As an advisor and consultant with Cyrex Laboratories, a clinical immunology lab, Dr. Chad Larson holds a Doctor of Naturopathic Medicine degree from Southwest College of Naturopathic Medicine and a Doctor of Chiropractic degree from Southern California University of Health Sciences. He is a certified clinical nutritionist and a certified strength and conditioning specialist. His practice integrates naturopathic medicine with cutting edge laboratory testing and diagnostic imaging. This integrative approach to medicine includes diet and nutritional counseling, prolotherapy, regenerative injection therapy, chiropractic manipulative therapy, bio-identical hormone balancing, IV nutritional therapy and natural
alternatives to prescription drugs. He particularly pursues advanced developments in the fields of endocrinology, orthopedics, sports medicine, and environmentally induced chronic disease. In this interview with BioTuesdays, Dr. Larson discusses the rise of autoimmune issues, the difference between immediate and delayed autoimmune responses, and why the distinction is important.

Why are autoimmune issues becoming so rampant?

Problems associated with autoimmune response have always been here but we’re just identifying them better today. While genetics and environmental factors affect our predisposition to, and development of, allergies, sensitivities and autoimmune responses, cases of such responses have not actually multiplied, but rather our knowledge of a broader spectrum of immune reactions has. Through ongoing studies, we have learned so much about the way our bodies respond to different foods, antigens and environmental factors. Not only have we learned that immune responses can be triggered by sensitivities and intolerances in addition to so called allergies, but we have learned that there are different ways our bodies can respond to them. Specifically, these responses can be immediate or delayed.

What’s the difference between an immediate and delayed autoimmune response?

Immediate immune responses usually appear within 30 minutes of exposure to something that the immune system rejects. When you think of an allergic reaction, for example, you might imagine one’s face swelling up, the body breaking out in hives or throat tightening up and causing breathing difficulty. If you have an allergy, your immune system overreacts to an allergen by producing antibodies called Immunoglobulin E, or IgE. These antibodies travel to cells that release chemicals, causing an allergic reaction. Nuts and shellfish are examples of common allergens that would cause these immediate reactions. If these “predictive auto-antibodies” remain elevated and are not addressed, they can cause autoimmune diseases in several years.

Delayed immune responses can take days-to-weeks to manifest and can be seen in such forms as contact dermatitis, like a poison ivy rash, or granulomatous inflammation, as with Crohn’s Disease. Patients often don’t realize that symptoms such as headaches, GI discomfort and asthma can result from the foods they ingest because they are not immediate responses. Delayed autoimmune responses usually occur when the immune system produces autoantibodies, such as IgG or IgA, that begin to attack the body’s own tissues.

Delayed immune responses cannot always be seen and often make it more difficult to identify sensitivities or intolerances that could be causing harm and ultimately, leading to autoimmune diseases. However, there are lab tests for these types of food sensitivities.
Why do patients need to be aware of these differences?

Because an autoimmune response is delayed, patients are not aware that symptoms such as fatigue, headache or GI discomfort may be caused by food they’ve been exposed to. That’s why lab tests are so critical in identifying food sensitivities causing these delayed responses.

How common is food sensitivity?

It’s very common and people are unaware of it because most food sensitivities are delayed, instead of immediate. But after lab testing for many years and for a variety of conditions, people are surprised that we can quantify these reactions and show that your immune system is reacting to a specific dietary protein as if it’s poison for your body. And we can show that when you take those foods out of your diet, you feel better.

Is sensitivity to gluten the most common?

It’s also the most important and has the most research behind it. If fact, other sensitivities can be caused by gluten. If gluten is part of a patient’s diet and they have an autoimmune condition or some other chronic problem, testing for gluten sensitivity goes to the top of the list, as far as I’m concerned. There is a huge amount of medical literature describing how gluten can cause a variety of symptoms and influence multiple organ systems.

What’s the connection between gluten and celiac disease?

Celiac disease is an autoimmune disorder in which the body mistakenly reacts to gluten, a protein found in wheat, barley and rye, as if it were a poison. When someone with celiac disease consumes gluten, their immune system reacts by destroying the part of the small intestine that absorbs vital nutrients. This malabsorption can lead to serious illness. The incidence is about 1% to 2% of the population. However, a much larger percentage of the population, 20% to 30%, may have a non-autoimmune reaction to gluten, known as non-celiac gluten sensitivity. New research suggests that gluten alone may not be responsible for the symptoms produced by the condition currently called gluten sensitivity. Instead, it is showing that perhaps a group of poorly digested carbohydrates may be the cause of the symptoms instead. It is also important to note that wheat, barley and rye — gluten-containing grains — are all poorly digested carbohydrates.

Is there a correlation between genetics and the environment in autoimmune issues?

In my mind, autoimmunity is a three-legged stool, consisting of genetics, environmental triggers, such as gluten or a virus, and integrity of the gut barrier. If the integrity of the gut barrier is compromised, anything we’re exposed to can get right into the immune system. There was a NIH study that estimated genetics plays a 30% role in a person’s potential for developing an autoimmune condition, which leaves 70% for the other two. So genetic predisposition to autoimmunity must be considered but I’ve diagnosed patients with no family history of autoimmunity.
What’s the prevalence of autoimmune conditions?

It could be as high as 15% to 20% of the populations in the U.S. and then there are people who don’t know they have autoimmune sensitivities to things like gluten, modified foods or chemicals.

What’s your take home message?

If your symptoms aren’t getting better, get tested because studies have shown us that the body can produce autoantibodies up to 10 years before developing into a clinical autoimmune disease, resulting in ongoing tissue damage and eventually showing symptoms. Cyrex Labs has comprehensive tests to evaluate autoantibodies, autoimmune conditions, gluten sensitivity and intestinal permeability.