

How The Food You Eat Affects Your Gut

DR. VINCENT PEDRE: In the 28 day Happy Gut Cleansing Program, featured in my book, Happy Gut, I guide you through a full mind-body-spirit cleanse that not only reboots your gut health in four weeks, it leaves you feeling balanced in body and mind.

In order to do this, I ask you to avoid the top foods, or food additives, that wreak havoc on your brain, gut, and overall health for 28 days. This may sound similar to the elimination diet you learned about earlier in this training, but this cleansing program is my personal creation, based on my own experiences and outcomes with patients. And it specifically focuses on healing the gut.

So to begin, why 28 days? When your immune system has gone renegade, reacting to all sorts of food antigens, it takes a minimum of two weeks to get it to settle down.

In the first week on a cleanse of any type, including mine, you may actually feel worse as your body works to resolve inflammation. Headaches, fatigue, achiness and a general blah feeling may be the norm in the first few days. This is totally normal. And I ask you to hold on and trust the process.

Drink lots of water to flush the system and stick with it. The light at the end of this tunnel is never as far away as it may initially seem. Typically, this takes about one week. But depending on how naughty you've been with your diet, it may take the full two weeks to resolve.

That's when the healing starts. In the next week, your body starts to resolve immune complexes, which cause all sorts of inflammation, including achy, stiff, swollen joints seen in autoimmune diseases like rheumatoid arthritis. The fourth week is meant to solidify these changes.

This is why any cleanse shorter than 28 days is only scratching the surface. Sure, it can get you back on track, but the deep healing needs longer to occur. There's yet another reason why the Happy Gut program is 28 days long. It takes about four weeks for a new habit to set in. In fact, when my patients realize how much better they feel at 28 days, and what a sense of accomplishment to have made it to the end.

They often realize how ludicrous it would be to go back to eating the way they used to, that was making them feel sick and horrible. Let's get into that. I want you to better understand why certain trigger foods are making you sick, leaving you toxic, overweight, and feeling zapped of energy. Let's dive deeper into some of the foods I ask you to eliminate in the Happy Gut diet.

We'll start with dairy. Despite what the dairy industry promises, milk doesn't always do a body good. Milk contains two main proteins, casein and whey. Raw milk also comes packaged with enzymes that are designed to facilitate the digestion and absorption of these proteins for the baby calf.

Homogenized, pasteurized milk is devoid of the enzymes that help baby cows digest and utilize these proteins. For many people, whey and casein, in particular, are hard to digest and can lead to

food sensitivities. There is, however, a type of cow called A2, which is genetically different from the most common type of cow, which we know as A1, that makes a casein protein that is slightly different.

This difference makes it easier for digestive enzymes to break down the A2 casein into amino acids, making it less likely to cause problems like food sensitivities and mental fog. Whereas, A1 casein does not break down easily and forms metabolites known as casomorphins that are basically like morphine to your brain.

Milk also contains a sugar known as lactose, which is actually disaccharide composed of two sugars bound end-to-end, a glucose plus a galactose. Greater than 70% of the world adult population lacks enough lactase enzyme to be able to break down this coupled sugar into its component parts, which are easier to absorb.

This type of deficiency leads to an intolerance to milk that causes symptoms of gas, bloating, and diarrhea. As the bacteria in your gut ferment the lactose sugar instead, creating hydrogen gas as a byproduct. Lactose intolerance is different from food sensitivity, as its effects can be felt from almost immediately to within 30 to 60 minutes following a meal. And it is not caused by the immune system. Its side effects, which again include gas and bloating, can really make your day miserable.

Next, gluten. Gluten is a sticky protein that gives bread products their fluffiness and chewiness. Why has gluten become such a problem? Is it just a fad, or is it for real?

First off, the wheat we are eating today is not the ancient wheat plant our ancestors ate. In the US, the food industry has hybridized the wheat plant to have 30% to 50% more gluten than it did half a century ago. . Gluten gives food a pleasing texture, like the lightness and porousness of risen bread. Unfortunately, for many people, it poses a real problem because it is also very hard to digest.

Gluten is actually made up of two proteins, glutenins and gliadins. Glutenin is the major protein in wheat, making up to 47% of the protein content. It is responsible for the strength and elasticity of dough. When people are sensitive to gluten, they may be having a reaction to one of these proteins, or to one of their breakdown subunits which leads to inflammation.

Because of this, it is difficult to diagnose gluten sensitivity from just one test. Of greater concern is the fact that antibodies that form to the gliadin protein can cross-react with neurological tissue, leading to a host of neurological problems from gait imbalance to mental confusion, that would be hard to trace back to wheat without a proper dietary elimination.

The 3D structure of gliadin, the main protein in gluten, it looks a lot like thyroid proteins. When a person has a leaky gut and eats gluten, and gliadin makes it through the holes in the intestinal cell tight junctions, the immune system identifies this protein as a foreign substance and tags it for attack.

But once the body has mounted an attack against gliadin, it can get confused to this molecular mimicry and start attacking the thyroid gland. This means if you have an auto-immune thyroid disease, like Hashimoto's or Graves', when you eat gluten your body will also attack your thyroid.

Having Hashimoto's is like having a slow burning fire in your thyroid. Experts believe between 10% and 30% of the US population has a sensitivity to gluten. And 2% of the population has Celiac disease, a severe autoimmune reaction to gluten that leads to auto antibodies against self proteins found in a wide range of body tissues and glands, including the thyroid gland, as well as the nervous system.

Most people have no idea they are sensitive. This sensitivity is caused by immune reactions that occur to any of a number of gluten metabolites and gluten-related proteins. In the case of full blown Celiac disease, the autoimmune reaction resulting from the gliadin component of gluten leads to body-wide inflammation. Inflammation manifests in different ways, including weight gain, fatigue, mental fog, skin rashes, and diarrhea or constipation.

How do you put out this fire? Stop eating gluten. And you've got to completely eliminate it. Each time you eat gluten, the immune response it triggers can last up to six months. So there is no cheating when it comes to autoimmune thyroid disease and gluten. You've got to cut it out 100% if you're serious about helping your thyroid recover.

I see patients every week who have normal thyroid function tests, but test positive for thyroid antibodies. This means that even if they are not showing symptoms yet, they will eventually if they don't make the dietary changes today that will improve the health of their thyroid glands tomorrow. Remember, that's just one of many examples of how gluten disrupts the health of your body.

Next we're on to soy. Soy and its derivatives are big business-- from tofu, to edamame, to less obvious places like protein bars and powders, nutritional supplements, ice cream, cheeses, and chocolate, perhaps because soy is so abundant and has become one of the top food allergens people are sensitive to.

Among its problems, soy interferes with the absorption of essential minerals like selenium. Your body needs selenium to convert the primary thyroid hormone, T4, to its active form, T-3. To make matters more complicated, greater than 90% of the soy mass-produced in the United States is genetically modified, or GMO.

This genetically modified soy is Roundup-ready, and was the first crop of this type. Studies show glyphosate, the main ingredient in the pesticide Roundup, and a patented anti-microbial leads to dysbiosis and then leaky gut. It also blocks an essential enzyme pathway and bacteria that we depend on to create three essential amino acids-- phenylalanine, tyrosine, and tryptophan.

Tyrosine is a precursor for thyroid hormone. And tryptophan is a precursor for serotonin, the happiness, feel-good neurotransmitter. By genetically modifying a crop to be resistant to an herbicide, farmers can then use an herbicide to kill weeds after the crop has emerged.

This is very convenient for farmers, but not so convenient for us. In fact, farmers that use GM crop that is Roundup-ready, tend to spray them with up to six times the concentration of Roundup than they would have otherwise used.

The safety and human health effects of GMO crops have never been looked at in a long term study. Yet as we speak, we're living in one giant, population-wide experiment, as unlabelled GMO products find their way onto the shelves of local supermarkets disguised in the foods that people frequently consume.

Next is corn. Like soy, over 90% of the corn grown in the United States is genetically modified. This GMO corn has also been adapted to be Roundup tolerant, and contains residues of this formulation.

Another type of GMO corn has been genetically modified to produce an endotoxin from a soil bacterium called bacillus thuringiensis, or BT, for short. This endotoxin accomplishes its insecticidal effect by poking holes in the lining of the digestive tract of insects. In a BT-GM crop, every cell is capable of producing this toxin, thus BT toxins are used as insecticides in certain genetically modified crop, like corn and potatoes.

At first glance, it seems ingenious to have the corn plant produce its own insect repellent. But think about this for a minute, you could actually be eating corn that produces its own insecticide. What are the potential consequences inside your gut from ingesting BT toxins? Well, BT toxin has a dirty little secret. Can you guess what it is?

If you guessed that its actions are not limited to insects, you guessed right. BT toxin has been shown to poke holes in human cells, leading to a leaky gut. A sensitivity to corn can result in all sorts of reactions, similar to those from gluten and other food allergens. In my practice, the most common reactions I see are rashes like eczema and hives.

Next, we're going on to lectins and phytates. Lectins and phytates are anti-nutrients found in all gluten containing grains. Lectins are also found in beans, and the nightshade vegetables like tomatoes, eggplant, pepper, and potatoes, Corn is also high in lectins.

Lectins are sugar-binding proteins, and like gluten, are very sticky molecules. Their complexity makes them resistant to digestion, even to stomach acid, which allows them to enter our bloodstream unchanged. Lectins then bind to cells lining your intestines, disrupting the tight junctions between the intestinal cells and creating tiny holes that allow larger, or partially digested food particles to get through.

This disrupts your gut flora, leads to inflammation, and eventually causes insulin and leptin resistance. Leptin is the hormone that tells you when you're full so you can stop eating. Once absorbed, lectins combine to many tissues, including the thyroid and pancreas, and to the collagen in your joints.

They then attract white blood cells to these tissues, potentially leading to an autoimmune response, such as autoimmune thyroiditis, otherwise known as Hashimoto's disease, and

rheumatoid arthritis. Lectins may also be involved in the pathogenesis of diabetes. And lectin containing foods may actually be at the root of chronic pain syndromes that many people suffer from.

But wait, there's more. Lectins block insulin receptors, so they can't receive the signal from your very own hormone insulin. This creates insulin resistance, which causes your blood sugar to rise as your body requires more insulin to keep blood sugar levels even, and leads to weight gain, obesity, and eventually diabetes.

Lectins also stimulate the release of histamine in your stomach, leading to acid hypersecretion, too much stomach acid. Have I convinced you that lectins are a problem? Well, they have a side-kick, phytates. Another anti-nutrient found in all gluten containing grains, but also in otherwise healthy foods like the outer coating of seeds, and nuts, interfere with absorption of important minerals like calcium, iron, magnesium, copper, and zinc.

One way to counter the anti-nutrient effect of phytates is to consume sprouted grains, nuts, and seeds.

Next we're on to eggs. Eggs are among the top 10 food allergens. Many people develop a sensitivity to eggs over their lifetime. They may react to the egg yolk, the egg white, or both. Eggs also happen to be a pro-inflammatory food. The egg yolk is high in arachidonic acid, and inflammatory omega 6 fatty acid.

Most commercial eggs come from chickens fed an unnatural diet of soy and corn. When you eat these eggs, you are consuming these food allergens indirectly. One tenet of healthy eating I like to repeat is, you are what you ate has eaten. Organic eggs from cage-free hens fed a natural, free-range diet rich in anti-inflammatory omega 3 fatty acids, are much better for us, and they are allowed after the 28 day elimination phase of the Happy Gut diet that I'll discuss later.

Next, we're on to night shades. As a brief review, night shade family includes tomatoes, tomatillos, eggplant, potatoes, bell peppers, sweet and hot peppers, peppinos, and pimentos. Plants in this family produce alkaloids and other natural insect repellent that can be toxic to humans in large amounts. But don't worry too much about this, as common night shades don't have enough of these alkaloids to be deadly.

However, some people with inflammatory conditions are particularly sensitive to even tiny amounts in the diet. And these people, even cooking the night shades, which will lower the alkaloid content by 40% to 50% will not be enough to save them from the damaging effects, which can lead to inflammation, joint pain, and an upset stomach.

Like gluten containing grains, night shades also harbor lectins, or sugar-binding proteins, which as mentioned earlier can activate the immune system and increase inflammation and pain in the body. Night shades are a particular source for agony for many people who suffer from arthritic conditions, or autoimmune disorders.

I strongly recommend that if you have an autoimmune disorder, or any arthritic or pain condition, you completely remove them during the 28 day elimination phase.

The last we're looking at is FODMAPs. Did you know that one in seven adults suffers from irritable bowel syndrome, also known as IBS? IBS is more common in women than in men, and is often associated with symptoms such as abdominal pain, gas, and painful bowel movements.

IBS can have either a predominance of constipation or diarrhea, but we often see a mix of the two. Usually the symptoms of IBS are relieved by bowel movements, but not always. It can be an absolutely miserable condition, as many of my patients can testify.

Fortunately, I found a tried and true way to treat IBS and other gut conditions without drugs or other invasive procedures. My secret? A low FODMAP diet. You've also heard a bit about this, as well. So here's a brief review.

FODMAPs is an acronym for an unwieldy phrase, Fermentable Oligo Di and Mono Saccharides and Polyols, which are sugar alcohols. The underlying cause is the short chain carbohydrates attract water, and don't absorb well in your small intestine, instead heading to your colon where your bacteria have a field day quickly fermenting them.

Symptoms of FODMAP intolerance include burping, bloating, constipation, diarrhea, and flatulence, very similar to what occurs with IBS and other disorders. A research team in Monash University in Melbourne, Australia created the low FODMAP diet, which eliminates frequent food offenders that contribute to or exacerbate IBS and other gut problems.

The results were impressive. One study found a low FODMAP diet improved symptoms in about 68% to 76% of IBS patients, results I've seen in my own practice. IBS aside, I use a low FODMAP diet for a variety of gut problems, including Celiac disease, and small intestinal bacterial overgrowth, or SIBO, another problem that involves bloating, abdominal pain, constipation, and/or diarrhea.

It is the foundation upon which the Happy Gut diet is based. I get great results because my program treats the underlying causes, not just the symptoms. More to come soon about that. But first, let's briefly look at high FODMAP foods and why they can become a problem.

First up, is lactose. About 2/3 of the world's population is deficient in lactase, the enzyme that breaks down the milk sugar, lactose. Undigested lactose pulls water into your intestines, causing diarrhea, gas, bloating, and other miseries.

Next, is one we've all heard of, fructose. Of course, high fructose corn syrup contains the bad news sugar, but so does fruit, honey, maple syrup, agave syrup, and certain fruits including red apples, pears, and mangoes.

Moving on to fructans, also called fructooligosaccharides, this common prebiotic is found in artichokes, leeks, garlic, onions, and jicama. The highest fructans intake, however, comes from wheat. We lack enzymes to break down fructans, leading to bloating, gas, and pain.

Next on the list we have galectins. High galectin foods include legumes. You guessed it. We lack the enzyme to break down galectins. Last but not least, sugar alcohols. Sugar alcohols or polyols, naturally occur in some fruits and vegetables, but more often as added sweeteners in sugar-free gums, mints, cough drops, and medications.

Anything ending in "ol" is a polyol, like xylitol, or erythritol. With a low FODMAP diet, you'll completely eliminate high FODMAP foods for four to six weeks. If you let even a little creep in, you'll find it harder to identify your food culprits.

Many patients notice a difference almost immediately. After about one to three months, but possibly longer, depending on the severity of the initial symptoms, we start to reintroduce high FODMAP foods one at a time. Many find they can occasionally tolerate some high FODMAP foods, while others are permanently off the table.

The biggest culprit of all, I've talked about how certain foods, including gluten, eggs, dairy, soy, legumes, corn, , and for some of you, night shades, are inflammatory and are actually making you and your gut sick. That's why we eliminate these foods during the 28 day Happy Gut diet, which is a gut-specific elimination diet.

But there's one culprit I haven't talked about so far that I want you to reduce or eliminate as much as possible. This culprit is a real monster. It plays a role in so many problems, including depression, mood swings, irritability, migraines, heart disease, diabetes, and weight gain. I could literally go on and on.

But let's just agree this ubiquitous substance-- almost like a drug, actually-- plays a key role in nearly every disease on the planet. Can you guess what I'm talking about? Sugar. When I say sugar, I mean refined cane sugar, but also high fructose corn syrup, or any other sweetening derivatives.

When you ingest too much sugar, it's like you just boarded a roller coaster. You better buckle up, because you're about to go for a mood swinging ride. Initially, sugar satisfies the craving centers in the brain, but it also increases your blood pressure and heart rate, and provides an energy surge that can translate into irritability and mood swings.

Soon your insulin levels start to rise to stabilize and control those blood sugar levels. As a result, your blood sugar begins to drop, and you feel irritable, angry, and easily provoked. Your patience wears thin. You then start to feel drowsy, tired, perhaps slightly head-achy, or with pressure in your sinuses.

If you're particularly toxic, you can feel the effects in your muscles and joints. After an hour or two of eating sugar, your blood sugar drops low enough that your body kicks into high gear. Your body secretes your stress hormone, cortisol, to now stabilize your blood sugar and maintain a balanced environment.

High cortisol stresses out your adrenals, and it winds you up. You may feel panicky, anxious, unsettled. Soon your brain begs for another hit. Like I said, sugar is a drug. It stimulates the same dopamine receptors, those reward pathways in the brain, as cocaine does.

And as your blood sugar drops, you will create more of it to keep you near your high. Except like any other drug, the sugar coaster keeps going up, and then crashing down. The more you do, the harder you fall. My sugar addicted patients can live their entire day on that sugar coaster.

The biggest thing to overcome your addiction is to ask yourself why you're self-treating through your sugar addiction. Here are some very common reasons people find themselves eating and craving sugar. Ask yourself these questions.

Do you find yourself reaching for a sweet when you're under stress? Do you crave sugar when you feel your life is not going the way you want it to go? Do you associate a bar of milk chocolate, or a box of cookies as a reward for yourself after a hard day at the office?

As a child, did your parents use sugar as a reward for good behavior? All of the above are reasons you might reach for a sugar-laden snack, like those times you find yourself eating ice cream in front of the TV after dinner, or a late-night snack in front of the refrigerator. If this describes you honestly, it's not all your fault.

Sugar is highly addictive. A study using rats showed that sugar is actually more addictive than cocaine, one of the most addictive substances known. When given a choice between the two, the cocaine-addicted rats switched to sugar water.

Even when I discuss sugar's dangers with patients, they'll sometimes ask, don't you think the case against sugar might be a little overblown? I mean, how bad could a little sugar actually be? I usually half-jokingly reply, do you have all day? I could literally go on and on about sugars wide-ranging health damages, but let me briefly sum those up. The top 10 problems a high sugar diet causes.

Sugar is unsustainable energy and devoid of essential minerals, vitamins, essential fatty acids, or protein.

2. Sugar is linked to a decrease in the intake of essential micronutrients. When you eat sugar, you're less likely to enjoy nutrient-packed foods because they will taste bland to you. You'll feel so full from sugar dense foods that you don't want to eat the foods in the phyto-nutrient spectrum.

3. Cane sugar is high in fructose, and it's a 50/50 mixture of glucose and fructose. Fructose can overload your liver, which is the only place in the body that can metabolize it. Fructose also does not turn off the hunger hormone, ghrelin, making you eat more.

4. Too much sugar, including high fructose corn syrup, can lead to a fatty liver. Along with worldwide obesity, fatty liver is a growing problem and can lead to metabolic disease and fibrosis of the liver.

5. Sugar can cause insulin resistance, which can lead to metabolic syndrome, a major cause of heart and vascular disease, as well as diabetes, a major cause of health problems that destroy the quality of your life.

6. Sugar causes inflammation, and inflammation leads to pain.

7. Sugar is linked to an increase in body weight in both children and adults.

8. Sugar is a major contributor to the rising rates of obesity across all age groups.

9. Sugar is highly addictive. Sugar leads to dopamine release in the brain, which makes eating feel like it's a reward.

Last two, sugar feeds cancer. People who eat excessive sugar are at a higher risk of getting cancer. And sugar raises your cholesterol. It's not the fat in your diet that's raising your cholesterol, it's the sugar.

I could go on and on, but I think I've driven the point home, that sugar creates all sorts of damage. But don't give up hope, because you can easily detox from added sugar in your diet. And the Happy Gut diet is designed to help you do just that.