

## NewsJournal

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## Avoid Wheat If Elevated Antibodies But No Symptoms?

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The National Institutes of Health tells us that Auto-Immune Diseases collectively affect more than 24 million people per year in the U.S.<sup>1</sup> To put this in perspective, Cancer affects nearly 9 million people per year and Cardiovascular Disease affects close to 22 million people. And we know that only about 1/3<sup>rd</sup> of the people with an Auto-Immune Disease are diagnosed.<sup>2</sup> This puts Auto-Immune Diseases at the top of the list of the most common diseases in America today. But to most of us, Auto-Immune Diseases are unknown. Our medical system waits until the signs and symptoms are severe enough with organ failure and irreversible damage before we identify it.

Disorder Classifications - In general. Auto-Immune Disorders can be classified as either organ specific or non-organ specific. In organ-specific Auto-Immune antibodies are Diseases, specifically directed against targets localized in a particular organ and are often detected in the blood. Examples of organ-specific autoimmunity include Hashimoto's Thyroiditis (thyroid tissue), Type I Diabetes (pancreas tissue), Multiple Sclerosis (brain and nerve tissue). and Myasthenia Gravis (muscle tissue).

In contrast, the non-organ-specific





Auto-Immune Disorders are characterized by the presence of antibodies directed against multiple targets (not specific to a particular organ). This results in the involvement of several organs or endocrine glands and is often characterized by the presence of specific circulating antibodies. Nonorgan-specific auto-immunity includes diseases such as Systemic Lupus Erythematosus (SLE), Rheumatoid Arthritis (RA), and Scleroderma.<sup>9</sup>

A growing number of studies have identified that the body makes these antibodies directed against itself (known as auto-antibodies) years, and sometimes for a decade before a diagnosis is made. The antibodies damage tissue slowly and steadily until finally people begin showing symptoms, and eventually receive a diagnosis. As an example, the graph shows this progression of auto-antibodies for Systemic Lupus Erythematosous (S.L.E.). You can see that 5 years before a diagnosis could be made, the immune system began an 'early-warning system' (by producing auto-antibodies. At this initial point, the patients did not have symptoms severe enough that warranted seeing their Doctor.

**Early Warning?** - In the majority of cases, no one is monitoring this early warning system. And so the body has to speak a little louder (more and different antibodies begin being produced) but no one is listening. Often, this continues for years until the body begins screaming. And how does the body scream? Pain. Researchers are telling us that auto-immunity appears to be a warning system that has gone beyond 'early warning' to 'take cover'.



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It takes years from the first identification of antibody presence to the point of 'clinical onset' (when the symptoms are obvious that something is wrong) and then the positive diagnosis. Notice that the levels of 7 different antibodies continue to rise for up to 5 years before a diagnosis could be made. Arguably, the most common Auto-Immune Disease is also the only one where the 'cure' is known and uncontested. For some, gluten causes an 'alarm reaction' in the immune system with a 'call out the troops' type of attack response. (upregulating macrophage proinflammatory gene expression and cytokine production).56

When this response to gluten (found in wheat, rye, barley, possibly oats and some hybrid grains) stimulates the production of auto-antibodies to the intestinal tissue (anti-transglutaminase or anti-endomyselial antibodies), Celiac Disease is the diagnosis. And this Auto-Immune Disease is readily put into remission and disappears with a life-long avoidance of gluten in any form.<sup>4</sup> We know that Celiac Diseaseassociated antibodies can be identified up to 5.2 years before a diagnosis of Celiac Disease can be made.<sup>17</sup>

Numerous pain syndromes and Auto-Immune Diseases have been associated with an 'alarm response' to gluten. From peripheral neuropathies (numbness and tingling in the arms and legs) to crippling migraines and ataxia, from acute myocarditis (inflamed heart) to chronic pancreatitis, from vitiligo (loss of pigment, resulting in white spots on the skin) to Primary Biliary Cirrhosis (Liver and Gall Bladder problems), from Multiple Sclerosis

to Rheumatoid Arthritis. from Attention Deficit Hyperactivity Disorder to Epilepsy, in susceptible individuals, gluten may initiate this auto-immune response. 5,14

So which organ is vulnerable to this auto-immune attack, this calling out of the troops? The target tissue seems to be determined by one's genetics (the blueprint you were born with) and all of the mitigating factors (accumulated exposures we've had in our lives such as toxic chemical accumulation, repeated use of antibiotics or other drugs contributing to intestinal permeability, heavy metal toxicity, excess stress hormone production, poor food choices...).<sup>7</sup>

This response may affect tissue throughout the body and has been identified with brain and peripheral tissue <sup>8</sup>, liver epithelial cells, pancreatic beta-cells <sup>8</sup>, thyroid tissue<sup>9,</sup> bone cells<sup>10</sup>, skin tissue<sup>11</sup>, skeletal muscle <sup>12</sup>, myocardium <sup>13</sup>, and the brain and nervous system. And it does not require the production of auto-antibodies to the intestines-that is, gluten intolerance can occur and be associated with other Auto-Immune Diseases without the diagnosis of Celiac Disease<sup>14</sup>.

As an example, 57% of patients with neurological dysfunction of unknown cause have elevated antibodies to gliadin (a protein in wheat). Only 35% of this group also have evidence of intestinal damage (Celiac Disease). The remaining 65% have gluten sensitivity and elevated antibodies to the brain (cerebellum) or the nerves in the arms and legs, a situation analogous to that of the skin in Dermatitis Herpetiformis.<sup>14</sup> It appears that wheat can directly

stimulate an auto-immune attack on the brain and nervous system in sensitive individuals without the diagnosis of Celiac Disease.

Elevated antibodies to gliadin and gluten are the immune system's way of saying "this food is not good for me". Many researchers take the position that if there are elevated antibodies to gliadin and gluten, but there is no evidence of Celiac Disease, there is no evidence of value to avoiding gluten. This position is historic and is in the process of changing. The idea that until the sirens are screaming, it's ok to eat gluten containing grains, even if the immune system is saying "this is not good for me", is a position that more and more doctors are realizing is causing unnecessary suffering.

Many doctors and health care practitioners believe that even in the absence of indicators of outright Celiac Disease-that is with elevated antibodies to gliadin and with normal transglutaminase or endomyselial antibodies, or a normal biopsy, we are best served by heeding the message our body is giving us, and avoiding these foods.

References truncated. Please email editor@nutrition4health.org for complete references. 1. National Institutes of Health. Autoimmune Diseases Coordinating Committee. Autoimmune Diseases Research Plan. 2. Bland, J., March 2006 3. Notkins, A., March 2007, 72-78 4. Murray, J., 1999 5. Betterle C., 2003 6. Zanoni,G.,2006 7. Kumar,V., July 2001 8. Alaedini,A., 2007 9. Freeman HJ., 2006 10. Moreno, M., 2005 11. Abenavoli L., 2006 12. Kozanoglu, E., 2005 13. Frustaci, A., 2002 14. Hadjivassiliou, M., 2002

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<sup>17.</sup> Salmi, T, 2006