

## Intestinal Detox, Repair, and Recipes How it Works and What Can Go Wrong

### Transcript

Hello and welcome to *Intestinal Detox, Repair, and Recipes: How it Works and What Can Go Wrong*. This is Dr. Ritamarie and I am excited to be here to share this next piece so you understand what's going on down there.

Before we get too far along I just want to remind you that this presentation is not intended to replace a one-on-one relationship with a qualified healthcare professional. It's also not intended as medical advice. It's basically intended as a sharing of my knowledge to you and the research that I've done and experience I've had clinically over the last couple of decades that I want to share with you.

And if you have any health problems, if you are under the care of a health practitioner, if you are on any medication make sure that you run this information by your practitioner before you make any drastic changes to your diet or lifestyle.

Let's take a look at the small intestine. It's a tube. It's about 18 feet long and about 1 inch in diameter. So there is a lot of tubing coiled around itself down in your abdominal area. The pH is maintained at an alkaline state at about 8 if you recall from the stomach when we talked about that the pH of the stomach is 2 which is extremely acidic, so it takes a lot of work to get that 2 up to an 8 to make your digestion efficient.

The duodenum is the first part. That's the part we talked about already in terms of where a lot of the digestion occurs with the breakdown, the enzymatic breakdown of the food occurs. That's the first 10 inches of the small intestine.

And then the next piece called the jejunum is where the absorption takes place. And it does so through a system of villi and microvilli and we will take a closer look at those.

What those do is help to through a series of fingerlike projections increase the surface area of the intestine. Instead of it just being an 18 foot long tube with a one inch diameter, spread that out that's about 1.5 square feet of surface area to get much more efficient digestion, so we can push food through more quickly, the villi and the microvilli expand that surface so it becomes the size of a football field. You might be saying whoa how does that happen? Well we will see when we take a look at the villi and microvilli look like, how that can possibly happen.

This is just a peek longitudinally down the tube. You can see a lot of folds so that's part of what happens, how we increase the surface area. See it's glistening so it is coated with some mucus. One of the really important parts of your gut and your intestine is the inhabitation, the co-habitation I must say, of micro-organisms that live there that are very beneficial to you and those are called your normal gut flora.

And when I say "to the rescue," it's because there are so many wonderful functions that these good guys perform for you that they basically rescue you and protect you from some not so good organisms, some shady organisms. So it's a collection of lots of different species. Some of them are lactobacillus, bifidobacter even E coli is a normal inhabitant when it stays intact. Sporogenes is a whole bunch of different ones and different forms of lactobacillus.

They provide protection and they also provide nourishment. They actually help us to synthesize some vitamins and minerals and actually help with the enzymatic breakdown of our food, they also protect. A healthy person should actually have between 3 and 5 pounds of good flora and the largest concentration is in the large intestine and the lower part of the small intestine.

Let's look at your **gut flora at work**. They basically will coat the digestive tract physically and block your blood stream from harm. Remember your digestive tract has direct access to your bloodstream so we need an army of soldiers to protect the lining and that's one of the functions that your gut flora performs.

They convert food into nourishment for the gut lining and they protect you from leaky gut. So they actually can take your food and turn it into a protective coating for your gut and also food for them. They can also produce enzymes that break your food down and help to transport vitamins and minerals across the wall.

In addition, they synthesize vitamins like vitamin K2 and several of the B vitamins, and B12 is one of those, and also amino acids, so you can get actually more nutrients out of your food and created within your digestive tract if you have a good environment full of good gut flora. They also help control your pathogenic microbes. What are they? These are the bad guys basically.

The gut flora are your good guys and the pathogens are your bad guys. Yeast and funguses and molds and parasites and certain viruses and non-desirable bacteria can take a foothold in your gut if you don't have enough good gut flora. And finally they can chelate, meaning attach to and drag out of the system things like heavy metals, carcinogens and other toxins, and they can dump them out and send them out through the large intestine.

**What are symptoms of small intestine imbalance**, things that you would notice on the outside? Most of these are related to imbalance in enzymes, imbalance in gut flora and something called leaky gut which we will be talking more about.

One of the signs is that roughage and fiber, which should actually help to move things through you more quickly and cause really nice bowel movements, can cause constipation if you have an imbalance in your small intestine.

If you get bloated an hour or two after eating and you have indigestion and fullness that lasts two to four hours, if you have difficulty losing weight in spite of eating a pretty good diet or if you pass too much gas those are other signs of small intestinal imbalance. Also, if you feel nauseous or you vomit or have alternating constipation and diarrhea, that can be a sign of small intestinal imbalance. Some of these can also be a sign of large intestine imbalance, but right now we are talking small intestine and most people think of constipation and diarrhea as a problem strictly within the large intestine and nausea and vomiting strictly within the stomach; but in fact the small intestine can contribute to both those sets of symptoms.

And then finally, if your stool contains undigested food, is foul smelling, is mucous-like, greasy or poorly formed that can indicate some problems with the small intestine. Of course, it can also indicate problems with the large intestine or with your liver and gall bladder in terms of fat digestion, but the small intestine is where a lot of the fat absorption occurs and if you are not absorbing properly this is what can happen so there are a lot of reasons for that.

I don't want to get too much into detail and overwhelm you with the anatomy of your jejunum, which is the middle part of your small intestine but it's important, I think, visually for you to see. You don't need to remember about the capillaries and the lacteals and all that or how the structure is.

In terms of seeing that if you were to take this digestive lumen (remember it's an inch in diameter) and you add a bunch of villi, which are projections, finger-like projections, that stick up on the inside, you increase the surface area dramatically.

Each of those villi is lined with microvilli, millions of microvilli, spread throughout your small intestine. That's how we take what would be 1.5 square feet of digestive tract and turn it into the size of a football field. It's HUGE, the area of a football field, because of all these projections.

This is an overview of how your intestine works. When you put good stuff in and you take care of it, it looks like it does on the left hand side. The mucus lining is nice and pink and there are lots of really good friendly bacteria lining it. And there maybe a few unfriendly bacteria but the friendly ones far exceed them and keep them in balance.

With a good intestinal tract your toxins get into the lining of the system and get detoxified by the detoxification mechanisms that exist within that lining. And you can see that you are protected - you are not going to have a lot of things floating in because this space is really small and narrow.

When you damage your intestinal tract by poor food choices, processed food, medications, recreational drugs, cigarettes, alcohol, and sugar (which is a biggie), these all provide a way to feed the unfriendly bacteria and crowd out the friendly bacteria and cause a deterioration and inflammation in the lining of the intestine. As a result, it starts to look kind of pale because the blood supply isn't as great.

Instead of lots and lots of these really good little friendly guys, it's taken over by a lot of these big things like yeasts and viruses and toxins that are now able to pass through into your bloodstream because the inflammation has created holes. On the left, there are no big holes in the tract. The toxins are just sucked into the mucosa and through into the epithelium and then detoxified. Where as on the right, they just fall through the holes and get direct access into your bloodstream. We'd rather have our digestive tract look like it does on the left hand side not what it looks like on the right hand side.

This is just a look up close and personal to what those damaged villi look like or the microvilli. And this is where those little holes happen and when those little holes happen that's what's called leaky gut.

This is a little bit overwhelming when you look at it but I just want you to see a couple of things here. In the good normal lining of the mucosa you've got these little Y shaped things. These are actually antibodies and those can latch on to pathogens and toxins and basically beat them to a pulp and destroy them so they don't get into your system.

It's set up so that the food particles get fully broken down you see into those little tiny pieces, that's all that can get through your lining in a healthy intact tract. But what happens when your digestion is not good, and you're full of toxins and processed foods and sugars and things that damage the intestinal lining?

You can see that over here we get less of these antibodies, secretory IgA, which is a protective mucosal lining, gets less able to protect you. The constant barrage of these larger molecules and things like gluten and casein, which are really inflammatory, can create holes in the tract. The spaces that normally only allow tiny little molecules to go through now are allowing these big ones to go through and that's called leaky gut.

And I wanted you to see here is how leaky gut contributes to food allergy. When these get into the bloodstream, they get attracted by these antibodies. And these antibodies say, "Hey foreign protein, no good." It doesn't know the difference between bacteria and a broccoli protein or a gluten protein or a bread of some sort or rice or whatever you might be sensitive to, whatever you might be leaking into your bloodstream it forms an attack to.

And then, it remembers so the next time you eat that it attacks it. You may be eating broccoli and suddenly start to get problems with it because you are eating a lot of it into your bloodstream because of this problem with leaky gut. That's how food allergies form.

Let's talk about some of the **physical findings** that you may see or feel on your body **when you have the small intestinal imbalance**. You may notice tender spots on the tips of the ribs 8 through 10 and those are here right along in the front below your breastbone. Your breastbone ends here and if you follow the ribcage down you'd have tender spots along those ribs on both the right and left sides.

And then you can also have a tender spot in between the 7th and 8th ribs on the left hand side and that's this blue dot here. You can also have tenderness or hardness or even distention, which is swelling extension (we may call it bloating) in a square that's 3 inches in all directions from your belly button. If you notice that there is probably some small intestinal aggravation irritation going on.

Let's just take a look at some of the **symptoms of leaky gut**. We already talked to you about how leaky gut forms, what it looks like from the inside, so what does it feel like from the outside? Well you may have constipation or diarrhea. You may have abdominal pain or bloating, mucus or blood in your stools; you notice that you've developed food sensitivities, allergies or intolerances.

You see then as the same but it's just the biochemical mechanism that's a little different between allergies, sensitivities and intolerances.

Maybe you have ulcerative colitis, Crohn's disease or celiac disease; you've been diagnosed with an inflammatory disease in your gut. You may notice that when you drink alcohol you feel really off. That's a symptom of leaky gut.

You may have a history of antibiotic use which predisposes because that kills off the good bacteria in your gut, that good flora that's protecting you and allows bad guys to get control and a lot of that protection that that good bacteria normally imparts for you doesn't happen anymore and so you get symptoms of leaky gut. Also, the use of non-steroidal anti-inflammatory drugs (NSAIDs) like Asprin, Tylenol and Motrin, are things that predispose you, or you find that you need to use them because of problems.

Let's look at some **symptoms of leaky gut** that are **not related to the digestive tract**. Some people don't realize they have leaky gut because they feel okay in their digestion.

Maybe it's not perfect, but they're just not really bothered by their digestion but in fact these are hidden digestive issues that are going on that are causing leaky gut, that are causing you to get in your bloodstream these toxins and allergic kinds of reactions, inflammation. You may feel depressed if your brain gets involved. You may have hormone imbalances like PMS and menopausal symptoms.

You may feel brain fog. I hear that one all the time. It's like 'oh I just can't think straight, I can't see straight.' Chronic or frequent fatigue can be a sign of leaky gut as can confusion, poor memory and mood swings.

For some it's swelling and pain through their joints or their muscles. They may say they have fibromyalgia or arthritis or they may have been diagnosed with those conditions and they may indeed have those conditions because fibromyalgia means that you have swelling in your muscles and fibrous tissue. Arthritis, arthralgia means that you have pain and swelling in your joints. Those are not necessarily diagnosed conditions. It's describing a situation, which could be a result of leaky gut.

Maybe you have just chronic or frequent inflammation in various parts of your body. It could be on your skin. It could be on your scalp. You may have eczema, skin rashes, or hives, psoriasis even that can be created from a leaky gut. Sinus or nasal congestion, asthma, hay fever or airborne allergies. There are a lot of things that can be a result of leaky gut that you don't even associate with your gut.

Let's also take a look at **symptoms of gluten intolerance**. Gluten you might recall is a protein that's found in a variety of grain products most notably wheat and also in rye, barley, spelt, kamut, triticale, those are the main gluten containing grains. And gluten is a glutinous substance. It's gluey, it's thick, and it's sticky. It's what gives the bread the nice rise and the doughy consistency but it's also causing havoc in your digestive tract. It can cause inflammation. It can cause those microvilli to get inflamed and sticky. It can cause malabsorption by getting gummed up into those villi and the pores in those villi. Let's look at some of the symptoms.

Some people lose weight because they get diarrhea from the gluten intolerance. Other people gain weight because they have malabsorption and they overeat. Some people get nutritional deficiencies. A lot of people in fact, most people end up with some sort of nutritional deficiencies because of malabsorption most notably low iron levels. Some people are anemic because not because they are not eating enough red meat or not getting enough iron in their diet but because they have gluten intolerance.

You may get bloating, pain, gas, constipation or diarrhea, but a lot of people don't even get those symptoms. They may get symptoms in other parts of their body. Some people get fat in the stools (steatorrhea) due to poor digestion, but they might go systemic.

Others don't have these gut reactions but they have pain in their joints or aches. They may get neurologic symptoms. They may get depression or ADD, eczema, headaches, and exhaustion. A lot of people are exhausted when they have gluten intolerance. They get the gluten out of their system and suddenly they have their energy back. They have the ability to think straight back.

It could be irritability behavior changes. Kids with ADD and ADHD oftentimes have gluten intolerance. It can even cause infertility, irregular menstrual cycles and miscarriage. And so many times these things are diagnosed there's a lot of expensive tests and procedures done to try to regulate these things when getting rid of gluten can solve a lot of the problems.

There are a lot of neuromuscular types of things like cramps or tingling and numbness, even signs of multiple sclerosis and other neurological type things that cause symptoms in the body like Parkinson's. Even Alzheimer's can be attributed to gluten intolerance. And there is a severe decline in dental health when people have gluten intolerance.

If you have leaky gut, you want to know that you have leaky gut. How would you know? Well, there are some lab tests. If you are not sure from the symptoms or you're not willing to accept the fact from the symptoms, you really want to have some proof there are some tests you can do. But what I highly recommend is that if you have any of the symptoms when you do the test, which we have a test on your site for leaky gut, I recommend that you use that as your guide.

But if you want to get some lab testing done or if you want to find out that there is a hidden source there is an intestinal permeability test to *Cyrex* lab does. It's only done through practitioners so you have to find a practitioner who is willing to order that for you.

There is a stool test from several different companies which *Genova Diagnostics*, *Metametrics*, *Diagnos-Techs*, *BioHealth*. They all have tests of various degrees to test your gut, to test your stool and see if you have imbalance of normal flora if you have pathogens and if there are signs of inflammation.

And then finally there are some gluten tests that you can do. The easiest way to do it is through [www.enterolab.com](http://www.enterolab.com), you can do it direct, you don't need doctor's orders to do it. They have a very inexpensive gluten test for \$99 and then they have more advanced tests where you can actually look at inflammatory markers and other antibodies and genetic factors.

And then also the same test *Cyrex* labs also has a complete antibody test for gluten and it's better than the typical test that's done by most medical practitioners. If they say oh let me check you for celiac, that's not that accurate. It's not testing all the sub fractions of the gluten. There are about 20 of them, 20 different types. Most of the tests just test gliadin and they miss a lot. A lot of people are told that they don't have gluten intolerance, they don't have celiac, and they continue to have symptoms. They finally either go off the gluten or get one of these alternative tests through the stool that are more accurate and find out that indeed they do have gluten intolerance.