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Riordan Clinic

Health Hunters Newsletter

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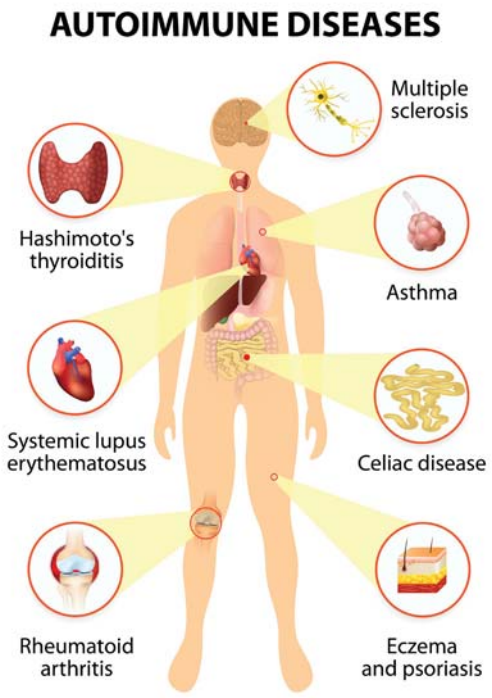
Inside This Issue

Why is the body attacking itself?: A discussion about Autoimmune disorders

THE AUTHOR
Karen Wheeler APRN

One of the leading causes of chronic health problems in this country is autoimmune disorders. The American Autoimmune-Related Diseases Association reports that there are 80-100 different disorders that are caused by the body attacking itself (www.aarda.org). But there may be many more diseases that have an autoimmune component to them. Autoimmune diseases include rheumatoid arthritis, multiple sclerosis, Type 1 diabetes, lupus, hashimoto thyroiditis and Crohn's disease. The National Institute of Health statistic is that 23.5 million Americans are suffering from an autoimmune disorder. Most likely, there are millions more because of the difficulty in tracking these statistics. In comparison, heart disease affects 22 million and cancer 9 million (www.nih.gov). While autoimmune diseases affect more women than men, they can occur at any age from childhood on. An individual can also have more than one autoimmune disease!



So what exactly are autoimmune diseases? Why does the body start attacking itself? The body has an intricate array of cells that are constantly monitoring for anything that may cause it harm. If the immune system recognizes a foreign substance, it sets about neutralizing or destroying it. When the immune system gets confused and cannot recognize what is self, compared to what is not self, it can start attacking normal tissues in the body. This results in illnesses that we classify as autoimmune disease. Autoimmunity develops over time and often takes years to diagnose because of the vague symptoms it causes: fatigue, low grade fever, malaise. But pre-clinical antibodies can be found circulating in the blood if the clinician is astute enough to consider the possibility of the patient having an autoimmune disease and orders proper tests to look for them.

How Food Affects our Genes continues on page 2...

Contact the Editor

Please send any comments or suggestions to newseditor@riordanclinic.org.

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Sean Osler
Editor

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Why is the Body Attacking Itself...continued from page 1...

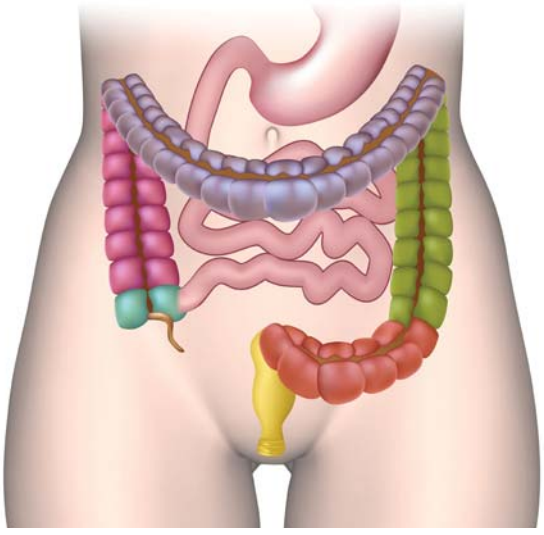
So what causes this confusion of the immune system? Several triggers for autoimmune disorders have been generally recognized and include genetics, environmental toxins, infections, stress and gut-related issues such as intestinal permeability (aka "leaky gut"). Most likely, it is a combination of factors that lead to a person developing autoimmunity. By identifying and avoiding triggers to the autoimmune disorder, the disease process can be stopped!

Dr. Jill Carnahan, in her presentation for Genova Diagnostics on March 25, 2015, states that 30% of autoimmune disorders can be attributed to genetic factors because these determine how the body is able to handle environmental exposures to infection and chemicals through processes such as methylation. But also, she speaks in depth about the importance of protecting the integrity of the gut lining and the beneficial bacteria in the gut that is referred to as the microbiome (www.gdx.net).

Approximately 70% of the lymphatic system is located surrounding the GI (Gastro-Intestinal) tract. This makes perfect sense due to what is inside the lumen of the gut is really part of the external environment! The apple you eat is still a foreign object inside of your gut until it is completely digested, broken into the smallest components, the usable nutrients absorbed and the waste disposed of. The lining of the gut is only one cell thick, so it is imperative that it stays healthy so that only what is safe to the body gets into it. Ah, but what happens when the gut lining is NOT healthy? What about when it gets irritated?

Have any of you seen poison ivy? That oozy, red rash occurs when the resin of a poison ivy plant gets onto the skin of a person sensitive to it. So imagine that same red, inflamed, swollen rash going on inside of your gut and you can get an idea of what is going on when your gut lining comes in to contact with something that it is sensitive to. This is the picture of a leaky gut. The compromised lining allows larger molecules to pass into the bloodstream than what are supposed to be allowed in. The immune system recognizes these molecules as foreign invaders and sets off an inflammatory and immune response.

Problems with autoimmune disorders come up when the immune system starts attacking normal tissues that look similar to those "invading" larger molecules. For example, if the immune cells detect that one of these "invading" molecules has iodine on it, it may start attacking the thyroid gland because it also has iodine in it to make thyroid hormone.



Many things contribute to developing "leaky gut" and

Why is the Body Attacking Itself...continues on page 3...

Why is the Body Attacking Itself...continued from page 2...

therefore, autoimmune diseases. One of the most obvious causes is food allergies, or sensitivities. Allergic reactions can occur immediately or can have delayed onset for up to 72 hours! Our ancestors did not eat grains for centuries, until after the start of the agricultural era. Gluten, which is found in wheat, barley and rye, causes intolerance or full blown celiac disease in millions of people. Gluten has been proven to stimulate zonulin which is a protein that has been discovered to open the tight junctions between the cells lining the gut (Fasano, 2012). Our bodies were never intended to ingest the food additives, pesticides or GMO products that are common in the diet of most people, so it is no surprise that these can lead to problems in our bodies. Medications, such as NSAIDs (anti-inflammatory medications that include ibuprofen and naproxen), disrupt the protective mechanisms built into the GI tract so, if taken with any regularity, it is presumed that the gut is leaky.

Antibiotics that we are given for infections, or that are in the milk or meat products that we eat, literally kill the normal beneficial bacteria in the GI tract and make it more susceptible to pathogenic microbes which can cause autoimmune disorders. Artificial sweeteners are also detrimental to the good bacteria that live in our gut. Even emotional stress affects the gut flora. A multitude of books have been written about the microbiome and how it is essential to protect and diversify it to stay healthy, so it is beyond the scope of this article to delve deeper into it at this time.

Research has shown an association between several infectious agents and the development of an autoimmune disease. For example, chlamydia and swalmonella have been shown to cause the development of reactive arthritis. Epstein-Barr virus has been associated with multiple sclerosis, lupus and rheumatoid arthritis. Coxsackievirus is associated with Type 1 diabetes. Viral infections can lie dormant in the body and reactivate years after the initial infection, or they can cause a low grade infection which adds to stress on the immune system.

So let's wrap up with what you can do to keep your immune system healthy! Get back to eating whole foods and organic produce to limit the amount of chemicals your body has to detoxify. Have your diet be sugar-free, gluten-free, and non-GMO. Avoid known food allergens, high mercury fish and other sources of heavy metals. Avoid transfats. Limit alcohol and caffeine. Find natural treatments like turmeric for inflammation instead of NSAIDs. Develop ways to help you handle stress—meditation, yoga or exercise may help. Many nutrients such as vitamins A, C and D can help boost immune function, just as probiotics can support a healthy diverse microbiome.

Probably the most important thing to do is to consider the possibility of having an autoimmune disease if you have vague symptoms that don't have a clear explanation as to what is causing them, and ask your provider to order appropriate testing.

For more information, call the Doctor's call time number or make an appointment to see one of our providers. We are here to help you discover Real Health!

1. (Fasano, A.: Ann N Y Acad Sci. 2012 Jul; 1258(1): 25–33).

Doctor Call Times

30 Minute Conference Calls for Potential Patients

1.800.615.2900

Access Code #2571701

Mondays, 5:30pm
Ron Hunninghake, MD

Tuesdays, 1:00pm
Anne Zauderer, DC

Wednesdays, 8:00am
Karen Wheeler, APRN

Wednesdays, 5:30pm
Jennifer Kaumeyer, ND

Thursdays, 5:30pm
Ola Buhr, MD

Fridays, 1:00pm
Karen Wheeler, APRN

Learn more about our team at:
riordanclinic.org/doctors-staff/

Gluten Triggers

THE AUTHOR
Krystal Shaw, RN

Just as stress can trigger minor symptoms in your life, such as acne or weight loss, it can also trigger genetic conditions such as celiac disease or gluten intolerance. The stress can be emotional in nature, but can also be a result of pregnancy or menopause that results in a hormonal shift and triggers the genetic food intolerance. Environmental factors, from our cleaning supplies to our car exhaust, may play a role as well. Unfortunately, though the stress may diminish, and we make an attempt to limit our exposure to such environmental factors, the food intolerance often remains.

If you have tested negative for celiac disease using laboratory markers, but continue to experience both gastrointestinal and non-gastrointestinal symptoms (i.e. leaky gut syndrome, bloating and brain fog) and have an improvement in your symptoms when on a gluten free diet. It is possible that you have a gluten intolerance. This is referred to as non-celiac gluten sensitivity (NCGS). **One in 10 adults has some form of NCGS or gluten intolerance.**

What is gluten? Gluten is difficult for most people to digest, whether they have a gluten intolerance or not. Gluten is a type of protein found in grains including wheat, barley and rye. It binds to certain amino acids (proteins), essential vitamins and minerals, making them unabsorbable. Although it is not found in grains like oats, quinoa, rice or corn, modern food-processing techniques often result in cross-contamination when the same equipment is used for processing. In addition, gluten is now used to help make many highly processed chemical additives that are found in a variety of packaged foods. This can make following a gluten free diet more challenging than ever, especially when **grain flours (predominantly wheat) make up 70 percent of the calories in an average American diet.** Check ingredient labels carefully!

Gluten causes changes in our gut microbes, which help to control everything from our nutrient absorption and hormone production to metabolic function and cognitive processes, therefore, damage done by gluten-related disorders goes far beyond the intestinal tract. It has untoward effects on the central nervous system, endocrine system, cardiovascular system, reproductive system and skeletal system. It can lead to an autoimmune reaction resulting in increased inflammation which is the root of most diseases.

Symptoms of gluten intolerance may include

- Digestive and IBS symptoms, including abdominal pain, cramping, bloating, constipation and diarrhea
- "Brain fog"—difficulty concentrating and trouble remembering information
- Frequent headaches
- Mood-related changes, including anxiety and increased depression symptoms.
- Ongoing low energy levels and chronic fatigue syndrome

Gluten Triggers continues on page 5...

Gluten Triggers continued from page 4...

- Muscle and joint pain
- Numbness and tingling in the arms and legs
- Reproductive problems and infertility
- Skin issues including dermatitis, eczema, rosacea and skin rashes
- Nutrient deficiencies, including anemia (iron deficiency)
- Higher risk for learning disabilities, including autism and ADHD
- Higher risk for neurological and psychiatric diseases, including Alzheimer's, dementia and schizophrenia

Natural treatment. Natural treatment of gluten intolerance includes the elimination diet. This means completely eliminating gluten from your diet for a period of 30 days, then reintroducing it while closely observing for symptoms. This will help you to recognize how severely you react to gluten, how drastically you need to alter your diet to eliminate gluten and how important it is for you to get tested for celiac disease. As with anything, the longer you stick with a gluten free diet, the more accustomed you become to it, and the better you feel, it will become second nature.

Focus on including more anti-inflammatory foods in your diet to repair you digestive system and heal nutrient deficiencies. Organic animal products, raw dairy products, vegetables, fruits, nuts, seeds and probiotic foods. Healthy fats and vegetables/fruits!

Try these Gluten-free flour alternatives

- Brown rice
- Sweet potato
- Quinoa
- Almond flour
- Coconut flour
- Chickpea flour

As always, our Riordan Clinic Providers are here to help! Consider testing to look for the two main genes associated with celiac disease and NCGS as well as an elevation in antibodies that are commonly present. Food is medicine! ! If you are ready to make the dietary changes necessary to take back control of your life, allow us to be a part of your support system. We offer food sensitivity testing, nutrient testing, a wide variety of high quality nutritional supplements, and we can provide you with the knowledge you need to get you on *your way to well!*

Autoimmune Disease PATIENT PROFILE

THE AUTHOR

Annette Chlumsky, RN

Autoimmune disease remains somewhat of a mystery to diagnose and treat. Autoimmune disease can involve almost every organ system- nervous, gastrointestinal, endocrine, as well as skin and other connective tissues, eyes, blood, and blood vessels. The immune system becomes misdirected and attacks the very organs and tissue it is designed to protect. There are many theories about what triggers autoimmune disease – bacteria, virus, drugs, stress, diet, chemical and environmental irritants. It strikes women three times more often than men and has been cited in the top ten leading causes of death among U.S. women and the fourth largest cause of disability.

A 67 year old woman who has been coming to the Riordan Clinic since 2008 has been diagnosed with several autoimmune diseases: scleroderma, Raynaud's with dermatomyositis, Sjogrens, Hashimoto's and vitiligo.

She has an extensive history of being treated with antibiotics for chronic sinus infections and acne prior to developing autoimmune disease. Treatment has included many trips to the Mayo clinic where she was given methotrexate, prednisone and CellCept.

She returned to the clinic due to significant peeling of skin on her hands and fissures (cracking open) over the finger joints which was extremely painful and limited her daily activities. She had tried many ointments and was wearing gloves for protection and healing, but was not improving. After consulting with Dr. Buhr and receiving six UBI treatments, the fissures healed and the co-learner was so relieved and

Patient Profile continues on page 7...

Celebrating Our 40th Year

On Saturday, October 17th, the Riordan Clinic hosted an event celebrating 40 years of Real Health. It was wonderful to see our patients, longtime friends, past employees, former board members, supporters and new friends enjoy a beautiful fall evening with live music, cocktails and hors'doerves, followed by dessert and program with Dr. Ron and Dr. Anne discussing our vision of the future of Real Health. Thank you to everyone who came out to celebrate with us.

Thank you to ASPYRA, LLC for sponsoring the desserts.

If you would like to contribute to the future of Real Health by donating time or resources please contact us at: 316.682.3100 or visit: riordanclinic.org/donate/

Patient Profile continued from page 6...

happy! She also received several lymphatic drainage treatments to facilitate circulation and release and drain toxins.

An OATS (Organic Acids) test was done which showed a low level of lactobaccilus (friendly bacteria) and yeast overgrowth in the intestinal tract. Karen Wheeler, NP, recommended higher doses of probiotics and Candistatin, turmeric for inflammation and Mitocore for mitochrondrial support.

Currently her overall condition is stable with normal inflammatory factors and she is off all immune suppressive medications. She uses a walker due to spinal kyphosis and has severe contractures of joints in her fingers and hands. Despite all the effects of the autoimmune assaults on her body, she maintains a very pleasant and positive personality. She is a prime example of being a Riordan Clinic co-learner who has made huge strides in taking responsibility for her health by educating herself through seeing various practitioners who practice different modalities such as chiropractic, naturopathy, functional medicine and attending nutritional classes offered at a local health food store. She sleeps on an earthing pad and has eliminated sugar and gluten from her diet to decrease inflammation. Her oral supplement program is extensive and she is constantly reading books to continue learning. The most recent is Immune System Recovery Plan by Susan Blum.

Management of autoimmune disease is an on-going process, not a quick-fix treatment approach. The co-learner can make a real difference by taking charge of their lifestyle, making healthy food choices, exercise, and managing stress.

Are you ready?

Talk with your Riordan Clinic provider today to see how Nutrient Lab Testing could benefit you!

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Improve your child's behavior, learning and mood through lifestyle and dietary modifications along with proper nutrient supplementation.

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- Anxiety

And please include the phone number **316.531.6242** to learn more or schedule an appointment.

Optimal Kids

Improve your child's behavior, learning and mood

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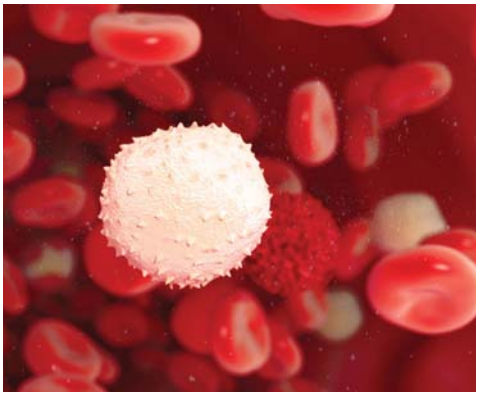
Vitamin C and Immunity

THE AUTHOR

Charles Hinshaw, MD, Director of Bio-Center Laboratory

Vitamin C boosts the function of virtually all of the immune system's cells.

Natural Killer (NK) cells.
These "hit men" cells detect and destroy infectious, malignant and other foreign invaders. Scientific studies show that NK function improves in the presence of vitamin C and declines when vitamin C levels are low, due to inadequate consumption and aging (Immunopharmcol Immunotoxicol. *1997 Aug: (3): 291–312).*



Neutrophils.
The main immune system defense mechanism for fighting bacterial infections, these white bloods cells engulf invading bacteria, and then destroy them by enzymatic digestion and blasts of free radicals. Vitamin C protects the neutrophils from these oxidizing free radicals once they have done their work. When volunteers took an oral dose of 1,000 mg or more of vitamin C, their neutrophils performed more vigorously than those of unsupplemented subjects (Can J Physiol Pharmacol. 1998 Apr: 76 (4): 373–80).

Lymphocytes.
These are immune system cells, called B-lymphocytes,that produce antibodies and coordinate with other immune cells to guide them towards threats needing destruction. When a threat is detected lymphocytes rapidly reproduce in a proliferative response that is enhanced by vitamin C. In older adults with lower levels of vitamin C the proliferative response can be restored to youthful levels by vitamin C treatment (Int J Immunopharmacol. 1986: 8 (2): 205–11).

Antibodies.
These are noncellular components of the immune system which are manufactured by lymphocytes. Antibodies help identify and destroy microbial threats and cancerous cells. Vitamin C enhances the production of three main classes of antibodies, IgA, IgM and IgG. IgA protects against infections mainly on mucosal surfaces, such as respiratory and digestive tracts. IgM is the earliest responder to threats. IgG provides long term immunity. Blood levels of these antibodies rise significantly when taking 1,000 mg doses of vitamin daily (Int J Vitam Nutr Res. 1977:47(3): 248–57).

All major immune system cell lines and functions operate at their peak level of effectiveness when supported by ample levels of vitamin C. For a more detailed and comprehensive article on vitamin C, go to (The Link Between Vitamin C and Optimal Immunity, Life Extension Nov 2015: 21(11): 56–64).

Addendum.
The normal range for plasma vitamin C, as measured at BioCenter Laboratory, is 0.6 mg/dL to 2.0 mg/dL; optimal range, for maximum benefits, is 1.7mg/dL to 2.4 mg/dL.