What foods are often eliminated from an autoimmune-friendly diet, and why?

When pursuing a healing-based approach to autoimmunity, diet is a key factor. Certain foods are known to cause inflammation and other issues in the body, so we are typically encouraged to eliminate these foods from our diet – at least for an elimination period of 30 to 90 days or so, or until symptoms resolve. Then we might reintroduce a favorite food that we've missed, and observe any symptoms.

This is, for example, the approach used in the Autoimmune Protocol, or AIP. The following text is from the AIP Certified Coach program through which both founder Joy Cutrone and contributor Lauren Gauthier are certified as AIP Certified Coaches. There are other elimination diets and, should you have particular concerns or anticipate needing resources to be able to make significant change to diet, a nutritionist and/or health coach who's experienced with autoimmunity could be an excellent support resource. The Autoimmune Families Community is also available as a resource with insights, a robust resource directory, and online community.

Grains:

These foods have a myriad of components that are problematic for those with gut issues and autoimmune disease. First, they contain lectins, most specifcally prolamins and agglutinins, which impair digestion, cross the gut barrier largely intact, damage the intestinal lining and set off the immune system (causing intestinal permeability, or leaky gut). These types of lectins also contribute to dysbiosis through the inhibition of digestive enzymes, meaning they provide more food for potentially pathogenic flora further down the digestive tract. As if that wasn't enough, grains contain digestive enzyme inhibitors, phytates and phytic acid, (known as antinutrients, or substances that interfere with the absorption of food) which survive cooking, resist digestion, and also cause intestinal permeability, dysbiosis, and worsen immune activation. When you combine the toxic and immuneostimulatory effects of these components in grains, it becomes very clear that for those seeking to heal a leaky gut, these foods should not be consumed.

Gluten:

A component of gluten found in grains (wheat, barley, and rye specifically) known as gliadin is the best known example of a prolamin (which is a type of lectin). Specifically, gliadin fragments cross the gut barrier, and once inside the body, these protein fragments interact with the gut associated lymphoid tissue, stimulating the release of inflammatory cytokines and activating cells of both the innate and

adaptive immune system. Through this process, gliadin causes damage of gut enterocytes, which results in the creation of holes in the gut barrier through which various contents of the digestive system can leak into the body. Inflammation is triggered by gliadin fragments that cross the gut barrier, as well as by other partly digested food proteins, gut bacteria, bacterial fragments, and waste products, like toxins, crossing over. This further activates the immune system, causing a vicious cycle of inflammation and gut-barrier damage, and is why the gluten-containing grains (wheat, barley, and rye) are typically the most problematic for those with gut issues or autoimmune disease.

Pseudo-grains and grain-like substances:

Although these are not true grains, they contain many of the same substances that impair the digestive process, cause intestinal permeability, worsen dysbiosis, and activate the immune system—lectins (like prolamins and agglutinins), digestive enzyme inhibitors, phytates and phytic acid. In addition, pseudo-grains can also contain saponins, which have detergent-like qualities and are similarly damaging to the intestinal barrier.

Dairy:

There are many reasons why a person with gut issues or autoimmune disease would want to avoid dairy products. First, dairy is a common allergenic food, affecting between 1–17% of children and 1–4% of adults presenting with IgE-antibodies (IgA-, IgG-, IgD-, and IgM- antibody reactions, sensitivities, in the general population are not known). For these people, even trace proteins in ghee can be a problem. Additionally, 25–75% of people (depending on ethnicity) are unable to digest lactose, a sugar found in milk. Next, dairy products contain protease inhibitors that may contribute to intestinal permeability. If you thought that was it... there are also a few other reasons to avoid dairy products—they are highly insulinogenic, which may contribute to inflammation and insulin resistance; they contain active hormones that have the potential to alter human hormone levels (like IGF-1); and they increase mucous production, which can irritate the gut lining and hinder nutrient absorption. Lastly, cow's milk proteins are also known to be gluten cross-reactors, which means that if they are sensitive to gluten, these dairy proteins may stimulate a person's immune system as if they were eating gluten.

Legumes:

Like grains and pseudo-grains, legumes contain many of the same substances that impair the digestive process, cause intestinal permeability, worsen dysbiosis, and activate the immune system—lectins (like prolamins and agglutinins), digestive enzyme inhibitors, phytates and phytic acid. In addition, legumes can also contain saponins, which have detergent-like qualities and are similarly damaging to the

intestinal barrier.

Processed vegetable oils:

Omega-6 fatty acids are concentrated in modern, processed vegetable oils. Their high linoleic acid content contributes to pro-inflammatory pathways in our bodies, the root of many chronic inflammatory diseases, like autoimmune disease. A balanced ratio of Omega-6 to Omega-3, between 1:1 and 4:1, is optimal for human function. Use of these Omega-6 oils crowds out healthier Omega-3 fatty acid sources, by competing for the conversion enzymes necessary for the body to use both types of fatty acid. This means that the quantity of Omega-6 in the diet directly affects the conversion of Omega-3 ALA, to long- chain Omega-3 EPA and DHA, which protect us from disease. Additionally, the manufacturing process

to produce these oils results in toxic end-products forming free radicals. These skewed fatty acid molecules damage DNA, RNA, cell membranes, vascular walls, and red blood cells, all of which cascade into deeper damage.

Processed food chemicals and ingredients:

A number of health concerns surround the chemicals commonly added to manufactured and processed foods. Preservatives, colorings, sulfites, phosphates, emulsifiers have been shown to have a negative impact in a wide range of areas. Furthermore, sensitivities to these chemicals are common, and there is enough evidence in the scientific literature to suggest that avoiding foods that contain these additives

is a good idea.

Added sugars:

The rst problem with sugar is that it is typically added to nutritionally poor foods in order to make them addictive. When the body is not receiving the nutrients it needs from these foods, a vicious cycle results in ever higher cravings for the added sugar. The second problem with sugar is that increased consumption leads to issues with blood sugar regulation, which can look like insulin resistance, high blood sugar levels, hypoglycemia, and diabetes. Regulating blood sugar levels and maintaining insulin sensitivity are critical to regulating the immune system and reducing inflammation.

Sugar alcohols:

Sugar alcohols are fermentable sugars that are incompletely absorbed in the intestine and have been shown to disproportionately feed pathogenic bacteria in the gut, meaning that they have the potential to worsen dysbiosis. Other studies have shown that they have the ability to increase intestinal permeability.

Non-nutritive sweeteners:

These compounds have been linked to increased risk of obesity and metabolic syndrome through their effect on hormones and metabolism. They have been shown to have physiological effects that alter appetite and glucose metabolism. Even natural nonnutritive sweeteners, like stevia, have been shown to negatively impact hormone balance. Other types (like aspartame) have been shown to increase oxidative stress and inflammation in the brain. Many of the long-term effects of these chemicals are unknown.

Nuts:

Nuts contain both digestive enzyme inhibitors as well as phytic acid, which has the potential to worsen intestinal permeability and feed bacterial overgrowths. In addition, many nuts are common allergenic foods.

Seeds:

Seeds contain both digestive enzyme inhibitors as well as phytic acid, which has the potential to worsen intestinal permeability and feed bacterial overgrowths. In addition, many seeds are common allergenic foods.

Nightshades or spices derived from nightshades:

Foods in the nightshade family contain a subset of saponins called glycoalkaloids, which increase leaky gut (although by a different mechanism than grains and legumes), are good at crossing the gut barrier, and can be powerful adjuvants (compounds that stimulate the immune system). Each nightshade-family food contains a different type of glycoalkaloid that can have various effects on the gut and the immune system—for example, alpha-solanine and alpha-chaconine in potato, alpha-solanine in eggplant, and alpha-tomatine in tomato. Even very low levels of these glycoalkaloids in nightshade family foods can contribute to a variety of health issues over time, especially in the presence of autoimmune disease. In

addition, some nightshade-family foods (like peppers) contain capsaicin, which has been shown to be a potent irritant to certain tissues and is possibly a contributor to intestinal permeability.

Eggs:

There are a few reasons why a person with gut issues or autoimmune disease would avoid eating eggs. First, they are one of the most allergenic foods, affecting approximately 2–3 percent of the entire population. Second, they contain lysozyme, which is an enzyme that protects the yolk against microbial attack as it grows. It is very good at breaking down cell membrane components of pathogenic bacteria in our gut, and subsequently transports these bacterial protein fragments across the gut barrier, damaging the gut and worsening intestinal permeability. Lysozyme also has the ability to form strong complexes with other proteins, and can transport them into the body. Next, many of the other proteins in egg whites are protease inhibitors, making the lysozyme and egg white protein complexes resistant to our digestive enzymes. Absorption of pure egg white lysozyme by itself into the circulation is probably not hazardous, but the problem is the other proteins being transported with lysozyme across the gut barrier. This is likely the reason why eggs (especially the whites) cause so many difficulties for those with gut issues or autoimmune disease.

Alcohol:

Alcohol causes an increase in intestinal permeability by unraveling both the tight junctions as well as the adherens junctions in the gut wall. By opening up both junctions, alcohol is able to create holes allowing unusually large molecules to be transported into the body, most notably endotoxins. Endotoxins are toxic components of the cell walls of Gram-negative bacteria, which live in our guts and are known to be exceptionally able to cause inflammation and tissue damage.

Adapted from "*Why do I eliminate certain foods on the Autoimmune Protocol*" by Autoimmune Protocol Certified Coach, 2017, Sara Ballantyne, Mickey Trescott, and Angie Alt.