



Day Four: Gluten, Gliadin and the Gut

Gluten is not just in wheat; it is also in rye and barley and often in oats unless they have been processed in facilities separated from all other processing of grains. There is also a type of gluten in corn. More about that later.

Wheat contains a specific protein called gliadin. And that's what people are really talking about when they are talking about the gluten in wheat. It is just one form of gluten.



Gliadin binds to the gut cell and over-stimulates the release of a blood protein called zonulin.

Zonulin causes the opening of the tight junctions between the gut cells to be less controlled, leading to increased intestinal permeability. It's like the drawbridge that won't close after the boat has passed under.

This allows unwanted contents of the gut to leak into the bloodstream. This triggers the immune system to respond, resulting in inflammation and contributing to the development of disease including and especially dementia and Alzheimer's. The proteins in other grains also behave in this way, which is why, for optimal gut health, it's a good idea to avoid basically all grains. This is something I cover in some depth in my book, ["Don't Let the Memories Fade"](#).

Many people have celiac disease, so for them, eliminating gluten is absolutely necessary. They feel terrible, with lots of pain and other effects if they have even a little bit.

Gluten Sensitivity is Not Just about the Gut

But many people have a gluten sensitivity that they don't even know about. It doesn't manifest in pain in the gut, but it does affect the gut.

It is often referred to as non-celiac gluten sensitivity, so while it doesn't affect the gut, it can affect many other parts of the body including, of course, the brain.

Gluten is a neurological toxin and there is an entire category of disease that is gluten-induced. There have been studies using MRI to show that there is actually a change in brain size or damage to the brain in some people when they eat any form of gluten.

Did you know that in the early days after it was “discovered”, schizophrenia was called bread madness?

Depression has also been linked to gluten because it affects hormone production by changing the microbiome. Some of the microbes are responsible for producing serotonin, the happiness chemical. When serotonin levels drop, you don't feel anything in your gut, but you feel sad.

Other gut bacteria also produce dopamine – which is important for stress response and muscular coordination, both of which impact the brain. Gluten sensitivity can also wreak havoc with these bacteria.

Gluten can also cause issues that manifest as brain fog, which is when you have the word, but you can't bring it to your lips. Or it can contribute to auto-immune disease, which often takes years to diagnose, but can create a lot of damage before it is discovered.

Its Own Painkiller

Another interesting fact is that gluten can cause problems that you don't feel because there is a type of gluten called gluteomorphin. There is a fragment of the gluten protein that mimics morphine, which acts as a pain reducer, so masks its own toxicity but the damage is still happening.

That can lead to malabsorption of nutrients in the gut, which can easily lead to vitamin and mineral deficiencies. Iron is one common deficiency, and B12 deficiency is very common.

B12 is essential for your body to make red blood cells (the cells that carry the oxygen)... and iron is fundamental for your body to carry the oxygen in your red blood cells.

This is why an iron and B12 deficiency may lead to brain fog, fatigue, depression, and even chronic pain. These deficiencies not only mimic early-stage dementia, but it can lead to many serious neurological problems including MS, Alzheimer's, and Lou Gehrig's Disease.

All of this is not meant to frighten you, but to give you many reasons to eliminate gluten from your diet. That means ALL kinds of gluten from all grains.

What does Gluten-Free Mean?

So those packages that say “gluten free” in the grocery stores really only mean gliadin free. You will want to avoid, at least for the duration of this course, everything that contains gluten. See how you feel!



That means no barley, no rye, no spelt, no kamut, and no corn, because corn has a form of gluten called zein. Plus, most corn in North America is genetically modified, which means it is sprayed with glyphosate, so it's just not good.

Oats can also be an issue because mostly they are contaminated in processing. So, if you do use oats, be sure they are labelled gluten free.

For these next 9 days, try to eliminate all grains.

What to Do

Eliminate grains. Seriously. It may seem impossible, especially if you're a bagel or bread lover. But if you really want to look after your brain, you need to eliminate grains.

Even if you do not have a genetic predisposition to gluten sensitivity, if you are having memory or neurological or gut issues, it is a wise choice.

Clear out your system, detoxify, so to speak, and then if you feel you absolutely must have them, see what happens as you introduce them back into your diet one at a time.

I recommend giving it at least 2 weeks without all of these foods so your body has an adequate amount of time to totally detoxify and reset.



I'll be honest...the first few days will be a little rough because your body is doing the work of putting out the fire AND beginning the healing process, especially since you are also cutting out sugar in these 14 days.

Luckily, it only lasts a couple days, and within a week you'll start to experience more energy, better sleep, improved digestion, and more focus.

What to Eat?

Here's the fun part. There are many things you can do to not only avoid grains but increase the quality of nutrition in your diet. Especially in the morning, because so many people start the day with toast or muffins or something similar.

One of my favorites instead of "toast" is thinly sliced sweet potatoes popped in the toaster. Add some peanut butter or coconut oil and cinnamon and you have a delicious light breakfast.

Or you can just avoid the whole "breakfast" mentality that we've been conditioned to accept with the advent of packaged cereals and breads.

You know what I often have for breakfast? A plate of sprouts covered with avocado, tomato, some kind of bean like black or cannellini beans. A little extra virgin olive oil, some turmeric, and lots of black pepper. Anti-inflammatory, lots of protein, complex carbohydrates, healthy fats, and the super-concentrated nutrition of sprouts. Throw on some ground flax seeds for Omega 3 fatty acids, and it is a perfect start to my day.

This is an opportunity to get creative.

And **instead of pasta** for dinner, use zucchini or carrot noodles. Absolutely grain and gluten free AND full of nutrition.

Instead of rice – enjoy quinoa.

Quinoa is the only plant food that contains all nine essential amino acids. It's rich in antioxidants like vitamin E, which protects and improves brain function. Amino acids are required to make neurotransmitters such as dopamine, serotonin, and norepinephrine.

To swap out for wheat or other grain flours, try coconut flour, almond flour, garbanzo bean flour, yucca flour or hazel nut meal.

Now that you're educated about what gluten/gliadin does to your gut, the next step is to make the commitment to, at least for the next 10 days....

Today's Assignment: Continue to keep a detailed account in your journal of what you are eating and how you are feeling.

Be especially mindful of sugar and do your best to eliminate at the very least the wheat from your diet for the next 10 days.

Be sure to do at least some exercise today and track it.

Today's Extra Materials: Three recipes to replace grains (and sugar) in your day are in the module materials for today.