



Digestion Basics: How it All Works

Transcript

Hello and welcome to our Gut Repair and Alkalizing Nutrition for the Digestion, digestion basics, how it all works. The goal of the program is to familiarize you with how your digestion works, where it can go wrong, and then give you very specific steps to take to heal it. I'm excited to be here because I love talking digestion because I think it just is the root of so many problems that we don't really even realize is the root of the problem.

For that reason I'm going to share with you how sometimes symptoms that you don't even relate to your gut are related to your gut. I invite you to sit back take out a pen and paper, take out a pen and take notes because there is going to be a lot here that we are going to go over. And as a result of the sharing you should have some insights about your own health about where some things might be going wrong and at the end I'm going to give you a set of action steps.

I believe that there are five that you can take right away to get started. I'll go through what we are going to be covering in the subsequent modules, but we are going to be going through step-by-step the digestive tract from head to toe—well maybe not head to toe but basically mind to anus as I like to say. I'm really excited about the topic.

As usual what I need to do is just let you know that the information I'm presenting is not intended to replace medical advice. It's not intended to replace your relationship with a medical practitioner but to enhance your relationship by providing you education and experience that I've had in working with thousands of clients and patients over the last 23 years of my clinical practice that gears around functional nutrition and nutritional endocrinology.

And so if you are under the care of a doctor, especially if you've got some serious digestive things or other health issues going on, I highly encourage you to take real good notes and then share the information with your practitioner and then work together as a team to get your problems resolved.

If you want to continue to work with me and in this group setting we are going to provide lots of education that's going to guide you on the path to success with your digestion.

I want to just start by doing an overview, a bird's eye view of what we are going to be covering, and then we are going to do, together, a 30-day reset for the digestive tract, and everybody will be working on what they need.

We are going to be working on a leaky gut repair if you need it, a Candida cleanse if you need it, and other ways to restore the gut flora, reduce the number of unwanted organisms, and repair whatever's going on with your digestive tract. I'm going to be getting into a little bit more about why the digestion is so important to work with, how it all works, and what kind of signs you may be getting that your digestion isn't working well, but let's just start with an overview.

Part 1 is the ***Digestion Basics – How It All Works*** and how your digestion works with the rest of your body. In **Part 2** we are going to be looking at the ***Upper GI***, the upper gastrointestinal system. We are going to ***Start at the Top***, the ***Mind***, which is an important part of digestion, the ***Mouth and the Stomach***. Those are the things we are going to be working on in **Part 2**. In **Part 3** we are going to really look deeply at ***Intestinal Detox Repair And Recipes***.

We are going to provide you with a really nice recipe guides and last I looked it was around 140 pages of recipes that we've put together to help you to have fun with food while you are healing your digestion. I know everybody gets scared about making changes and having to fix their digestion because you are afraid you are not going to get to eat.

And indeed there will be some kind of gearing down and allowing the digestive tract to rest with less food, but we've given you some really nice recipes that will help soothe and heal and repair your digestion.

Then finally, in **Part 4**, we are going to ***Optimize Elimination***. Elimination generally happens through the large bowel, the large intestine, but there are also some other channels of elimination and I will talk to you a little bit about optimizing as well like your skin, sweat, and your liver and gallbladder and how they work, and your kidneys. Those are organs of elimination but the primary focus because we are talking digestive health here, will be on the large intestines for eliminating.

A lot of people will say you are what you eat and that's not necessarily true, because even if you eat great food, and the food is good for you, if you are not able to effectively absorb the nutrients from that food, break down the nutrients, absorb them, and then you eliminate the wastes, you are going to be in trouble because your body is going to reabsorb all the waste.

It's just as important to optimize the way you get rid of the foods that you take in as to optimize how well your body breaks them down into the particles it needs and then absorbs it.

Before we go further and I go into what we are going to learn, and then start in on teaching you about your digestive tract, I mean after all we all need to know how our body parts work and unfortunately we weren't born with a user's guide.

We had to come and figure this out on our own and we didn't necessarily learn it from mom and dad, they just basically said here kid, here is your food, eat it. They didn't really share with us how our food affected us, how our thoughts affected us. And it's only as we grow up and things start to go wrong and illnesses and symptoms rear their ugly heads do we start to question like hmm, this is digestive tract and the food goes through there, I wonder if food has an impact on health.

I'll share a little bit about my revelation regarding that in just a little bit. I want to let you know how widespread digestive problems are so you know you are not alone. If you have ever experienced ulcers or know people who have you are in good company because there are 14 million people in the US alone that have been diagnosed with ulcers, and there is probably a whole lot more that have symptoms but just have never gone through the symptoms of being diagnosed.

There are 56 million people who have diagnosed reflux. Reflux meaning that the contents of the stomach start jumping out of the stomach and backs up into the esophagus. If the esophagus and the stomach and how all that works is not very clear to you right now, by the end it will be, because we are going to go through the overall anatomy of the digestive tract.

60 million have heartburn meaning not only is the food going back up into the esophagus but they are having pain, they are having this burning sensation either in their esophagus, in their chest or in their stomach or in their intestines for that matter; heartburn is what it's usually called. Mainly because the burning happens somewhere in the chest right near the heart usually, and that's because it's in the esophagus, the food tube.

76 million people have food-borne illnesses. We think we live in this day and age where we are really clear on germs and the whole germ theory and antimicrobial soap and wiping down counters and cleaning things, why is it then that 76 million people have food borne illnesses? That's a lot, this is not just a little child's play numbers, these are big numbers.

There are 80 million people who have irritable bowel syndrome and irritable bowel syndrome is usually classified as a condition where you never really know what's going to go on down there. You may be running and hopping from bathroom to bathroom because you have diarrhea, or your bowels aren't moving for days at a time and usually it alternates because the bowel is irritated.

There is a very thick, plump mucous membrane that lines the entire tract starting in your stomach, and lightly lines your esophagus, but mainly starting in your stomach and going through the rest of it. There are lots of things that disrupt that, a lot of things that damage that lining and we are going to share with you a list, a chart that will show you some of those things.

But that mucous gets damaged by organisms, microorganisms that don't belong there, for example H. Pylori, Helicobacter Pylori which is a bacteria that only recently has been found to be one of the underlying causes of stomach ulcers, H. Pylori. It damages that really nice protective mucous membrane which leads to all sorts of digestive disarray, which we'll talk about in a little bit.

It's estimated that half the world's population has been inhabited by H.Pylori. It may be asymptomatic at this point, but that's a lot of people, and in the US it's estimated to be about 20% of the population; that's a huge number to be infested by a particular bug that causes symptoms of stomach ulcers.

I wanted to teach you how to tell if your digestion needs attention, this is an important piece. Some people it's obvious they've got cramping, they've got bloating, they've got gas, they've got diarrhea. It's obvious that their digestion needs attention but there are influences from the digestive tract on other body systems. You may not realize that your headaches are related to your digestion, or your joint pain, or your autoimmune disease; so I'm going to share with you how you know.

We are going to go through digestive anatomy and physiology and for those of you who science scares you I promise you it won't be the boring, very detailed version that you might have learned in elementary school and then forgot. No, it's going to be stuff that is going to make sense. It's going to be applicable and I'm going to teach you in a way that you are going to think oh well that's why this happens or that happens; I really want to make it practical.

We are going to look at an assessment of how you look at your digestive system to see if it's working properly, we will look at the concept of transit time.

We'll share what that is, how long does it actually take for food to go from one end to the other. We are going to talk about how important it is to have pre-meal, de-stress practices, and the importance of chewing, and why these things are important.

I'm sure you've heard it's important to relax and take a few deep breaths and to say Grace before meals and chew your meals. But until you really get it and understand what's happening physiologically you may not take it seriously. And then we are going to give you an overview of something that's called the **4R** process for healing your digestion and we are going to mostly work on the **first R** which is the **Remove R**.

I'll tell you what that is in a little bit, and part of that will be showing you what an elimination diet is; and we are going to overview that for you as well. Let's look at **Does Your Digestion Need Help?** There are the **Obvious Signs** and then there are the **Not So Obvious Signs**. We are all pretty clear when we are in distress, when we've got ***bloating*** or ***gas*** or ***flatulence, burping, pain, hemorrhoids, irritable bowel, diarrhea, constipation, Crohn's disease, diverticulitis, colitis***.

If you've been diagnosed with any of those or you are experiencing any of those it's pretty obvious that your gut is involved, that is pretty obvious but what about the **Not So Obvious**? What about some of the symptoms that you might be experiencing or conditions that you've been diagnosed with that to you it's not really obvious? Acne: did you know that acne can be related? And a lot of other skin problems, ***acne, eczema, psoriasis***, what about the ***brain fog*** and the inability to hold attention and keep your memory working?

Depression and anxiety can be linked to digestion and ***joint pain, frequent illness*** like poor immune function that can be linked to digestive illness. And as we learn how it works I'm going to be pulling these things back in so this is my overview, the quick pass overview to get your attention and say hey, wait a minute maybe I do have digestive issues and maybe some of my family members have digestive issues even though it's not obvious.

We are going to look at things like ***hormone swings*** and ***thyroid imbalance***. That's one of the key things in thyroid, especially autoimmune thyroid, is digestive. There are a lot of reasons for that and we'll talk about why. **Headaches**, very common, migraine headaches, cluster headaches, different kinds of headaches can be related to poor digestive function.

Autoimmune diseases; a lot of them like Sjogren's, lupus, rheumatoid arthritis, and MS. **Allergies**, like food allergies and also inhaling allergies like the ones that involve sneezing ADD, **Attention Deficit Disorder** with or without the hyperactivity.

Asthma, fatigue and **fibromyalgia**; and we don't always think about digestion when we hear about these particular conditions.

But as we go through the program it's going to be really clear why these conditions are related to poor digestion. **Does Your Digestion Need Help?** Go ahead and jot down on your paper 'yes my digestion needs help', and if you are having any of these symptoms you can jot them down. Let's just look at some digestion recovery stories. What do I mean by that?

Well people who are suffering from digestive issues that maybe didn't really relate it to digestion until we fixed the digestion and the symptoms went away. My very first digestion recovery story is me. When I was back in my 20s I was not the way I am right now, I wasn't as health conscious, I wasn't health conscious at all, let's just be real and I was not really taking good care of myself.

I was drinking and I was staying up late, I'd still do that but I was eating, overeating and eating really rich foods and I just wasn't really on the ball as far as taking care of myself and I started to develop symptoms like the inability to stay awake unless I dosed myself with 20 cups of black tea every day.

And the inability to really focus, having brain fog and I really couldn't focus all that well. I had things like sinus issues where my sinuses were just constantly dripping and dripping down into my throat. This is embarrassing but I was with a partner and he said you know, I hate to tell you this but your breath is really foul.

And it turned out it's because I had this drip from my nose of all this foul mucous that was dripping into my throat and it didn't make me very attractive. I was always struggling with my weight, I never was heavy but I was always trying to work really hard to keep myself thin. I didn't relate any of this to digestion; it wasn't until I started to develop ulcers or when I had headaches. I forgot about that, and I was taking a lot of aspirin for the headaches and it wasn't until I started to develop burning in my gut that the doctors tied it to digestion but they didn't tie any of the other symptoms. I had to later learn about that to tie it.

But here is the deal, I went and had all the testing done and they said we don't have an ulcer, we don't know what's wrong with you just take ulcer medication and I said there is got to be a better way. How many of you have been in that situation where it doesn't make sense the doctor is saying you don't have this but here is the medication and you say 'uh-uh I want another way' and then you jump in and that's why you are here, it's because you've looked for another way.

Well I was looking for another way and he didn't have it, so I left searching for another way. As I discovered what was going on with my gut and heal that and found out that I also had an overgrowth of Candida and some other funguses and healed that. All the other symptoms started to go away. I cleansed, I cleaned out and the other symptoms went away and I don't have any of those symptoms anymore and I don't need any caffeine to keep me going, and I can stay up 24 hours without caffeine, full of energy and full of health.

That was my digestion recovery story. I was so enthralled by that and so outraged that there wasn't a solution in medicine, I decided I'm quitting my job and I'm going back to school and I'm going to learn it. I did and I went to four years of chiropractic school, I did a two-year nutrition program, I did a two-year herbal medicine program, I did a two-year acupuncture program.

I put all this together and then I trained with the *Institute of HeartMath*. That wasn't a two-year program that was like a five-day program intensive. I learned how to put all this together and that's why I'm here, because I'm dedicated to not having people be given the pat on the back and say 'here, just go take this medication but we don't know what's wrong with you' and that's why we are here.

I wanted to tell you a couple of other cases of people that I worked with and these are people I worked with early in my practice. I remember somebody coming in and she had something called Psoriatic arthritis. Now I was relatively new in practice and I didn't have like a whole host of experience with Psoriatic Arthritis.

But I knew the underlying mechanism of **Psoriatic Arthritis** and I knew how to work with people to **heal the digestion**, get their **alkaline diet** going, and get their **inflammation down**. and I worked with this woman and I put her on a gut healing protocol and we got rid of her allergy foods, a lot of the stuff I'm going to share with you, and lo and behold the skin starts clearing.

If you see this picture here in the middle, you'll see these like scaly kind of patches on the hands and then very red and inflamed and thickened joints. Psoriatic Arthritis is a condition where there is a combination of Psoriasis which is a skin issue with inflammation in the joints and it's generally considered an autoimmune disease which means the body is attacking itself. What I've come to learn and teach to my practitioners and learned from my mentors is that any time you have an autoimmune disease you've got to look to the gut, you've got to look to healing the gut.

I put her on protocols similar to those we are going to share throughout this program, and lo and behold her Psoriatic Arthritis cleared up so that's another case.

The third case is the case of someone who came in to me, a male executive, considered one of those very aggressive guys at work, but that was a front because when I was with him and he was concerned about his health he was very vulnerable and very sensitive; and we talked about what might be causing these MS-like symptoms and that's why there is the picture of the brain; those little white spots, are considered plaque.

In MS that's what we look at when you do an MRI of the head, you are looking for these little white plaques. You are saying 'well what does that have to do with my digestion?' It has everything to do with it; it's another autoimmune disease. Again I looked at the guy's diet, he was an executive, he was going to a lot of business dinners, he was living the high road, he was eating the rich foods and drinking the alcohol and under a lot of stress.

And I worked with him to calm all those things down, get his digestion to calm down and for the first time he started walking without a limp. I remember he came to me it was Christmas time, when I first started working with him it was sometime in December, and he came to me for a visit and we talked. I did some hands-on therapy and he was going to go out with his daughter to go Christmas shopping and he was dreading it because he was like 'oh, I don't know I'm not going to be able to do this I'm going to be sitting on the bench the whole time.'

And the next time I saw him a couple of weeks later, he said 'oh my God I'm so thrilled that my feet didn't get tired, I didn't lose sensation, I wasn't limping, I actually was able to enjoy it and it was really great, so thank you.' And he was really dedicated to keeping his digestion working, to getting his inflammation down.

These are the kinds of things that are possible and we don't even relate them to the gut. I didn't relate my symptoms to the gut until I had a gut symptom. But none of these people really had overt or major gut symptoms, they weren't their chief complaint. And then as we dug we realized they did have some problems; antibiotic use and a lot of the risk factors that we'll talk about.

Those are the kinds of things that don't just think 'oh I don't know why I'm here, I just signed up because I like you.' No, if you have any kind of symptoms at all; fatigue, joint pain, all those things I listed before, autoimmune disease, skin issues, you are in the right place because we are going to help you to get on the path to get your digestion working.

Because if you don't have the digestion working no matter what you do to fix the rest of your body it's not going to be a long-lived solution. You may get some temporary relief by taking the right herbs or taking the right nutrients but it's not going to be a long-lived solution. I thought I'd share that so that you'd be inspired to know that wow okay this can be something that is going to work for me and help me.

Let's take a look at **How Digestion Influences Other Parts Of The Body**. Well, number one if your digestion isn't working properly you are going to have ***nutritional deficiencies***.

Your body is not going to be able to absorb all the nutrition in the food, maybe you'll have protein insufficiencies and your body won't be able to create the structures, create the enzymes and it's kind of a proposition that keeps making itself worse, because if you don't have enough protein because you are not absorbing the protein, then you are not going to be able to digest well because you need enzymes which are proteins, to digest.

It's like this vicious cycle that – the gift that keeps on giving only negative it's the syndrome that keeps on taking. You get nutritional deficiencies and that can affect you throughout the body. Hormonal imbalances can affect your brain, it can affect your skin, your urinary tract. The other thing that poor digestion can cause is ***inflammation*** in the body.

The digestive tract as this tube that goes from your mouth to your anus. The digestive tract is not inside your body, it's outside your body. People say, 'what, how can digestion be outside my body?' It's actually, your digestion has a lining that's keeping the food that you take in from going into the internal part of your body.

It's just really a tube it's got an opening at the top and an opening at the bottom, and then it's got little spaces in between the cells where only fully-digested foods are supposed to enter in. But when we do things that irritate and aggravate the digestion that we'll talk about in a little bit, what happens is that gut lining gets irritated and aggravated and you start to take in things into the digestive tract that don't belong there.

You end up with this systemic inflammatory condition when things are getting into the bloodstream and then the body tries to attack. So you get inflammation that can affect everywhere.

The same thing causes ***toxic absorption***. The toxins that are supposed to be eliminated and the toxins not only that you take in, but the toxins that you produce metabolically, and that your gut bugs produce, they are not supposed to filter into your bloodstream they are supposed to go out the other end.

Toxin absorption ends up causing a strain on the system and can cause damage to other parts of the body.

It can cause ***immune stress*** again because these things that don't belong in the bloodstream get in and then the immune system has to start this all-scale attack. And when you are attacking things that are not dangerous you don't get to be as good, you get tired out and don't get to attack the stuff that is dangerous.

We get a lot of people who have low tolerance for illnesses and they catch everything that's going around, it could be as a result of the gut. ***Hormone imbalances***; the thyroid is particularly sensitive to these toxins and the inflammations and food antigens and cross reactivity, and we'll go more into that later; so hormone imbalances are very common.

Also the gut is a source of stress. When you've got things going on in the gut, mal-absorption and critters that don't belong there, that's a stress on your body which creates a stress on your adrenals. And when your adrenals are stressed all of your other steroid hormones are affected. What does that mean? Well things like progesterone, estrogen, testosterone, DHEA, hormones that we need and when they are low we create uncomfortable symptoms; that's how the gut can lead to hormone imbalances.

And finally ***brain and neurotransmitter imbalances***; and again part of it is because of the toxins and the inflammation, part of it is because of the nutrient imbalances, and part of it is that the gut actually produces neurotransmitters and those can disrupt the harmony of the brain. There is a big, big connection between the brain and the gut in the way that they affect each other.

You know how you say I have a gut feeling, well, those feelings, you don't just have the neuro transmissions and the emotions that get stemmed and the thoughts that get stemmed in the brain, they can get stemmed in your gut. All of these reasons that the digestion has an influence on the rest of the body.

In a nutshell, **What Is Your Digestion Tract's Job?**

It's ***to take nutrients from the foods you eat so that the cells of your body can use them***. The nutrients come in then it goes into the bloodstream and it fuels the body for use. That's all it is, a very simple process. But it's simple yet it's a little bit more complex.

There are **three main functions of the digestive system**.

One is **digestion**, it breaks down the food into molecules your body can use, simple as that. You eat a piece of celery your body needs to take out all the nutrients from that celery, make it something that you can use and then the next part is **absorption**. Those molecules that your body can use; the amino acids and the nutrients, the minerals, the vitamins, they need to get absorbed into the bloodstream and carried through the body; so digestion, absorption and then finally **elimination**.

Celery is a really good example because there is a lot to eliminate with celery. It's got a lot of stringy fibers that your body can't break down that is just cellulose, and your body needs to be able to eliminate that rather than allowing it to build up and be food for intestinal organisms that are not so good.

That's the main functions of your digestion and here is what your digestion looks like. On this picture it starts with the **mouth** because that's where the food enters; in the mouth. The food gets into the mouth, the teeth chew it and it's the only place in your body where efficient, mechanical digestion occurs, the breakdown physically of the particles so you either have to chew it or blend it, or it's going to come out the way it went in.

Then it goes down into the **pharynx** which is the throat area and then into the **esophagus** and down into the **stomach**. Before I go down through that and explain the functions of those things, I just want to really reiterate; the mouth is super important and chewing is really important but there is one piece that happens before the mouth and that's **your mind**. What are you thinking when you sit down to have that meal?

Are you in a **stress mode or a relaxed mode** when you sit down to have that meal? That's going to determine how well you digest your food. When we talk about the digestive tract it's not necessarily mouth to anus although that's the route the food takes. But the process of digestion is occurring in the mind so it's mind to anus.

We go down this long tube called the esophagus and we'll go into more detail about that when we do our next module which is the upper GI. It basically transports, right, swallows, goes down the esophagus and dumps into the stomach and the stomach is where we get the beginning of protein absorption with hydrochloric acid and all that, and again we'll go through the details of that and what can go wrong and how you can support your stomach health in the second part next week.

You've got your ***liver*** and your ***gallbladder*** and your liver makes bile to help with fat absorption (we'll go through that as well), and it gets dumped into a part of the small intestine called the duodenum which is right at the top part. The ***small intestine*** is this twenty-two foot tube; it's small not because it's short but because it's narrow, it's a narrow tube that's coiled around itself.

It has three parts; the duodenum where the digestion occurs, that breakdown, the jejunum and that's where most of the absorption occurs, and then the ileum which is where the last bit of the absorption happens and waste starts to get extracted and that's also where B12 absorption happens, on that very last part.

We'll talk more about that as we go through the individual parts. We just want to give you an overview and then we go into the ***large intestine*** and then from the large intestine - it's a shorter tube, maybe 10 to 12 ft or 8 to 12 ft depending on the size of the person, a little bit thicker, rounder and that's where the wastes are and the last bit of the water gets extracted, a few of the little minerals get extracted there, and for the most part it's just absorbing, taking this liquid, smoothie-like consistency mass and turning it into the stool which is supposed to be well-formed and we'll talk about that more when we get there.

It goes around the large intestine, comes out through the sigmoid colon which is S shaped and then into the ***rectum*** and then out the ***anus***.

We have the rectum as a storage place, so we don't want to have to go to the bathroom every time something starts to move in there. The rectum can hold the feces and you can hold that so that you can go and eliminate several times a day instead of continually all day long. But when things go wrong like diarrhea or increased transit time, as we'll talk about in a bit, then you do need to be near a bathroom all the time because your body is not holding on to things.

That's just basically the digestive tract in a nutshell and we'll be going through each and every part in way more detail as we go through the course.

I just want to make sure you understand, there are **4 Stages Of Food Processing**. There is ***ingestion*** which is eating, taking in the food and that's in the mouth, mainly, right, the mouth is where it takes it in.

There are cases when people are digestively impaired and they are in the hospital with a feeding tube so that could go right into their stomach or right into their jejunum. Then there is ***digestion*** which is the physical and chemical breakdown of complex organic molecules into small parts. Well, where does that happen?

Well, the mouth because we've got teeth and we've also got little bit of salivary amylase to break it down which happens in the stomach. The stomach churns it and then it secretes pepsin and hydrochloric acid to start the protein breakdown. Then there is the pancreas which produces the enzymes that get shot into the duodenum and the duodenum where the digestion actually happens and then the liver and the gallbladder which squirt out bile to help effect digestion. Those are main components of the digestive part of food processing.

Then there is the absorption which is pulling the digested molecules into the bloodstream for distribution throughout to all the rest of the system. It's main focus of the jejunum although there is a little bit of that that happens in the large intestine, and then the main focus of elimination is the large intestine.

This is just an overview of the process. I like to look at it as two kinds of digestion to really reiterate the importance of your teeth which a lot of us forget about. We just like put the food in our mouth, chew, chew, chew and swallow and then we wonder why there are bits of food coming out the other end, or maybe there is an irritable bowel.

There are **two kinds of digestion**, mechanical and chemical. **Mechanical** is grinding the food into small pieces. Mechanical can happen in your mouth by your teeth. It can happen in your blender or food processor and it can also happen to a very limited extent to the stomach. The stomach will take what you have chewed and it kind of churns it around like a washing machine and so there is the more breakdown that happens there.

But if there are big, old pieces the stomach doesn't have teeth so it can't really break those down. Then there is the **chemical** which is where you take large food molecules and you break them down into small food molecules by enzymes. Digestion can happen without enzymes, people think that you can't digest without enzymes it's just very, very slow without enzymes. Enzymes catalyze, they improve the rate at which the breakdown occurs.

Let's talk about some of the **phases of digestion** and this is getting a little more geeky than you may want and the writing on here is very small. I just wanted you to see the overall look of where all these parts were.

The **cephalic phase** is the mind part. That's where you are thinking about food and you are smelling the food and it's stimulating the gastric juices to start. Then the **esophageal phase** which is where the food is going from the mouth down through the tube and into the stomach. The **gastric phase** is where the food is in the stomach and then the **intestinal phase** so those are the main parts and if you ever hear those things talked about that's what it is.

No need to memorize it, just to understand that there are different places that things happen and this is just a bird's eye view of what happens. I just really like this, it's like equating a digestion to a factory and it's a picture of a guy with a hamburger holding it up on a pair of tongs and putting it into the teeth which are being held together by these guys, squirting these little bottles and vials of stuff into the food in the mouth and a little bit into the stomach.

And then more vials that are squirting little things in there, these are helping you to digest, and then the tubes that it goes through, and then collecting that at the bottom where things are kind of sitting there and solidifying and then plop out in the toilet, alright. Cool little diagram, I just thought it was really fun.

Let's talk a little bit about **What Can Go Wrong With The Digestion** and there are different things can go wrong in different places, and as we progress through the course we'll be talking about the various things and then what you can do about each of them. You might have heard the term **leaky gut**. No it's not a matter of food coming out your belly button and no it's not the amount of leaky faucet coming out of your belly button although it's a very good graphic you get an idea.

Basically leaky gut means that your gut is not keeping the things out of the bloodstream that it needs to. It's not doing a very good job of filtering it. When we look at the small intestine in our third part where we are going to go in and do our digestive repair I give you little diagrams so you can actually see what's going on in there.

But you actually have all these little finger-like projections in your small intestines that wave the food through and then absorb what it needs to absorb from it. It absorbs the nutrients and waves the rest of the waste products through. Some of the things that can go wrong, you can **not make enough stomach acid** so you can't really efficiently break down protein and minerals.

Maybe you **don't make enough bile** or your **gallbladder is congested** and stony, full of stones and not squirting out the bile the way it needs to and then you **don't absorb your fat** really well.

Maybe you have this leaky gut, your inflammation in your small intestine and you are **not absorbing nutrients** properly and worse is you are absorbing things you shouldn't be absorbing and you are getting a lot of inflammation and irritation there. Maybe you **pass things through you too fast** and you have diarrhea or maybe they go through you **too slow** and you've got constipation.

Maybe it's worse than that and you've got **inflammation** in the gut. Inflammation in these little pockets that you see on this large intestine pictures they are these little packets, those are the **diverticulae**.

These diverticulae can get clogged and inflamed and you can have a condition called diverticulitis and we'll talk about that more when we get into that part of the program. Then you could have **colitis** or **ulcerative colitis** or **Crohn's disease**, a lot of things can go wrong in the gut, I might have missed stomach you can have **ulcers** you can have **gastritis** which is an inflammation in the gut.

When you hear something that ends in **-itis**, you know that that is an inflammation. So gastritis would be inflammation of the stomach, hepatitis is related to the liver so inflammation in the liver, colitis inflammation in the colon, and encephalitis inflammation in the brain. All these things are inflammation, and inflammation is a big part of why the digestion sometimes doesn't work right.

Let's look at how you can **assess the functioning of your digestive tract**. I like to use symptoms, there is a **set of symptoms** that might point to the problem being in the stomach or the problem being in the large intestine or the small intestine. We have an online assessment and I'm going to give you access to that so you can actually get your own score and you see where your digestion is at.

There is something called **transit time** and I'm actually going to teach you how to measure your transit time. That's how fast the food takes to go from the mouth to the anus and it really should be somewhere between 18 and 24 hours. If yours takes longer then food is in for too long and you are going to be absorbing too many toxins back into your system instead of eliminating them as they should.

If it goes through you too fast you are not going to be able to absorb all the nutrition. You might have diarrhea, maybe not, but you may have diarrhea and you are just pooping away all the great food that you took in. We look at **labs** and there is specific markers in just the general blood test, but also you can do stool analysis and just really look to see what kind of bugs are in there, and how the digestive tract is working.

We can look at your body for **physical signs of nutrient deficiencies**. You can look at your fingernails and if you have really cracked and brittle fingernails or your skin is all dried and shrivelled up there are signs of nutrient mal-absorption and there is a series of those. You can have **inflammation and allergic reactions** and that can be problematic.

You can have ***symptoms outside the digestive tract*** so it's really important to see the integrity of your ***skin, gums, nails, lips, tongue, joints, bones***, your ***brain***. That's what you do for an assessment to see do I have problems. I have a questionnaire that I'm going to give you at the end of this so that you can do it and see if this applies to you.

The **transit time**, how long did it take to go ***from mouth to anus***? It should be between ***18 to 24 hours*** and you can ***test it***. You can get yourself some ***activated charcoal*** and you can swallow a bunch of them, six capsules or tablets and then you wait and you watch to see what comes out the other end. How long is it before you see the black of the charcoal coming out the other end? If it's ***too short*** if it's like you start to see it in ***12 hours*** you know that things are going through you too quickly. If the charcoal went through you that quickly that's what's happening with the ***nutrients*** and you are ***not going to absorb*** them all.

And if it takes ***30 hours*** before you start to see the chalk coal coming out, ah that's ***too long*** you are ***reabsorbing toxins*** and you might end up being ***constipated*** and we have the exact description on how to do that. I think it's in this part of the program on the website.

This is just going back to how important this has always been, it's not something new. ***Hippocrates*** is considered the father of modern medicine, he was urging his citizens that he wanted them to have ***large, bulky stools after every meal*** and that's really how it should be.

If you have a decent size meal you should be pooping within half an hour of that meal because you are stimulating movement through it. Now you are not going to be pooping out what you just took in or what you took in that day or six hours ago. It's what you took in 18 to 24 hours ago; so it's this nice, well-oiled machine.

The other piece that is so important that I want you to understand it's not just the mechanics of the digestion, it's the ***psychology of the digestion***. It ***begins in your head and your heart, not in your gut***. If you are under ***stress*** and you are feeling like you are watching the news and you are getting all bent out of shape about the latest hurricane or murder, whatever. You are going to upset your digestion because the natural response to stress is the body shuts down digestion. Did you know that?

When you are sitting there chomping away at dinner and you are yelling at your kid you are not digesting your food real well and you are leaving yourself open to lots of digestive illnesses.

The digestion, when you are in ***fight/flight mode*** turns off, shuts down the sphincters, which are the valves between the different sections, which means things can't move properly from place to the other, it lowers the secretions in the digestive tract which means you are not going to have a nice, thick mucous membrane protection, you are not going to have enough stomach acid or digestive enzymes, and things just don't move through. That's a really big piece of it is getting out the stress mode.

Breathing. Let me teach you the ***pre-meal routine***. What I want you to do before every meal and you can do this now is put your right hand over your heart, your left hand over your belly and I want you to just stop whatever you are doing, just stop. If you are reading the paper, stop, if you are yelling at your kid, stop, before you put food into your mouth, stop, just stop.

And you just close your eyes or keep them open and you take some deep breaths and you really emphasize and put your attention on a deep feeling of appreciation for the food you have in front of you. Not everybody gets the privilege of sitting in front of a perfectly formed meal every day and we have that privilege and the food is beautiful, it's full of color, it's full of nutrition and you honor that food and then you eat.

30 seconds, a minute, two minutes, however long you want to take on it, it makes all the difference in the world for your digestion. In my opinion it's a must. If you are not having good digestion and you are not doing this you need to start now.

Here is **how stress affects the gut**; the *Institute of HeartMath* measures something called ***Secretory IgA (SIgA)***. Secretory IgA is secreted into your saliva and it's an ***antibody*** that lines all the mucous membranes in your body.

It lines your digestion, lines your respiratory tract, your lungs and when you are ***under stress*** the ***Secretory IgA secretes goes down***, that's this line way below the line. When you go into anger, that's where your Secretory IgA goes.

When you go into ***care***, the ***secretory IgA goes up*** and then just stays up and goes up and is really ***improving the protection that you have in your gut***.

This is the **Pre-meal ritual: stop, look, tune into your heart, breathe fully and deeply, feel sincere appreciation** and do this every time you put food into your body, every time, don't miss.

Focus on this alone and you will start to see changes in your digestion, I promise you.

Chewing, I'm going to reiterate, **only your mouth has teeth** and the other **un-chewed food comes out the other end** perfectly **intact** which means you are **not extracting** all the **nutrients** from it.

The other thing you don't do when you don't chew properly is you **don't allow for the breakdown in the mouth**. There is some salivary amylase, there is even a little bit of salivary lipase, very small and you want to get those things going in your mouth and amylase will digest starches and lipase digests fat.

Without chewing you are going to **eat more quickly** and you are going to **eat too much** because you are just bolting it down and you don't even realize you are full. Not chewing properly can **lead to acid reflux** which 56 million people have acid reflux and much of it can be stopped by chewing, doing the pre-meal ritual and then some other nutrients and herbs that we can talk about. Poorly chewed foods can lead to **flatulence, indigestion, heartburn, gas and IBS**, because the bugs get it.

Let's talk about the **4R** process and we are going to start with the top one which is **Remove**, and throughout the program we are going to go through **Replace, Re-inoculate** and **Repair** and I'll explain those to you when we get there.

We are going to start with **Remove**. This is a process that one of my mentors, Jeffrey Blend popularized. He first learned about this and the brilliant way of putting all the different things we know are going to help your digestion.

There are **Foods That Can Hurt Your Gut**. They can damage that delicate mucous membrane that lines and protects and cause irritation to the cell layers underneath that and when that gets damaged you've got to be doing things to put it back in place.

These foods can also cause an irritation to the tight junctions between the cells and they become not-so-tight junctions, they become leaky. It's called increased **gut permeability**. The commonly heard term is **leaky gut** and I know people who hear leaky gut have all sorts of strange ideas like 'does that mean food is dripping out of my belly button?' No, it's their **food is leaking from the lining the inside of it into the bloodstream**.

Foods That Can Hurt Your Gut: gluten, **gluten** is a protein found in wheat, most of you have heard me speak about gluten before, it's mandatory to get off gluten if you want to heal your gut, mandatory. Gluten is glue-like, it can plug up those villi, it can also cause inflammation in those villi and in the spaces in between and lead to leaky gut *even if you don't have celiac disease*.

Even if the doctor tested you for celiac and you don't have it you can have a non-specific, non-celiac gluten sensitivity.

Dairy is another one, it contains a protein called casein. Casein is like glue again, it can gum up the absorptive mechanisms. It also can get into your bloodstream and cause mucous and inflammation.

Sugar is damaging. Sugar actually feeds the bugs that live in your gut that you don't really want to live there and just as an aside.

What is your microflora? Your microflora is those set of organisms that live in your gut that are doing you good. They are producing vitamins, they are helping to repair the lining, they are helping you to absorb your nutrients, they are good for you.

And when you take too much sugar, you feed the not-so-good guys. We all have good guys and bad guys in our gut all the time and they get into battles. When you eat too much sugar you make the ones that you don't want there stronger, you create an environment where they can grow, and when they grow they crowd out your good guys, your protectors, and then you get the bloating and the gas and all sorts of things.

We'll be talking about a variety of different syndromes caused by sugar and in **Part 3** of the program when we start your 30-day metabolic digestive repair process we are going to talk about how you can starve away some of these critters that live there. Also refined carbohydrates get converted to sugar.

There is a process and we'll talk about it later on at the Specific Carbohydrate Diet (SCD), or the GAPs diet, and then the FODMAPs diet. These are where we've identified specific sugars and specific people who are sensitive to them, and we'll talk more about that if that's something you need to do. It's not something that the majority of people need to do but if you do it's important to know about it.

Sugar alcohol in some cases; people who are sensitive to FODMAPs are going to have sugar alcohol problems and we shouldn't have that taken in. And in general I recommend that you don't take too much. Sugar alcohols are things like xylitol, erythritol, mannitol and sorbitol. I don't recommend mannitol and sorbitol much at all but in some cases xylitol can be helpful for teeth. The dentists are telling people to do it so you just have to see. A lot of people get diarrhea badly from it. Most people don't get diarrhea from erythritol but most people do get it from the xylitol in decent quantities.

You need to be off **foods that you are allergic to**, because allergies cause inflammation, and if you've got inflammation going on you are going to hurt your gut. **Caffeine** and **alcohol** and **trans fats**. Trans fats being those fats that have been altered in structure either mechanically or through heating processing, they change structure and they become *trans* form instead of the *cis* form. And the trans form of fats is actually bent in a way that your body is not used to and it can cause damage to your digestive tract as well as to your blood vessel walls.

Processed meats have nitrites and all kinds of preservatives in them that can be damaging. In some people **nightshades** are problematic, what's that? That's *tomatoes*, *potatoes*, *eggplant*, *bell peppers*, but not everybody. Not even a majority. But if that's you, and you are doing everything else right and you are not getting the results, it could be a nightshade problem.

Then there are **lectins**; and lectins are particular markers in the chemistry of grains and beans and dairy. Again it's in some people. When in doubt, leave it out at least during the elimination phase.

I'm a really big fan of simplifying down to very little and then gradually adding things in to see - not adding back trans fats and alcohol and caffeine mind you - but I mean certain sub groups of foods that some people have problems with; night shades, some people have problems with sulfur-containing foods, some people have problems with oxalates, and it has to do with their particular biochemistry.

And then in some people the **FODMAPs** and that stands for: *Fructooligosaccharides*, *Disaccharides*, *Monosaccharide's And Polyols*. It's a big long list. And there are specific foods that some people have problems with because their gut bacteria is living off of it and thriving off of it and you are getting the not so good stuff, and we'll talk more about that when we get into the intestines.

Those are some of the things, so the hot dogs not so good, the beer and French fries, not so good. Some of these things you might be able to get away with every now and then once your gut heals, but while you are in the healing stage, strictness is definitely in order.

Remove, what are we going to remove? That's the R we are working on today.

The R is for removing **foods that hurt your gut** which I just gave you a list of. **Medications**, like over the counters, like NSAIDs, let me tell you a little bit about the medications.

The medications that are said to have the most damaging effect on the gut are ***Non-Steroidal Anti-Inflammatory Drugs (NSAIDS)***, that's those things we take over the counter for pain relief and headaches, and ***antacids***.

People take antacids because they have burning in their stomach and it turns down the stomach acid but the majority of people have low stomach acid so antacids are actually making their digestion worse. Those are two main categories of drugs and there are others that will negatively affect your gut.

The other things that you want to Remove are ***candida, parasites and bacteria***. With the **Remove** we are going to start with everything on here except the candida, parasites and bacteria, we are not going to do anything to directly remove those, we are going to wait until **Part 3** when we get into all the procedures for doing that.

But let me just tell you, if you follow an elimination diet, avoid the sugars, avoid the foods that hurt your gut that I listed on the previous page, and you get off of the common allergens and see which ones you are sensitive to, and get off of the foods you know you are sensitive to.

All of that is going to naturally allow those levels of candida, parasites and other infections to go down, and then when we get to that part of the module we are going to go ahead and do specific 30-day process for healing it and getting the rest of it so that's **Remove**.

The **Elimination Diet** is very simple; it's just a matter of identifying common allergens and known allergens, and removing them from the diet along with foods you eat frequently, you crave or you know you don't digest well, because these are the foods that can be creating problems for you. We get down to a very elementary diet, very simple diet that you can do for a while, experience pleasure and comfort and then you can move on, and then we can add things back in.

There are ***two Phases: Elimination and Provocation***. Right now we are just going to talk to you about elimination. **Eliminate** the common allergens; ***gluten, dairy, eggs, peanut, corn, soy***, any ***allergies you know about***, the ***foods*** you ***eat frequently*** and ***crave***. You just do this temporarily to see how you feel and then you can test them back, and then ***foods*** you know ***you don't digest well***.

Elimination/Provocation (and again we'll go more into detail on it later) is where you identify the common food allergies, you ***remove*** them from the diet ***for an adequate time*** and that can be for days, it could be for weeks, or it could be for months. You get to judge that. Then you ***re-introduce*** them ***in systematic manner in high doses***.

You don't want to just give a little dot of it because the symptoms it creates might go undetected. You want to really do large amounts so it's obvious that you are having a problem, if you are not having a problem no matter how much you eat it it's not going to cause problems unless you overeat we are not telling you to overeat and stuff yourself.

And then you just **be a detective** about **how you feel**, what **old symptoms** are coming up, and **immediately to two days out**. It's not like you can say 'okay I'm going to add a new food for breakfast, a new one for lunch, a new one for dinner' and then if you have a problem the next morning you can have a delayed hypersensitivity to something you ate before. Those are the things to consider and we go through a lot more detail on that in other programs that we do.

Here is what you need to know: **when you start to remove your allergens, you can feel sick as a dog the first few days**, especially if you go off the allergens, sugar, and stimulants, all at the same time. You can feel sick as a dog because your body was relying on those for stimulation.

You have an addiction there, your body was getting an endorphin rush from those foods. As your body is eliminating and detoxing, you may not feel good and it's a good idea to take it easy on yourself, and rest and relax.

We are going to **Begin To Heal Your Gut**. What do we need to do to do that? Well I like to get people on some **daily green drinks** because it **provides gut soothing chlorophyll**.

Now these green drinks can be any sort of green drink you want, we'll talk about those kinds. It's a good **source of magnesium** which is really important for digestion, they're **loaded with minerals** which **help your digestion heal**, and help you to **produce your enzymes**, and **keep your lining nice and pump**. They are **smooth and easy on the gut**, instead of chewing a salad and risking not chewing it all the way and having that be irritating to your gut, you are blending them.

We are going to incorporate in our 30-day program some blending. Not exclusively blending for 30 days unless you want to, that's not mandatory, but we are going to be doing some blending.

And it can be whatever it takes for you, **green juice** where you don't have the fiber and that's usually recommended for people who have some really serious inflammatory bowel disease, because the fiber just isn't sitting well.

Blended green drinks made from raw veggies and that can be smoothies and have a little bit of fruit in it or the savory kinds. You can make **green soups**. One of my favorite things to do is steam up a bunch of vegetables and blend it up on a cold, winter day with the water and then with some really good gut-healing herbs.

You can have **powdered drink mixes**. I just came back from a trip and during my trip I didn't have my blender with me. I could have brought it but I didn't want to have to deal with having to check my luggage so I didn't and I was going to be in a hotel. I just felt like okay I'm just going to use my powdered green mix and I took a jar with me, and I shook things up and I bought water and I had a powdered green drink.

Mix it up, find out what works for you. Just because I say you should be working up to a quarter more if you find that if you take more than 24 ounces you feel weird, you don't like the feeling, well then back it off. Your body is telling you things. Not everybody can do it and that's why when we are together you are going to have a lot of opportunities to coach like hey I tried this thing you said and this is what happened, it wasn't what I expected so I can dig deeper with you to help you to figure out why.

Daily green drinks are important. This picture over here is my son who is on the far left. That was when he was ten years old, or 11, he's 16 now so he's a lot taller than that, he's a lot taller than me. They were wearing their green-smoothie moustaches and posed for the picture for me and I was just so thrilled.

These guys are 12 and they were thrilled that they could get all those veggies in a green smoothie, and this guy is three years younger than him so he must have been seven at the time and he would come over my house, lives next door, all the time and ask me to make him a smoothie. And he knew after a while I told him that I was putting spinach in his strawberry smoothie and it was okay with him.

Daily AM Gut Rejuvenator.

This is something I'd like you to get started on right now, it's very easy.

- 32 ounces of water
- 1 lemon or a lime, juice of
- 2 drops of peppermint oil
- 2 drops lemon oil

I like to put it in a glass jar and shake it up and drink it.

There is something about the peppermint, the menthol in there and some of the other alkaloids and the limonene that's in the lemon that helps to support the body's detoxification.

Limonene is important for the liver detox. It's one of those factors that helps improve the Phase 2 liver detox, but also it helps to open your digestive tract up. Even sleeping all night, even laying flat, there hasn't been a lot of movement, there can be stagnation. We want to be able to push things through so you get rid of the debris from yesterday and start afresh with debris from today.

This is what I call my *Daily AM Gut Rejuvenator*. People say 'I don't have peppermint oil I have spearmint,' that's fine too. I don't have lemon, I have orange or I have lime or tangerine or citrus.

It's okay, lemon and orange tend to have the most limonene but all of them have limonene so go for it. The oil comes from the skin and that's where the essentials components like limonene are. That's what I want you to drink in the morning.

We are coming to the end and then we'll have questions and I want you to do some things, this is your homework for the week.

Every week we are going to have an **Action Plan**. This week's action plan is **complete the online assessment** and then the second part is **add a Daily AM Gut Rejuvenator before any food in the morning**. Before you eat, drink a *Daily AM Gut Rejuvenator*, you may start with eight ounces because that's all you can do and work it up to a quart, same thing with the green drinks, green smoothies, blended greens.

Some of you are already doing it, some not. And it's okay if you have an irritated gut to have a blended green drink from cooked foods in the morning, cooked vegetables. Because sometimes we have to go with cooked while we are healing the gut, because the fiber is like sandpaper. It's okay to wake up and have a nice warm bowl; instead of oatmeal you have a warm bowl of blended vegetable soup, and you make it all delicious and put a lot of herbs there which we'll teach you through the program.

And then you do a **Pre-Meal Ritual**, okay, you *stop*, you *look*, you *breathe* and you *give thanks for your food and your life*. And then finally begin to **eliminate the foods that hurt your gut**. What's coming up?

- This was **Part 1** and we went through the overview, we went through some basics, we gave you a nice action plan to get you started on healing your gut.
- **Part 2** is going to be *Starting At The Top, Mind, Mouth And Stomach*. We are going to go through the physiology of those things, what goes wrong and what you can do about it, how are you going to improve your stomach acid production, what can you take, do you take stomach acid? Do you not take stomach acid? and how do you optimize that?
- **Part 3** we are going to look at *Intestinal Detox, Repair And Recipes*. We'll look at how the small intestines work the different parts. We are going to look at how you can detoxify, repair, get rid of any bugs that you have living there, optimize your gut flora and then we are going to give you the *Recipe Collection* which you see a picture of right there. There are 140 pages in there of gut soothing recipes.
- **Part 4** is *Optimizing Your Elimination*, what do you do to get all the wastes out? 30-day guided leaky gut repair and candida/parasite cleanse. There are all the details you need of how to do this, what supplements and herbs to order, how to set it up, and we'll have plenty of time for Q&A to help you fine tune it for you.

Then we'll have a series of assessments, *check lists, supplement lists, resources, foods lists*, a lot of stuff to help you. This is just the beginning; you've got five steps. Let me go back to that action plan. Complete the online assessment for those of you who are visitors we'll give you a copy of that but what I would encourage you to do is come on in because there is a lot more than that on the site.

Your daily gut rejuvenator: your water, your lemon juice, couple of drops of lemon oil, couple of drops of peppermint oil. Adding daily green drinks or blended soups and in our recipe guide we have plenty of those recipes. Do a pre-meal ritual before each meal. And then eliminate the foods that hurt your digestion. I'm excited that you are here and we've shared a whole lot.

I want to just go through and share what are some of the **Upcoming Specific Issues** that we'll be going through. So if you have any of these issues and want more on them we'll be going through like how do you help yourself heal and repair from these? ***Low stomach acid, H. Pylori, ulcers, gastritis, reflex, irritable bowel, leaky gut and celiac disease, gallbladder congestion, and what do you do if you've have your gallbladder surgically removed?***

How do you make up for the lost function? Digestive enzyme insufficiency and what do you do? SIBO, which is Small Intestine Bacterial Overgrowth, different from overgrowth in your large intestine, it's in your small intestine.

Candida and other gut critter overgrowths, and what do you do about that and then we'll touch on inflammatory bowel disease, Crohn's, colitis, and diverticulitis, and some very specific things dietary-wise and supplement-wise that you can do to start to heal those.