Well. Hey, everybody. So excited to have Doctor Murray with me. Perhaps the world's expert on natural medicine. Definitely in the top five, in my opinion.

And it's been around for a number of decades. Written over 40 books. He trains doctors, he trains the public and how to best use natural medicine. Appreciate about him is he can take very complex literature, scientific literature and give us the gold nuggets of it, something that we can use.

And for those of us in practice where we can't spend a lot of time all day long looking at studies, he gives us the gold nuggets and how to help people, and he gives it directly to the public as well as website doctor murray.com that's spelt out.

Doctor doctor Murray Murray.com. So Doctor Murray great to be with you. My pleasure Mark always. Well this whole summit is on gut health related to whole body health.

And one of the things that most people, let's say 40, 50 and above are very interested in is aging. What can we do to help with aging? And you've written on this, you've written on, you know, restricted diets, healthier diets, diets with nutrients, dealing with toxins and environment.

All these things affect aging. But give us your overview on the relationship between the gut and aging, if you would. Well, Hippocrates said it well, all help begins in the gut, and we are learning more and more.

True, that is. And it's certainly important for our overall health. And that includes our ability to live a long and healthy life. If we're looking at it, it's a quality of life.

There's no question that gut health is critical to that as well. And talk to us about that, because that often gets myths, people, length of life. But you and I both agree.

What is length without quality? Maybe just comment on that as a person, as a physician, right? I don't know if a lot of people really want to live longer, Mark, because they're not in good health.

If you're suffering, if you if you're depressed, if you have low energy levels, if you're in pain, if life is hard, having more of it, it's not that appealing.

What I try to do is help people realize that they can take steps to feel better. Now. People want to feel better now, and the more they feel better now, the more they get inspired to live longer.

And so, you know, I think that the two go hand in hand. If you can help someone feel better, they're going to want to live longer. Absolutely. You know, decades ago, naturopathic doctors, we had this well, not just us.

I mean, you know, thousands of years. You look at Chinese medicine, European herbal medicine, nature path medicine, you know, all the great healing systems or this there was this idea of toxin, which means you could reabsorb toxins from the digestive tract.

Nowadays, we know more from the colon back into the bloodstream. So I remember when we were in school, it was kind of we had this concept. There was a little bit of literature on it, but the mainstream mass was saying that's bunch of and and there's nothing to it.

And of course, as with many things, the mass and that has changed. Talk to us a bit about this concept of nature talk, if you will. Yeah. Well now it's referred to as garb aging, right.

We know that there are factors that are social with poor detoxification that really affect our health and our ability to

live longer. And if our body is not effectively detoxifying, these compounds can cause significant harm and significant acceleration not only of aging, but also of virtually all disease processes, especially inflammation.

So yes, port detoxification is a key factor to address if people want to be healthier and if they want to live longer. Well, that's a very good point.

In terms of gut health, that is true if you have detoxification problems, you're not only increasing inflammation in the body, but in the gut as well.

And then we have information. Again, you're getting leaky gut syndrome and dysbiosis and you get more systemic problems going on. So maybe what how do you advise practitioners and patients and lay public.

What are some of the keys do you think of just supporting good detoxification, which will result in good gut health and whole body health? Right. Well, let's focus on what's the biggest stress or to detoxification.

And that biggest stressor is what we're absorbing from the gut. One of the most silent epidemics in modern living is nonalcoholic fatty liver disease.

This affects basically almost 100% of people that are overweight or have type two diabetes and or have a lot of visceral fat. You can be skinny fat where they they're thin, but if they have a lot of internal visceral fat, they generally have a fatty liver as well.

And this fatty liver is most often the result of what they're absorbing from the gut. With increased gut permeability or leaky gut. We get absorption of various gut derived toxins, particularly by products from microbes that can in significantly impact liver function and reduce the liver's ability to detoxify.

And this has broad systemic effects. It can lead to not only disruption in metabolism, but also insulin resistance, general inflammation, joint pain, all the things that we associate with leaky gut syndrome.

And these things definitely have an accelerating effect on pathology and inflammation. And that leads to a shorter lifespan. Yeah. And that's a good point.

So basically this toxicity or garbh aging is coming from what you absorb through those small tests and or shouldn't be absorbing. And then some reabsorption of toxins in the colon.

So that's very, very true. You know terms of anti-aging and the gut health. Maybe just talk to us a bit about, you know, this vast concept of the microbiome, which, you know, nowadays we know includes not only the bacteria but fungal organisms which inhabit the gut in a natural way.

Viruses, it's our knowledge of it is expanding. Tell us about the kind of symbiotic relationship with gut health and whole body health, and what people can do to improve that.

Exactly. We're learning that everything seems to affect the health of the microbiome, this very complex system within us, we have ten times as many microbial cells in our gut than we have human cells in our entire body.

And this this interaction with this microbiome plays a huge role in our overall health. The way that we feel and the rate at which we age. And so we're learning more and more that we can influence this microbiome most beneficially through some basic things.

One, you got to make sure you your digestive secretions are sufficient, sufficient hydrochloric acid output. Many people don't produce enough hydrochloric acid as they age.

We also know that people have autoimmune diseases generally have decreased hydrochloric acid output. There's a long list of health conditions. One thing that I noticed is that the health of the fingernails really reflect the degree of hydrochloric acid output.

If you're not secreting hydrochloric acid, you're not going to break down protein properly and you're not going to ionize your minerals. So you're likely to have weak healing or cracked fingernails.

If you're not secreting enough hydrochloric acid. You're also not protecting your body from infective organisms that can find their way into the small and large intestine instead of getting destroyed in the stomach.

If a person feels stomach irritation or gas and bloating almost immediately after they eat, or up to the first 30 to 45 minutes, that's also a sign of lack of hydrochloric acid.

If that irritation happens 45 minutes or an hour after eating, that's usually a sign of lack of pancreatic enzymes and a deficiency of hydrochloric acid or pancreatic enzymes.

That's a big deal, because you get severe disruption of the microbiome in these conditions. So it doesn't matter if you're taking probiotics, it's not going to produce this overall effect that we want in creating a healthy microbiome.

So digestive secretions are a key factor. The next thing is the quality of your diet. If you're eating a lot of junk food, if you're eating the wrong types of fats, you're going to have an unhealthy microbiome.

To have the healthiest microbiome, we have to eat really good whole food. And that diet should be very. We're learning that the quality of your microbiome is largely based upon its diversity.

We're designed to have a diverse number of organisms growing in our microbiome. And the best way to have this diversity is to have a lot of diversity in your diet.

Most people that that I know, they're eating the same foods day in and day out now, many times those are really healthy foods. But I would encourage people to think about being more varied with your diet.

That's going to lead to the most ideal or optimal microbiome composition. Yes, and that's what the literature is showing you, right? Maybe in this last part, talk to the viewers about, you know, the gut health, aging and stress, how stress affects that health.

And that impairs obviously digestion, absorption, get more toxins, create more free radicals. You know, you're going to have problems with disease and age.

And tell us a bit more about kind of that mind body connection. I know you've written about two. Yeah. And sometimes it's good to go back to the beginning and just simple things.

One of the first things they noticed was stress was that it reduces the level of secretory IGA. This is a nonspecific immune protector secreted by the lining of our mucous membranes.

And when we're under stress, the level of secretory IGA drops. That makes us more prone to infections and also allergies. So how do we protect against stress lowering IGA levels?

Well, we do that through stress reduction techniques. Meditation, exercise and proper nutrition are absolutely critical for kind of buffering the effects of stress on secretory IGA.

If you're under a lot of stress, you're going to have that IGA level drop that's going to lead to more likely damage to the intestinal lining, and that's going to lead to that snowball effect of the gut syndrome and everything else.

So yes, dealing with stress is a big part of gut health. And it's something that we know that there's a strong link between the mind and the gut. And a lot of this link is the effects, negative effects of stress on gut health.

Absolutely. We know we have this gut brain axis, which is bidirectional. So messages from your brain right to your gut to your stomach or small intestine, you're calling the other digestive organs but works the other way around.

Two especially I think most of the research has been done on the like the the bugs, the microbiome and that gut and then messages getting back to the brain and maybe just comment a bit on that and how we produce more serotonin in the gut than we do in the brain.

So we obviously impact gut health if we have proper mood and brain function. Yeah. This is just it's it's so symbiotic. It's and it does work both ways.

And what we're learning about this, this microbiome generally the things that are good for the microbiome are also good for our general health as well.

It's not just probiotics or prebiotics. It's a variety of different dietary constituents. And these dietary constituents themselves have some significant direct effects on reducing stress and helping us feel better.

Some of the research on on just blueberry consumption or flavonoid consumption has shown in teenagers that a bowl of berries had an immediate media defect on mood and brain activity.

So and we know that these foods are very good for the microbiome as well. So generally, what we need to do to have good microbiome health and to have this access of brain to gut and gut to brain working very well, it's just to focus on feeding our body and that microbiome with health producing foods.

And we get caught up in the world and we think about, you know, what the greatest technology is. And yeah, I love my phone, but the greatest technology in the world is nothing.

That man is created its nature and the way in which we commune with nature on a daily basis, besides through our eyes and breathing, is through the food and water that we ingest.

And the quality of our food is really the key. And there's so much magic in food. It's the title of one of my books, the The Magic of Food, and we're learning just how magical it is for food in the way in which it works in our body.

Sir Arthur Clarke, who wrote 2001 A Space Odyssey, is credited with a great quote. He said that any sufficiently advanced technology is indistinguishable from magic, and I just stated that the greatest technology in the universe is nature.

And so we're just learning. It's still magical to us in many ways. This, this, this effect that food has on us, not only in terms of how it promotes health and sustains our body, but how it makes us feel as well.

And one of the key new paths that food has in producing these health benefits is through its impact on the microbiome. And fortunately, we don't have to get too complicated.

When you eat a healthy, very diet, that's how you feed the health of that microbiome. And you just motivated me. On one kind of topic, we'll just touch on briefly.

And that is I was reading some published articles in the mainstream literature talking about how food is information. And then so that ties in this field to epigenetics where you can you can influence your DNA expression, how you carry out events in your body which would tie into age.

In other words, if you're eating healthy foods, then you're getting in the right information to your genetics so that you can operate more healthily, which is going to reduce your risk of diseases, which I guess indirectly reduce your risk of dying younger.

But maybe, maybe comment on that. Yeah. So one of the challenges with a lot of the nutritional therapies, like a lot of the chemicals, is that our body metabolizes them into inactive forms.

So for example, a flavonoid molecule, when we ingest it that it gets bound to to a molecule of acid or sulfur almost immediately after it's, it's, it's absorbed or say curcumin.

Everybody's heard about curcumin. That's a fantastic anti-aging supplement. But when you ingest it it gets bound to the the glucuronide acid. And it circulates in the body in a in this bound form.

That's brilliant, that's beautiful. And that makes a lot of sense because these are pharmacologically active compounds. If these compounds were not regulated in our body properly, it would be chaos.

But what's interesting is that if you look at the they demonstrated this over a decade ago, they they showed that when mitochondria are damaged, that it causes the cell to increase the secretion of glucuronide days, and that will break the bond, freeing up the free curcumin, or free flavonoid.

The study actually used quercetin. And what it showed next was that the the curse of ten would go into not only the cell, but also the mitochondria, and influence the mitochondrial DNA to make changes to help repair and restore function.

And when another thing that we've learned is that a lot of these compounds, they're very active as antioxidants in test tube studies, but we can't get the concentration of these compounds to that level in the body.

But we know that they activate antioxidant mechanisms. So for example, most of these polyphenols like curcumin or flavonoids, they activate an enzyme system called nerve two.

So they're working through this enzyme system and the expression of our genes to increase the output of indigenous antioxidant compounds. So they do have an antioxidant effect.

It's just not direct. It's much more complex and it's much more harmonious and it's much more magical. We could we didn't know this 20 years. We thought it was this.

It made a lot of sense because like I said, these compounds are active. They're like drugs, but they don't have the side effects. The side effects of curcumin are virtually nil.

The side effects of flavonoids virtually nil. But we know that they have therapeutic benefits. So how can something be so active but yet so safe? And the reason is, is that they they circulate in our body in inactive forms, and they're only released when needed.

And that's magical and that's beautiful, and that's why it's so important to mass. And even though we have some very well studied supplements and so forth, and they can help people a lot, we cannot forget the priority of the diet, like you said, because that's where the magic is occurring, where that information, that core of your health occurs.

So sometimes, you know, we're tempted even as well. Let's stick practitioners to, you know, Skidmore the diet and get into the supplements. But that's a mistake.

And you just gave some great examples why that is. Yeah. Yeah, yeah I think well, I think you got to do it all, Mark. You know, you've had patients like I've had that have been faced with some very serious conditions and they tend to be the most compliant.

And I always tell the story of one of my patients. Dean had a very severe genetic disorders. He was at a very severe disadvantage and he endured a lot.

And one time I asked him why and he said, well, all you can do is all you can do. And so why wouldn't I do all that I can do to live? And he was really trying to live.

And I think that's how we should that that's what we need to have that attitude. And so what that means is if you're if you're if you want to live longer and you want to live better now, you've got to approach it holistically.

You've got to get your mind right. You've got to get your emotions and your heart right. You've got to get your diet right. You've got to get your supplementation right.

You got to get your lifestyle right. You got to get your sleep and other habits right. You got to do it all. And that's that's daunting for a lot of people.

But it's incremental steps, incremental steps. And having the attitude that you are empowered and you can make a difference and you can feel better. That's great.

That's great. A good way to end this segment. So Doctor Murray, again, thank you so much for your time for people want to get more information on anti-aging nutrition holistic medicine.

Go to the website at Doctormurray.com that's spelled out or doctor doctor Murray Murray.com. Thanks again Michael. Thank you.