older) TH1 system with its many checks and balances. By stimulating this system preferentially, the body produces more inhibitors to wild TH2 and thereby, over time, patients are neutralized to their previous environmental triggers. Sublingual treatment with allergens also bypass "wild TH2" by entering the lymphatic system.

Maybe it's all hogwash or just a good nighttime story to share with your kids but this theory seems to be standing (for the moment!).

Putting on my clinician hat I must say that provocation neutralization testing and treatment works!! It has been said- "Useful interventions can precede a full understanding of mechanisms... we do not have to know everything before we do anything".

Kevin Hegewald MD
Medical Director, Wellness Resource Clinic

Testing (continued)

Patients with poorly controlled symptoms may benefit from retesting to broaden the coverage of environmental triggers.

At Wellness there are no hard set rules about retesting- everyone is treated on an individual basis. We educate patients so that they can become self-guided about what in their environment is affecting their bodies. We have all heard the saying "if it's not broke, don't fix it".

But sometimes the "endpoint" (the amount of antigen which turns off or neutralizes the immune system) changes. This change in endpoint can be shortterm or longterm. The most common causes of a change in endpoints and therefore a need for retesting are:

1. Growth spurts
2. Prolonged illness (i.e. chronic diseases, infections, newly diagnosed diseases)
3. Hormonal changes (puberty and menopause)
4. Total Load (see 1st edition of the Wellness Newsletter).

Here's to good health!
Mitzy

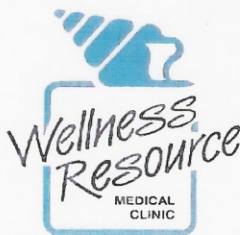
(Principles of EM cont.)
where a state of balance with the immune system has been reached.

4. Adaptation with symptoms-

Symptoms are felt, body defenses are beginning to break down, and the immune system is being stimulated to the point of causing symptoms (i.e. out of balance). This is typically the start of where a patient begins to feel sick (or in traditional medical terms, the "onset of present illness"). In the case of the bee, you get stung a second time and the allergic patient has a profound allergic response.

5. Maladaptation- Stage of exhaustion leading to depletion of nutrients, energy, and possible end organ damage.

Through provocation neutralization **patients can remain masked from any symptoms** because the immune system is kept in check. Of course our environments are always changing requiring constant watch for a maladapted state.



Allergy
&
Environmental
Medicine

BACK IN SERVICE...



WE are continuing to update our website to better serve our patients.
Please visit us at:

www.Wellness-Resource.com
949-249-9449

Food Allergen Labeling & Consumer Protection Act becomes Law

On Aug. 5, 2004 President George W. Bush signed the above act (FALCPA/S.741) into law. This took four years of congressional review and numerous hours of advocacy in the form of letters, phonecalls, and pleadings from patients, families and providers. This is great news for food allergy patients and patients requiring specialized diets and first legislation of its kind. Because labels are incomplete or written for scientists instead of consumers, up to 200 allergic reactions resulting in death occur annually as well as 30,000 emergency treatments.

The Food Allergen Labeling and Consumer Protection Act specifically requires ingredients to be listed in plain language if any of the 8 main food allergens are contained within the product (i.e. milk, egg, peanuts, tree nuts, fish, crustacean shellfish, soy and wheat/gluten). For more info go to www.cfsan.fda.gov.



For those taking thyroid...

There is no reason to believe that generic formulations of thyroid or natural formulations of thyroid are less reliable or less potent than brand names. Thyroid in general has a very narrow range of therapy. Meaning a small change in the bioavailability of the drug can cause clinical hypo or hyperthyroid states. Thyroid is also an inherently unstable drug and is markedly affected by light, heat and humidity. Be extra careful in handling this medication and consider retesting thyroid functions 6-8 weeks after switching brands.

Reference: *The Medical Letter*, Sept. 2004.