The Gut Twilight Zone: What's Leaking and Why Transcript

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Podcast Intro and Regenerative Medicine Overview

Hey there, welcome to the Recharged Biomedical Podcast. I'm Dr. Edward Park, and if you're curious about regenerative medicine, you've come to the right place.

We're diving into the latest breakthroughs in telomeres activation, stem cell exosomes, and all the cutting edge science that's shaping the future of healing and longevity.

Let's get started. Okay, everybody. Hey, this is Dr. Ed Park, and today we're doing a webinar on leaky gut. So the reason I put these slides up on the beginning is, you know, I've watched all the Twilight Zones.

I used to love them, and I think a lot of people loved them because we never really knew what was truth. And if you look up Twilight, it's between bright and dark, right?

Opening the Leaky Gut Webinar

So all of knowledge is always passing through bright and dark, and you know, especially in this election of politics, the season of a lot of heat and not a lot of light, everyone's kind of got their spidey sense tingling.

So let's talk about a very, very controversial subject. I will not even venture to say that we're not going to reach any definitive conclusions. And I think that's fitting because of all the things you do in life, Probably digestion or eating stuff without it killing you is one of the most complicated things.

All right, I'm sure you could probably guess what the two missing letters are there. You know, if you took a look at what people are accomplishing, I mean, there's great works of art, but you know, basically from the point of view of an alien, you know, we seem to be eating stuff and producing stuff and all that stuff is of course SCAT, scat.

Schopenhauer was said to talk about truth going through three stages. First, it's ridiculed, then it's challenged vehemently, and then finally it's accepted as being self-evident.

Many truths have passed through this, such as Zeus being the king of all gods. So you have to be careful. We're reminded that they used to have a lot of ads featuring Actors playing doctors recommending certain brands of cigarettes.

So truth is always a matter of parsing out the light from the dark. In life, we find that many people like comforting lies. They like simple stories of good and bad.

And Harvey, who is on the call, is a close musician, magician. He does magic, and magic is premised upon the idea that the mind already is interpolating, extrapolating, and so it's very easy to lie to people.

What's harder is to get people to listen to unpleasant or complicated or ambiguous truths. Things can be true-ish and false-ish. A very famous tale is Cassandra, who is the daughter of King Priam of Troy.

She was given the gift of prophecy, but the rub or the twice on ironic twist was that nobody would believe her. So when the Greeks gifted the horse, she said, Hey, everybody, there's Greek soldiers in there.

They're going to kill us and destroy the city. Nobody believed her. And that's, I think a fitting way to talk about something as controversial as leaky gut.

So I just learned this term a couple months ago, translational medicine. Apparently this is what I've been doing for all these years. I take strange cases that people really haven't seen a lot of.

At first it was with telomeres activation and now with exosomes and I try and guess. Of course, I'm also full of scat. I don't know. I go with the people I think I can trust.

And so I think it's fitting that we start this webinar with a patient testimony. We usually end it, but the whole reason we're doing this is because of what this patient sent me that was so mind-blowing.

I heard the motif of the Twilight Zone the first time I opened it. RS is a 48-year-old man with malabsorption and I guess what you'd call irritable bowel syndrome.

I have to warn everyone that the FDA has not approved exosomes for anything, but he came in with a gentleman, his friend and business partner to get exosomes.

His friend was very interested.

Patient Testimony and Exosome Effects

Ironically, him being the most intact and healthy had the least effect. His sister came along, they drove out from Las Vegas, and his sister had amazing effects.

She's able to hike now. Her very, very damaged lower limb is much better and she's extremely happy. In fact, she came back, I think it was, yeah, when I was in LA two weeks ago to get another treatment, drove 10 hours, five and five, and she said her digestion is better.

But let's talk about Richard. So RS had severe food intolerance. Meaning for the last few years, anytime he ate anything dairy, anything with wheat, any kind of fast food, he felt terrible.

Diarrhea, cramps, this is generally described as malabsorption. Malabsorption is when, you know, you just don't absorb. So instead of getting a nice form brown stool, you get crampy, liquidy diarrhea.

It's often yellowy, greasy. It's often very foul smelling. He also reported fatigue, decreased libido with some erectile dysfunction and exercise intolerance.

So Richard quite dutifully took pictures. I didn't ask him to do this and he sent them to me and I was completely blown away and my spidey sensor, my BS detector kind of went, there's no way this is real.

So let's go over what he said happened. So on his legs, this is just one area, three or four areas where he had varicose spider veins. And again, he labeled these pictures I didn't look for Photoshopping.

I didn't look at the meta tags. But I don't think he was really conning me. But by 10 days, these had gone, not only here, but in several other areas.

Also, the eczema on his hands got better. The swelling in his face got better. And these are direct quotes from the email that he sent me. Day 10, incredible energy level, started jogging, and I'm now running without any breathing difficulties.

I eat junk food and dairy products again, and the stool results in two days. Sleep longer, steadier, and deeper. Picture of his hands on the right after on the left before.

You see that the light exposure is not the same, but you see a deep fissure. I guess he had eczema on his hands consisting of some kind of autoimmune condition.

Could be scleroderma. Again, there's so many things to talk about in this webinar. We're not going to get to them all. He said on day 12, his stool is colored, which is good, because usually if it's pale, watery, yellowy, that's bad.

It's colored, it's solid, and it's just unusual for him after consumption of fast food or dairy. He was very happy. And

his connexum, of course, better, as you can see.

On day 16, he wrote, after three years of allergic facial bloating reaction, this has disappeared, probably reflecting kidney starting to work properly again or the immune system.

So again, I don't think these are doctors. Maybe they are, maybe they're not, but clearly there's some edema under the eyes. There's some swelling. And then on the right, different light conditions, but he certainly looks a little healthier.

And I would encourage you to read the blog, actually, Recharge Biomedical slash Exosomes 28 Varicose Veins, because his testimonial, it seems very, very authentic to me.

But you never know. So the null hypothesis is that someone is lying. This is all BS. The other theory which prompted this webinar is that he had some kind of problem with digestion and leaky gut.

And what would that entail? That would entail closure of the tight junctions. Above me, you can see what tight junctions would look like. That big arrow coming down is inflammation.

So basically between us and what we eat, there's a single layer of cuboidal cells or mucosal cells and it's like a very strong barrier. And yet, Ironically, between the cells, there are something called tight junctions which can loosen as we'll talk about in a moment.

So, it is permissive of toxins, food particles, drugs, pathogens. Of course, if it were completely watertight, we would all die of malabsorption. We wouldn't be able to nourish ourselves.

Although there are channels for certain nutrients, like sugars and everything, and there's endocytosis, meaning the cells can swallow in, there's also larger floodgates, if you will, that allow stuff under the lining and into that interstitial space.

And so again, like I said, digestion is probably the most complicated thing you'll ever do and you have to do it throughout your life. And it's no surprise that we get into trouble distinguishing friend from foe, nutrition from poison.

This will be a very controversial subject for many years to come. Anyway, so probably what happened if I had to guess that he's not lying is that his tight junctions closed up.

The mucosal barriers, which there's actually above the cells, there's the mucus, which protects. Just like in your nose, you have mucus protecting. The gut flora in the large intestine could have changed.

And of course, the final common pathway is that the oncotic pressure in the lumen or the tube part, the hollow part of the bowel got normalized, it wasn't swelled up with gas or water, it wasn't being stretched out, and there wasn't as much inflammation going on there.

The body wasn't secreting antibodies and secreting immune response, complement, cascades, So we have to assume that maybe the gut became less leaky. Maybe there was less of immune reaction stuff flowing under the barrier and causing this systemic immune activation.

So we know that exosomes shift from Th2 to Th1 phenotype. It's like humoral immunity is antibody immunity. That's what mediates the allergic responses.

And then cell immunity is more Th1. We know that's a known effect of exosomes. By the way, he just got 5 billion IV one shot. And then we also perhaps restored some of the balance to his autonomic nervous system.

In life, we have cycles daily of yin and yang, up and down, hot and cold. And so your digestion, of course, requires a parasympathetic response, which is a craniosacral vagus nerve response.

Could have helped his sleep, his sex hormones, and also God knows why, but those veins seem to go away. Maybe the cells directly, as we'll see in future webinars, the cells of the veins and the vessels improved.

The topic of digestion is covered in a, I did like an hour video on digestion. If you want to watch that, it goes into all things poop, such as why it's brown, what's normal, yada, yada, yada.

It's an hour discussing scatology or the study of poop. And so you can find that at tinyurl.com. Looking above me is a schematic of what we got going here.

From the mouth to the anus, it's very complicated. In the mouth, we release a lot of digestive enzymes. Of course, it goes down the sort-soling tube to the stomach where the real boiler room is.

Hydrochloric acid pH of 2, that's going to do the chemical degradation of a lot, but not everything. Right after the stomach, as I talk about in this video, which you really should watch if you're interested, is the duodenum.

That's the car wash. That's where all the other major enzymes from the pancreas and the liver come in. The bile comes in. So for the next 20 feet or so, you got digestion and small intestine is largely sterile actually because the stomach acid kills the bacteria.

And on the other end, just before the large intestine, which is that up across down draping thing, it has a one way valve. So from stomach, to large intestine, it should be largely sterile.

If you look to the left of this lady in the cartoon, we see on the far left, there's a mucus barrier. So it's not just that single layer of cells protecting us.

There's also mucus, very important. Just like if you had a dried out nose, it would bleed easily, same principle. If we go too over to the colon, there's a double layer of mucus.

How the Gut Barrier Works

So there's bacteria that are facultative, they're friendly, and actually they're the ones that produce you know, most of the solid volume of the stool is actually bacteria as well as fiber.

Secondary layer of mucus is there, so we need to have bacteria. Nature pours the vacuum. If you have no bacteria, you're going to be in trouble. Something else will move in there.

So the famous phrase is one man's meat is another man's poison or let food be thy medicine. The fact of the matter is we're all very, very different in terms of how we handle food.

And so digestion from mouth to anus is complicated. It's both a barrier and it's also a permissive gateway to nutrition. It's got a neuroendocrine function.

In fact, before we developed the neocortex, we presumably, if you believe in evolution, just food processing machines. And some of these worms are like that.

So the actual brain of our intestines was before a higher order cortex. So that gut brain is a real thing, but it does communicate with our nervous system mainly, but not exclusively through the sympathetic, parasympathetic, right?

So if you're relaxed, you can digest. If you're stressed out, you get stomach cramps from eating and swimming, but also all these psychoactive substances are largely produced in the colon too, at least with the help of the colon, as we'll see.

It's an immunological thing, so you have to tolerate what's coming in, not overreact, but if there is something infectious or bad, you have to be able to marshal your forces and destroy it.

So it's also a microbiological attack mechanism, but yet, like I said, if you don't host you know, trillions of healthy bacteria, something worse will move in.

So looking to my left, we see this is an incredibly busy slide and just meant to show you that there's a lot going on immunologically. Good luck figuring that out.

What you should be able to figure out is do I have a problem? Let's listen to a quote by the character Morticia from the Adams family. And she allegedly said, normal is an illusion.

What's normal for the spider is chaos for the fly. So I think it's important. I love this one man band picture. And it's important to realize that your intestines, stomach, everything, it's very complicated.

You know, be careful what you wish for. There's nothing perfect. If you're having around one normal form bowel movement a day, you're doing great. You're killing it.

Malabsorption, if you've ever had it, you know what it is. It's called sprue. It just means, again, you're having this greasy, crampy, yellowy diarrhea.

There's no time to form. Your body's purging. Of course, you have a problem if you eat something, as do I. I forgot I have a tropical fruit allergy. which is very ironic living in Hawaii now, but you know, I don't die.

I don't go to anaphylaxis or wheezing, but if I have tropical fruit, then I will itch and I will have all the tummy ache stuff that we don't need to describe.

Remember once I took a whole 22 ounce shake of mango and it was like having a bowel prep. Remember what you're allergic to. Also, there is no problem if you eat and you don't consistently eating that food and that same preparation have a lot of gas, pain, constipation, diarrhea.

That would be food intolerance, which we'll get into a moment. Normally, if you have a big meal at Ruth Chris and a glass of wine, you're going to be drowsy.

I wouldn't call that brain fog or anything like that. If you have diabetes and you eat something very glycemic, your blood sugar can shoot up so much that you can go into a coma and die.

So having diabetes obviously needs to be ruled out. People with diabetes tend to pee a lot. But realize, of course, normal is a wide range. If you're listening to the subjects of what I'm saying, putting anything in your mouth is ambiguous.

It could be good. It could be bad, depending on how you react to it. So accept that throughout life, we're eating impure things. We have a low-level infection, of poisoning, of immune reactions, of overreactions, of cramps.

Our emotional state regulates also how we react. So this is normal. This is not anything you need to change your diet or see a doctor for. So just be grateful that the one-man band is working and playing on.

Let's look at the digestive problems that people do have that are real, the differential diagnosis medical term that just means what other things could this be.

Spru is kind of an onomatopoeia word and it kind of is what it is. They used to call it tropical sprue. If a person traveled to a foreign country, of course, you know, Montezuma is a very common one.

If you eat E. coli, that's not the E. coli you're used to. You can get an infection. Viruses like rotavirus, amoebas like giardia, parasites like different helminths and nematodes.

You got tropical sprue. Traveler's Diary is what it's called. We'll get a little bit into non-tropical sprue, which is celiac disease. That's gluten intolerance.

That's a real thing. Food allergies, like I told you with my mango lassi, real thing. Lactose intolerance could be real. A lot of Asian people have a relative deficiency in lactase, although it is an inducible enzyme like alcohol dehydrogenase.

Uh, but certainly people know and their friends know if they're lactose intolerant. Inflammatory bowel disease. Interesting. I sort of, you know, in this week's research kind of got the inkling that maybe inflammatory bowel disease, namely Crohn's and ulcerative colitis could be related to leaky gut.

But again, the whole. idea of leaky gut, it triggers some people. I remember there's a three minute video on YouTube from some pompous guy and he's saying leaky gut is not a thing.

And then he spent the other three minutes talking about why it's a thing. So there's a lot of cognitive distance going on here. Small intestinal bacterial overgrowth or SIBO is a real thing, but it's very rare.

As I said, the stomach acidifies, kills bacteria. And the one-way valve at the other end of the small intestine keeps stuff from regurgitating. So in most people, the small intestine is a relatively sterile environment.

When it's not, you can get overgrowth in the small intestines. That's a disaster. It can be tested for by breath tests for methane, hydrogen. They can also do a biopsy through endoscopy.

That's a bad disease, but it's not a common disease. IBS or irritable bowel syndrome, we'll talk about in the next slide. Food poisoning is a real thing.

Also very real are the drugs that people take. Opioids number one, constipation, slow gut motility. But anything that's psychoactive, antidepressants, antipsychotics, seizure medications, anxiolytics, they all have effects on gut motility.

And so you got to be really careful about that. Of course, anything thyroid also affects.

Digestive Disorders and Differential Diagnosis

Some people have weird diets of, you know, college kids maybe eat ramen and hot dogs. Or some people have laxative problems, a body with dysmorphic problems.

They feed themselves bad stuff. And if you look at the slide above me, you see that this is, I don't know if it's intentionally like that, but the gut biome is surrounded by a bunch of stuff that could be contributing or anyway, I think it kind of illustrates how ridiculous this whole idea of the gut biome is.

I think it's a. It's a cart that's gotten way out in front of the horse. And again, at the risk of being that guy from Mass Journal and saying the gut biome is not a thing and then explaining why it is a thing, there are a lot of people selling.

I remember I met the CEO of a now somewhat discredited firm who was testing the gut biome. Let me just say that it's absolutely true that we're supposed to host billions, trillions of bacteria of dozens of species and that a shift in that can cause illness.

But just like the H. pylori story 20 years ago, is that the cause of the disease or is that the result of the disease? It's very, very complicated and so I think it's kind of a joke that everybody wants to point to the gut biome as the new greatest thing to explain away human existence.

All right, so for those who remember Siren Live and the great Mike Myers character, his mother-in-law Linda Richmond, she used to get a little acclaimed that she would say, the Holy Roman Empire was neither Holy, no Roman, no one Empire, disgust amongst yourselves.

So that was cute. But if we look at irritable bowel syndrome, Same thing. Is that really a thing? Maybe it's not a

thing. Okay, is it a syndrome? No, it's basically a wastebasket like tummy ache or my head hurts.

Is it in the bowels? No, a lot of people say it's in the emotional state. It's a sympathetic, parasympathetic, could be an immune thing. Is it irritable?

Well, irritable implies a character flaw where you're overreacting. Maybe it's appropriately reacting. So, the idea that anybody with dysfunctional bowel movements and some cramps has irritable bowel syndrome is kind of an overly broad and therefore useless term.

yet it's used commonly. What is not overly broad is celiac disease or non-tropical sprue, aka gluten or severe gluten intolerance. If you have this HLA type, DQ2 or DQ8, remember HLA are the surface antigens on our mainly white blood cells, but all cells really, all nucleated cells.

These people tend to have more that can help you make the diagnosis. Also, be very careful. If you think you have gluten sensitivity, well, you really should know because sprue is not subtle.

I mean, you have a muffin or a roll and you have terrible diarrhea, you've probably got some gluten intolerance. It's only about 1% or 2% of the population.

But if you're off gluten, then the antibodies won't be spiked and it will be possibly an equivocal test. When you have celiac disease, truly, it's because the gluten, which is comprised of gliadin and glutenin, this is not easily broken down by the proteases in the early digestive system.

So wheat, rye, oats, and barley, not rice. have gluten and they can stimulate through a variety of mechanisms this terrible thing. What happens on the right, you can see above me these nice pillars, beautiful pillars of small intestine which are meant to increase the surface area for absorption are mowed down into little lumps.

That's how the doctor, if they need to, if the antibody testing, the genetic testing, the clinical history warrant it, They'll put a tube down, they'll biopsy in the small intestine, they'll see, oh yeah, you're digesting, you're destroying, your immune system is ganging up on your own small intestinal cells.

But the question is, is gluten toxic to all of us? There's a lot of group think thatism. There's a lot of, you walk down the grocery aisle compared with 60 years ago, it's a marketing tool like organic, non-GMO, gluten free, buzz, buzz, buzz.

Again, we're full of a lot of scat. Like people tell us stuff, we believe it, we ask ourselves, well, Come to think of it, I don't feel that good. I had that thing.

Maybe I am. So, you know, we face this a lot. But what is real is this guy, Alessio Fasano, he's a professor of pediatric gastroenterology at Mass General.

And, you know, he's very careful. I actually respect what he says. But he discovered, he and his team discovered a thing called zonulin. Zonulin is a protein released by the intestinal mucosa, which is key to open the gate.

It lets the tight junctions loosen. It lets stuff under that barrier into the interstitium. It's also present in the lung tissue, but mainly we're talking about the tight junctions of the intestines.

Interestingly, they took people with known celiac disease and they created an inhibitor of zonulin. called AT1001 and they do this test. You can see to my left there's a test and it's illustrating that the junctions can be tight.

less tight or loose. So because there's lactulose, which is a bigger molecule, it can't get through the tighter junctions. So anyway, long story short, if you check the urine of somebody who drinks a fixed amount of lactulose to mannitol, it should be a certain ratio.

If the junctions are super loose and letting big molecules through, that ratio changes. So doing this zonulin

inhibition, they showed they can abate the symptoms of celiac disease and keep those junctions from opening.

So even Fasano says that it might not be bad that the junctions open and zonulin opens them and we get gluten in there. That might not be bad for everyone.

So I think what that doctor that had all the degrees and the fancy books was trying to say is don't believe all the people on the internet. Again, beware of all the BS.

So if people say autism, depression, chronic fatigue, fatty liver, autoimmune disease are brought about by gluten sensitivity, they may be BSing you. But then on the other side of the mouth, they'll say, it's absolutely true that these things have gone up in incidents over the last two or three decades, and it might be related to leaky gut, which might be related to gluten.

And they're basically objecting to the messenger, not the message. And I think rightfully they're objecting to a lot of the hucksterism within this field.

You can't watch a YouTube video without having somebody pop up and say, I've solved it all. This is the problem with humankind, and it's leaky gut due to X, Y, or Z.

One of the fellows that came out of Australia invented this term called FODMAPS, and the way he invented it was really funny. He hid it like a Trojan horse in some other article that was in a throwaway journal.

FODMAPS is this cumbersome acronym for fermentable oligo-di- and monosaccharides and polyols. So he is able to create something out of nothing, His poop got published and is now a real meme.

Anyways, basically there are these small sugars, fructose, lactose, these can ferment. They can cause gas. And some people, they cause irritation. So when we talk about gluten sensitivity, there's confounding.

What is confounding? It means that the exposure and the outcome are related to some third thing. So if you think that teams with a quarterback named Brady win a lot of Super Bowls, it's because Brady is associated with the football team playing well and winning the championship.

It's not because there's anything special about Brady. Okay, so something in wheat could be causing this. Could be FODMAPs for some people. Could be gluten for more people.

It could be emulsifiers in some foods. Polysorbate is a common thing which will act like a surfactant detergent. It will melt the mucus both in the small and large intestine if it gets that far.

Another big one which we can't even talk about because it's such a broad topic is glyphosate. It's a simple molecule, round up, used to kill germinating plants, also to kill plants before harvest and desiccate them.

It's nearly ubiquitous, like all the California wines, all the foods. You know, I don't know if even the moniker of organic means anything. If anyone's checking it, again, it's like a marketing tool.

But the whole thing, just to briefly touch upon the GMO story, is that a lot of these crops have been genetically modified to be roundup ready. So they're more resistant when they need to be chewed as pesticide.

Glyphosate is probably not the worst thing in the world, but then again, attorney wouldn't drink it on live TV when offered a glass of it. So it's probably not the best thing either.

And the interesting thing is that it kills certain bacteria. Our mitochondria arguably are just bacteria, so it can kill our mitochondria.

Celiac Disease, Zonulin, and Leaky Gut Debate

But more importantly, in the large intestine, we can't make tryptophan, which is the basis of serotonin, that's the happy molecule, tyrosine, and phenylalanine, which is the basis of thyroid hormone.

So that could be Reversed tyrosine might be a thyroid. Anyway, phenylalanine is, I think, a precursor to neurotransmitter. But glyphosate poisons these good bacteria, and that could shift the gut biome.

Finally, some people think that the ratio of omega-6 to omega-3 is important. Omega-6 more inflammatory, omega-3 less inflammatory. I don't know if this is a robust theory.

It's commonly bandied about. When you feed corn to fish or to animals, they have more omega-6. These fatty acids are not made by us. Allegedly, that ratio is more inflammatory.

And finally, we have this huge bugaboo of lectins. This guy on my YouTube feed always advertises to me, Dr. Gundry cares about you, cares about me. So he's telling me that there's stuff in food that is called lectins and it explains everything.

And I have to probably believe him less than even Richard's photos. So what is a lectin? Lectin is a very poorly created and defined and useless term for any protein that binds to a carbohydrate.

That is pretty dumb. But anyway, it's functionally used. So we see lectins above me. Some of them are like the toxin ricin, which can be mailed and kill people.

And then there's amyloid, which is a normal part of our system. So anything that binds to a carb that is a protein is a lectin. So it's a gross oversimplification to say lectins are killing us and causing all our disease.

Certainly, even Gundry, when put on the spot, will admit that if you soak and or boil beans, then the level of these poisonous lectins goes to zero, basically.

So raw foodism is not everything is cracked up to be, long story short. There are a lot of lectins, they're not all poison, and they have many different roles.

So I think this explanation is way too simplistic. When we talk about food sensitivities, there's something called the LCAT, which is the Antigen Leucocyte Antibody Test.

Antigen Leucocyte Antibody Test. It's a fancy way of saying that if you give these people blood and $200 to $1,200, they can run your blood in tiny little wells and say, do your cells change?

based on this food, this food, this food, this food, this toxin, this toxin. I mean, it works. So basically what you see above me is a neutrophil. These are the most common cells of the immune system, of the blood system.

And if they go from big bag to small bag, it's because they've secreted their contents. And so the inference is, which is completely fact-based and true, is that somehow they were triggered.

They were triggered by an antibody response. Your body is primed to react to avocados or whatever. So it makes sense. And the way it's done is through a culture model.

You don't need to know all this, but basically the electrocompetence of the white blood cells gets changed if they're smaller. People used to say, oh, LCAT is BS.

It doesn't work. It's pseudoscience. And then they published a couple of studies and they show, well, maybe not total pseudoscience. This study by Di Stefano in a clinical nutrition journal basically shows that if you take people who have self-proclaimed gluten sensitivity that you give them a placebo or gluten, yeah, usually most of the time they're right.

The gluten, even if they don't know which one is which, will cause problems. And furthermore, the ALCAT test will

correlate with that. Another test showed that just generally speaking, I'm not saying you should spend money on this, but if you're really kind of oblivious as most of us are as to which foods are good for us, and remember, this is not for all time, all the time.

For me, durian, star fruit, kiwi is going to be toxic for me for all time probably, unless I take a desensitization program, meaning I'll have diarrhea and itchiness.

But for you, if you want to send in a couple hundred bucks and some blood, they can test you and they'll give you this. Green is okay for now. Now remember, in the future you might develop one of these sensitivities, but yellow is okay, orange not so good, and then avocado for this person is bad at this time.

by this test. But we find that all the people screaming, well, this is pseudoscience, this is BS. In the British Medical Journal of Open Gastroenterology, they did a study, and they just took people, tested them, and asked them to avoid these foods.

And for what it's worth, their symptoms got better. This may be a helpful adjunct to you if you are unsure whether you have a problem. Going back to our poor digestive system, the one man ban, that's supposed to keep everything out, keep everything in, host the bacteria, kill the bacteria, keep us happy, you know, anyway, it's a hard working thing.

If you stop all wheeze, just because you're not sure if it's FODMAPs or Roundup or gluten or what, Be careful because you're losing a lot of the nutrients.

They enrich flour after the milling and they put folate and vitamin B. There's also natural divalent cations like magnesium, calcium, iron, and you don't get fiber.

Fiber is needed for the good bacteria to eat to create poisons for the bad bacteria. So that'll adjust your microbiome as well. So, you know, we have a lot more questions than answers.

We have a lot more heat than light. But just like in our political season, you know, there is a lot of scat rolling around. I like this quote by Mr. Rod Serling who said, there's nothing in the dark that isn't there when the lights are on.

So it's just a matter of perspective, whether we choose to see it. And what's frightening to us is because we're wrapped up in the whole emotionality of it.

But truth is truth and it'll pass through phases. Eventually, you know, doctors who recommend camels will not be worshipped as mavens. And so you have to be careful what you let into your mind and what you let into your body because both can be toxic to you.

and come out smelling not so good. Whether Richard did anything to Photoshop this, I don't know. I think it speaks to a larger point as the man looks younger.

So could it be that aging itself is an accumulation of immune dysfunction over time? This is not the latest version of my presentation. There's actually another slide that doesn't show up here.

But basically, I want to point you to a couple of videos. If you're really interested, watch my video. Again, that's the park poop one. Watch Alessio Fasano.

There's one that's tagged. Alessio Fasano is tagged Mass General. And there's one video on YouTube called Beyond Leaky Gut. It's like an hour and 15 minutes of really deep dive into the actual bacteria in the large intestine.

All this other stuff that people are promulgating and selling and telling you this explains everything, this is how you can get healthy, got health, got health.

I'm not saying it's not real, but it's not real, or it's not really that simple. Next week we're going to do stasis dermatitis. And again, that'll be a short little presentation.

Again, translational medicine. Gave a lady a thing, her legs got better, the stasis dermatitis went away. Hey, what causes stasis dermatitis? That's how these webinars are born.

So with that, I'd like to turn it over, put my headphones in and see if there's any questions from people. Very, very controversial topic, but one that I think is gonna be a little clearer as the decades go by.

All right, any questions? Let me see if I can find my… chat. Does any of that make sense? I think you probably have more questions. Again, I would watch that video on digestion.

It's super detailed. There's more in that that I've forgotten than I can even remember right now about how complicated digestion is. Again, Alessio Fasano, the father of the leaky gut theory, he makes a great point, which is that if you look at the last 20, 30 years, the incidence of autism, way up.

Incidence of inflammatory bowel disease, way up. Incidents of other things autoimmune conditions way up. So he Challenges the idea that's because our environment is so clean The hygiene hypothesis is that we have a cleaner environment.

We're living longer. The body doesn't fight the normal hostile pathogen so that's why we're succumbing to autoimmunity and he says no no maybe it's something in the gut that's allowing all these things to come in and create autoimmunity and that is a good maybe not competing theory but possibly true.

I think that autoimmunity is a very complicated subject and there is a strong association, according to him, with zonulin and things like scleroderma.

So Richard may have had a variant of zonulin that was too robust and too active. So that may have been causing, in my translational way of thinking, his problem.

I find it hard to believe that he's BSing me and that he wants to fly out to Hawaii and spend money and quarantine just for no reason. It just seems like a lot of malingering for no great benefit.

Somebody asks on the chat, did Richard have IV once? Yes, Colleen. He had just 5 billion in one time with his two friends. Harvey asks, how is your exome treatment different from back, shoulder, knees, et cetera, different from leaky gut treatment?

I mean, it's just a matter of location. We put it where it's needed. If you have back pain, then probably I'm putting it in your back.

Food Sensitivities, Microbiome, and Probiotics

I'm sure it didn't… You know, I did actually upon first glance, I just accepted the reality with which I was given. I didn't notice he didn't show me the veins, the hands.

I didn't think his face was swollen because I'd never met him. So he got five billion IV one time. Carolyn asks, where can I find these recordings that you're referring to?

They're on YouTube. Number one is I can pull them up if you like. Any other questions? Yeah, digest. Anybody wants to say anything? Yeah, but I just could not even believe these pictures.

I mean, I think clearly Richard had the biggest improvement of anyone that I've ever seen and looked so much younger. I'm like, what is going on here?

And the only answer, or the best answer, shall I say, that I could comment was he must have had a leaky gut. And

interestingly, I think the first time, not all the time, Alessio is the guy who I thought was pompous.

Actually, he ended up being the guy I respect. I just realized from the YouTube search that it's the same guy. Let me see if I can share my screen with you.

There it is. Where do you do injections into RB? Oh, RS. RS. Yeah. Again, 5 billion IV. It just had a systemic effect. But the one thing I didn't mention is the first time I did IV exosomes, I had like a, excuse me for saying this, but a very long, maybe 15 inch bowel movement.

And then an hour later, I had another one. So I had to Google how much poop is there in a person? And there's a lot of people saying that you have 20 pounds of poop.

I don't think that's true at all, but it could be true-ish. I mean, I've done endoscopy as a resident and you look in there, it's clean as a whistle after a bowel prep.

There's not like this imaginary caked on, last days of Pompeii, you know, mud, it's just clean as a whistle. But there's a lot of people saying you have, you know, many pounds of poop in you.

But for some reason, I don't know where the junctions tightened up stuff in the crevices was a lot of stuff that got squeezed out like a dirty sponge.

I don't know. That was hasn't happened since, but it did happen. I just thought. That's a weird phenomenon, like there's no way I ate enough to have two gigantic bowel movements like that an hour apart.

So I do think maybe if you have some bowel problems, it might be worth a try. I don't know what's going on there. Could be a lot of things at once going on.

So this is the one with the fancy degrees, and I don't know if that's a blast of Beethoven, but he's saying in the first 30 seconds that leaky gut is not the cause of everything.

which is really funny. And then there's another lecture, which is by the Mass General Hospital, where he actually presents a pretty cogent, and this guy is, you know, he's reasonable.

Here it is. Nutrition, microbe, compositional leaky gut, clinical and therapeutic consequences. It's a little more balanced appraisal, a challenge to the hygiene hypothesis.

And, you know, he kind of lets you make the leap from all these chronic weird inflammatory conditions, including autism and inflammatory bowel disease and autoimmunity.

And he kind of like, it's more effective because he lets you connect the dots. He doesn't force it down your throat, so to speak, like Dr. Gundry. And then if you Google beyond leaky gut, This gentleman who works for a lab, Thomas Fabian, obviously knows this stuff.

He goes about an hour and 10 minutes into the ecology of the large intestine. The people who are buying and selling the gut biome theory, testing and treatment, I think they are not that knowledgeable about how complicated, or at least they're obfuscating how complicated.

To answer a Harvey O. H. G.' 's question, What do you think of probiotics? Probiotics are great in principle, probably in practice. Then again, you know, they have to be protected like I make a supplement I protect from stomach acid.

It doesn't get digested easily by the first pass. So they have to be kind of like protected from the stomach and then released somewhere distally. And remember, The small intestine is sterile.

You don't really want bacteria, nor can you find or get reliably bacteria in the small intestine. So if you're talking

about probiotics for the large intestine, you're talking about fecal transplant, the very notion of which is perhaps disturbing to some.

But there is no doubt that it's a wild world down there in the last six feet of your GI tract. And there's a lot going on there and shifts in your diet.

and how much glyphosate you're eating, what other critters got invited to the party, all can have a huge impact. But remember, the unhealthy imbalance comes from you as well.

There are host factors, just like as was the case with the H. pylori nonsense. So can you get probiotics down there? Maybe. In the vagina, no problem.

Lactobacillus in the vagina, super good. But are people really down for a fecal transplant? You know, if you had drug-resistant clostridium difficile, absolutely.

But for the majority of people, if you take some kind of probiotic, it probably is not going to make it to the large intestine, and I'm not so sure that that works.

Again, I think the whole idea of creating an ecosystem in your large intestine by swallowing a pill is super suspect. How does candida albicans relate to leaky gut?

Again, same answer, candida albicans, super bad. Candida albicans omnipresence. We all have it all over inside and out. It overgrows when our immune system is dysfunctional or shut down or distracted.

So is it the Candida that's causing the problem or is it our immune T cell dysfunction that's causing the problem? It's not ever that simple. You know, people get Candida in the mouth, it's thrush.

People with HIV AIDS can get it in the colon. And you can test it in one of these LCAT tests. Oh, I'm susceptible to Canada. Why are you susceptible to Canada?

Because you're fighting an ongoing infection. It's never, ever that simple. So good questions. Any other questions? I would urge you to watch my video on digestion or constipation.

I was reminded that birds do not urinate. The reason why is basically birds get rid of their urea. I had gout a few weeks ago. They get rid of their urea through Poop so that's why you get the white in addition to the brown yellow in the bird poop because they don't pee birds don't pee So there is a plethora of knowledge here that I can remember But it will explain to you why poop is brown and all the different amazing things that happen when you digest Okay, so that is on YouTube it's my 45th podcast and you can find it by typing in tiny URL slash part poop Question from Harvey, does a person have to kill the yeast with something like Nystatin first?

No, I don't think so. Like I said, You're always hosting yeast. It's everywhere, on your skin, it's in your nose, it's in your bowel. If you have an overwhelming symptomatic candidile infection, it's in your blood, that's a different story.

I mean, if you are having thrush, different story, then yeah, you have to treat it with an azole or antifungal. Again, I think the greatest instruction comes from a lot of these.

You know, as residents, we used to treat people with antibiotics.

Audience Q&A and Closing Remarks

And the first thing on the differential diagnosis was pseudomembranous entocollitis, which is an overgrowth of this bad bacteria called pseudomonas. So people with fever, diarrhea, leukocytosis, it's because we're giving them an imbalance by hitting them with antibiotics.

So again, if a person is healthy, then they're not gonna host these bad ideas, these bad bacteria, this imbalance.

So I come back to the idea that, you know, I was talking to a 72-year-old shaman yesterday, and he is on no meds, he has no chronic infections, he has a little tweak in his knee, which I treat with exosomes, but if you're 72 and you're on no meds, you don't see the doctor, you've never been hospitalized, that's the very definition of healthy aging, and we get there by being in balance.

And by trusting Gundry and trusting the crazy gut biome people and by taking antibiotics and by traveling to this and that, we get out of balance because we put all our crazy eggs in one crazy basket and we come up with crazy ideas.

So, you know, the body is meant to be in balance, fighting infection, hosting good bacteria. You got to be careful what you wish for, you know. You take antifungals, maybe something worse comes in, you know.

Okay, good questions. Any other questions? All righty then. Next week we'll talk, it's gonna be a little briefer, a couple of cases of stasis dermatitis, but again, a thing that I didn't really even know existed until I saw it go away.

So, translational medicine at its finest. Everybody, thanks a lot to Dr. Ed Park doing a webinar on leaky gut, which I do think is a thing. and I hope it piques your curiosity to learn more and maybe trust less.

Everybody, see you next week. Thank you very much. Thanks for tuning into the Recharged Biomedical Podcast. If today's episode got you thinking, you'll love my book, Exosomes, Songs of Healing.

It's packed with cool analogies, full color illustrations, and all the science you'll need to understand how exosomes are changing the game in aging and regenerative medicine.

You can grab it in paperback, ebook, or audiobook, whatever works for you. Now head over to www.rechargebiomechanical.com to check it out. And don't forget to like and subscribe so you never miss another episode.

See you next time.