

Gluten Summit Report:
*The Triple A Threat of Gluten Sensitivity –
Autoimmune Disease, Arthritis and Alzheimer’s Disease*
by
Sheryl Sanchez, L.Ac.

Medical scholars gathered recently for a symposium on the topic of gluten sensitivity, 'A Grain of Truth: The Gluten Summit'. This educational summit was organized by Dr. Thomas O’Bryan, a premier educator in the field of Functional Medicine and Nutrition. This summit was a series of interviews of primarily medical doctors who are on the cutting-edge of the epidemic of gluten-associated disease in America today – authors of books such as *Wheat Belly*, written by a cardiologist who focuses on early-heart disease detection and prevention and *Grain Brain*, written by a neurologist who focuses on addressing root causes of neurological conditions; respected Functional Medicine expert, Dr. Mark Hyman, author of several books and a PBS special addressing the global epidemic of obesity, diabetes, and cardiovascular disease, to the pioneer researchers in Celiac Disease (Dr. Alessio Fasano and Dr. Umberto Volta), to a premier, progressive researcher in immunology (Dr. Artisto Vojdani) to other specialists in diabetes, nutrition, gastrointestinal and cardiovascular disease.

Now commonly known as 'non-celiac gluten sensitivity', but referred to as 'gluten sensitivity' or GS in this article, it has become apparent that a large percentage of people eventually develop a 'loss of tolerance to gluten in some way', becoming more prevalent over the age of 40.¹ In fact, it is now known that gluten is not actually 'digestible' by humans at all, that we have not evolutionarily acquired the enzymes to break it down, and this, coupled with the fact that we overconsume gluten – the amount of gluten in wheat consumed in America has increased from 30-40% to over 50% in the last century² – are why more Americans are reacting to gluten in a negative way.³ Also, the “average whole wheat bread today has more sugar content than sugar”⁴, or another way to look at this is a quote from *Wheat Belly* – “eating two slices of whole wheat bread can increase blood sugar more than 2 tablespoons of pure sugar can” (emphasis mine).⁵

The first threat caused by GS is a whole class of many different disease processes labeled as **Autoimmune disease**⁶. Autoimmune diseases are caused by many potential factors – genetics is one, but research now shows that DNA can be reversed through diet, nutrition and lifestyle.⁷ Environmental toxins such as heavy metals, herbicides or pesticides, such as lead and mercury, Agent Orange or paraquat, amongst many others, have shown links to various autoimmune diseases and neurological conditions.⁸ But excessive diet consumption of sugars in all forms in our American society – whether it be gluten⁹ in various forms in our diet - has now been proven by research that the *inflammation* that occurs due to the modern American diet is causing a myriad of inflammatory diseases, including autoimmune diseases, which are greatly on the rise.¹⁰

The wheat we consume today has been modified within the past generation – purposefully hybridized in the 50's to produce more yield - but we especially cannot digest what has been created – some new gluten protein sequences have been created, and evolutionary adjustment does not occur in 40 to 60 years – and excess of this kind has led to the creation of more autoimmune disease in basically one generation than what has ever been seen before.¹¹

To oversimplify how to understand how diet and GS leads to many inflammatory diseases: overconsumption of sugars in all forms causes intestinal inflammation and intestinal dysbiosis or permeability or *damage*, resulting in '*leaky-gut syndrome*'.¹² This allows systemic circulation of potentially harmful, foreign cellular structures¹³ that the body then tries to respond to, creating an *autoimmune* reaction.

For example, the autoimmune disease of Hashimoto's Thyroiditis is the most common form of autoimmunity in the US today,¹⁴ and is extremely on the rise due to this connection. Gluten is similar to the structure of a thyroid hormone in the blood, and our body recognizes this as an overproduction of the hormone. The result is to react by attacking the thyroid gland to stop the production of the hormone it thinks the thyroid has produced in excess.¹⁵ Another sad fact is that the treatment of Hashimoto's Thyroiditis by typical MDs is to ignore the autoimmune process altogether, since they do not know how to treat it any different from a non-autoimmune case, resulting in very likely long-term serious health consequences. Treat Hashimoto's Thyroiditis by eliminating wheat, healing the intestinal lining and boosting the immune system? This is absurd from their point of view today, but I believe this thinking will change in the next decade because of the extensive research and education about diet and autoimmunity occurring today.

Other autoimmune diseases, such as Multiple Sclerosis (MS), a neurological condition, dermatological conditions such as psoriasis and eczemas, and Rheumatoid Arthritis (RA), also can result from GS similarly through a cascade of responses to these toxins that end up in our bloodstream. The typical gluten allergy, known as Celiac Disease, occurs by damaging the lining of the intestine in response to the toxin of gluten and its related proteins, whereas in these autoimmune diseases, the destruction is to other tissues in the body – myelin sheaths covering nerves in the case of MS, skin cells inflaming and overly multiplying in the case of dermatological conditions, and cartilage destruction in the case of RA.

The second threat of gluten sensitivity is **arthritis** itself, formally known as osteoarthritis. Gluten and all sugars cause glycation - an inflammatory reaction that occurs and especially attacks the joints¹⁶. Gluten causes joint inflammation also due to stimulating production of inflammatory hormones, which has 'direct joint destruction effects'.¹⁷ This inflammatory cascade in the joints decreases cells that allow joint repair and therefore cartilage corrodes away. Another result is osteophyte (bone cells) production which tries to repair inflamed joints, resulting in arthritis, possibly along with bone spurs and scar tissue. I believe this is why our society of 'older' Americans in their 50's and 60's are getting joint replacements at a alarming, high rate - it is not due to 'wear and tear' (from our sedentary lifestyles?) as the AMA suggests - it is due to the joint inflammation that results from our diets (and obesity). I even hear now in my office how knee joint replacements are being postponed since the patients are 'too young' for the expected life expectancy of a joint replacement is only 10-20 years.¹⁸ Therefore, arthritis is another health condition that can be helped by diet change. Depending on its severity, as with all health issues, lifestyle and diet change behaviors both are needed - best to change behaviors that cause damage early on in life. We need to choose to eat better to avoid serious disease processes. Avoiding and actually eliminating gluten is imperative for approximately 80% of Americans, since we are genetically predisposed to be gluten sensitive due to our European ancestry.¹⁹

This leads to the last but definitely not least threat of GS as outlined here – **Alzheimer’s disease**. Alzheimer’s disease has also been linked to many of the same causes as the autoimmune diseases mentioned above. But brain inflammation or neuroinflammation from **GS** we are just learning is a very large factor in the progression of Alzheimer’s, which is also becoming increasingly common.²⁰ Recent research in respected medical journals (*Lancet Neurology* and the *New England Journal of Medicine*) highlights that our brain shrinks due to the inflammation caused by a diet high in gluten and carbohydrates of any kind, and even ‘mild elevations of blood sugar’ increase the risk of dementia.²¹ The recent book ‘*Grain Brain*’ by neurologist Dr. David Perlmutter recommends a gluten-free diet (with a diet high in omega-3 fats) for any neurological condition, from headaches to depression to ADHD to dementia to movement disorders (Parkinsonism, dystonia, ataxia, etc.) to MS.²² Another very important reference in this field is the book ‘*Why Isn’t My Brain Working?*’ by clinician and educator Dr. Datis Kharrazian, a Diplomate of Chiropractic Neurology and a specialist in Functional Neurology. The leaky-gut phenomena leads to the attacking of brain cells - neurons die and memory cells disconnect and degradation has occurred. Brain inflammation must be stopped or the cascade continues to kill off more neuron cells.

Treatment can be difficult in all of these disease processes. However, there is good news in that Functional Medicine (a systems biology approach that recognizes individuals are biochemically unique) lab analysis and natural medicine treatment can help tremendously, without the side effects of pharmaceutical treatment.²³ Diagnosis of leaky-gut syndrome and system autoimmunity can occur through lab analysis. The potential for autoimmune disease progression can be addressed through diet, lifestyle changes, along with nutritional support through natural medicine. Leaky-gut syndrome can be repaired through diet elimination of gluten and other allergens (there are many cross-reactive foods that can also cause inflammation and leaky-gut syndrome²⁴), along with natural medicine treatment using herbs, antioxidants, and nutritional support to repair the intestinal lining. Inflammation can also be mediated by maintaining healthy blood glucose levels (reducing carbohydrate consumption), which can be monitored via lab analysis²⁵, and increasing healthy fat consumption (such as fish oil, coconut and other plant oils). Autoimmunity can be managed by testing adrenal stress and watching antibodies while managing the immune system with natural medicine. Traditional Chinese Medicine, one distinct form of natural medicine, including acupuncture, Chinese herbal medicine and dietary therapy, can also be very effective for arthritis²⁶, autoimmunity²⁷, and Alzheimer’s disease²⁸.

¹Volta, Dr. Umberto. The Reality of Non-Celiac Gluten Sensitivity and Its Many Manifestations. *A Grain of Truth: The Gluten Summit Handbook*, ed. theDr.com, November 11-17, 2013, p. 73.

²Fasano, Dr. Alessio. Why Creating the Healthiest Intestinal Environment Possible Can Arrest Your Vulnerability to the #3 Cause of Getting Sick and Dying. *A Grain of Truth: The Gluten Summit Handbook*, ed. theDr.com, November 11-17, 2013, pp. 47-48.

³Americans consume about 146 pounds of wheat per person per year and with along with other carbohydrates and refined sugars, to a total of 152 pounds per year of sugar, which averages to a pound of sugar and flour per person (including children) daily. Hyman, Dr. Mark. A “Functional Approach” to Lifestyle Can Transform Your Body. *A Grain of Truth: The Gluten Summit Handbook*, ed. theDr.com, November 11-17, 2013, p. 150.

⁴Ibid.

⁵Davis, William. *Wheat Belly*. New York: Rodale, 2011. Dust jacket, back page.

⁶ Autoimmune disease is defined by *Wikipedia* as ‘an abnormal immune response of the body against substances and tissues normally present in the body’.

⁷ Hunter P. We are what we eat. The link between diet, evolution and non-genetic inheritance. *EMBO Rep.* 2008;9:413–5. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2373379/>

⁸ Cannon J.R., Greenamyre J.T. The role of environmental exposures in neurodegeneration and neurodegenerative diseases. *Toxicol. Sci.* 124, 225–250. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3216414/>

K.M. Pollard, P. Hultman, and D.H. Kono. Toxicology of autoimmune diseases. *Chem Res Toxicol.* Mar 15, 2010; 23(3): 455–466. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3076021/>

Freire C, Koifman S. Pesticide exposure and Parkinson's disease: epidemiological evidence of association. *Neurotoxicology.* 2012 Oct;33(5):947-71. <http://www.ncbi.nlm.nih.gov/pubmed/22627180>

Windham, B. (Ed.) *Pesticide Effects: Autoimmune Conditions (Lupus, Scleroderma, RA)-Review.* <http://www.flcv.com/PestAI.html>

⁹ Note that gluten is contained in the grains wheat, barley and rye. There is a similar protein to gluten in oats, which some may also be sensitive to.

¹⁰ Autoimmune Disease Rate Increasing. *Pub.* 6/22/12. <http://www.medicalnewstoday.com/articles/246960.php>; American Autoimmune Related Diseases Association, Inc.

<http://www.aarda.org/autoimmune-information/autoimmune-statistics>

¹¹ Kharrazian, Datis. *Why Do I Still Have Thyroid Symptoms?* Carlsbad, CA: Elephant Printing, 2010. p 46.

¹² Intestinal permeability or leaky-gut syndrome can also be caused by medications (antibiotics, corticosteroids, antacids), yeast or bacterial overgrowth, viral infections, parasites, stress (increased cortisol), hormone deficiencies, and other autoimmune disease processes.

¹³ Specifically, peptides (combination of amino acids or small proteins) and antigens (molecules that induce an immune response), amongst others.

¹⁴ *Gluten, Leaky Gut, Autoimmune Connection Manual*, written by Dr. Datis Kharrazian, presented by Dr. Brandon Brock, Apex Seminars, 2013, p. 101.

¹⁵ Kharrazian, Datis. *Why Do I Still Have Thyroid Symptoms?* Carlsbad, CA: Elephant Printing, 2010. p. 29, 31.

¹⁶ Davis, William. *Wheat Belly.* New York: Rodale, 2011. p. 125.

¹⁷ *Ibid*, p. 124.

¹⁸ The life expectancy of a joint replacement depends on many factors, including lifestyle/activity levels, type of materials used and which joint is replaced. <http://www.aaos.org/news/aaosnow/apr12/clinical17.asp>;

<http://www.healthcentral.com/osteoarthritis/c/240381/163101/replacement-devices/>

¹⁹ Kharrazian, Datis. *Why Do I Still Have Thyroid Symptoms?* Carlsbad, CA: Elephant Printing, 2010. p. 30-31.

²⁰ <http://money.msn.com/now/post.aspx?post=bdfa927b-cdf1-4f24-8f7e-bdd59fbc0d2d>;

<https://www.aan.com/PressRoom/Home/PressRelease/1142>

²¹ Perlmutter, Dr. David. Eliminating Gluten as the 1st Step in Preventing Brain Conditions. *A Grain of Truth: The Gluten Summit Handbook*, ed. theDr.com, November 11-17, 2013, pp 198-199.

²² How to Prevent Alzheimer's Disease – A Neurologist Speaks Out.

<http://articles.mercola.com/sites/articles/archive/2013/09/29/dr-perlmutter-gluten.aspx>

²³ Severe, acute autoimmune reactions may need appropriate conventional pharmaceutical intervention.

²⁴ Currently known cross-reactive foods are dairy (milk and eggs), soy, oats, yeast, chocolate (milk), coffee, sesame, buckwheat, sorghum, millet, hemp, amaranth, quinoa, tapioca, teff, corn, rice, and potato. Ref: Cyrex Labs.

²⁵ Hemoglobin A1C, C-Reactive Protein, etc.

²⁶ <http://apps.who.int/medicinedocs/en/d/Js4926e>; <http://nccam.nih.gov/research/results/acu-osteo.htm>

²⁷ <http://www.healthcmi.com/index.php/acupuncturist-news-online/478-newacupuncturearthritisresearch>;

http://www.acupuncturetoday.com/graphs/dec_02graph.php;

<http://www.webmd.com/rheumatoid-arthritis/news/20090604/chinese-herb-may-treat-autoimmune-diseases>;

<http://www.ncbi.nlm.nih.gov/pubmed/1581655>

²⁸ Traditional Chinese medicine: a promising candidate for the treatment of Alzheimer's disease

<http://www.ncbi.nlm.nih.gov/pubmed/23445907>