

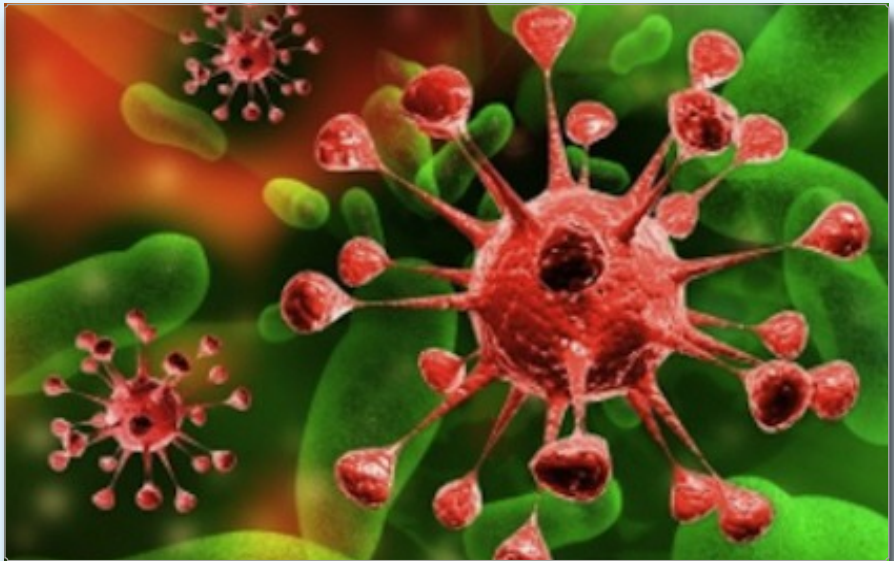
Cultivating The Right Bacteria

"Cultivating the right probiotics is paramount for any chronic unresponsive disease or any longevity wellness plan."

We have approximately 30,000 genes in our body, but the microbiome in and around our body contain almost a million genes. Genes can turn on and off inflammation as well as regulate our immune system. So pain, many of the "itises", autoimmunity, allergy, even cancer can be affected by, even initiated by, the microorganisms in our body.

Viewers may remember we shared a microbiologist's experience with diabetes and hypertension. Just by changing his microbiome and breaking the hyperinsulinism cycle he was able to lose 100 pounds in 23 weeks and to see a remission in both diabetes and hypertension. He then injected his fecal samples into mice genetically bred to be lean. Interestingly they became obese and displayed blood sugar issues as well.

One of the research teams shared the possibility that the "mammalian immune system which seems to be designed to control microorganisms is in fact controlled by microorganisms."



Dr. Vasquez has said for years that one of the ways we can enhance T regulatory cells which down regulate autoimmunity can be accomplished by healing the gut and providing healthy probiotics. Optimizing digestive and bowel health is one of the foundational pillars of health. Cultivating the right probiotics is paramount for any chronic unresponsive disease or any longevity wellness plan.

But where do we start? Current thought: replete with as many different strains and with as many numbers as possible in between meals so that the HCL and bile in the GI tract won't kill them. Also re-

frigerate the bottles between doses to make sure the bacteria don't die off. But on the flip side, experts are also saying numbers may not be as important as the viability of the strain.

The late, Dr. Klem Shahani, spent his whole life studying probiotics. He believed that taking probiotics with food was acceptable, as the HCL would kill off the weaker strains of bacteria before they could multiply and take up space. Dr. Shahani claimed bacteria double in number every 2 hours. For example, a 100 mg probiotic mass would reach 10 grams in only 20 hours. That means the envi-

ronment of the bowel in terms of pH, enzymes, food and lodging, etc is the most important part of the equation rather than sheer numbers.

Do the bacteria we want to cultivate have enough food to reproduce? Bacteria live in mucus. Is there sufficient healthy mucus to thrive? Are the bacteria we are supplementing vibrant and alive to start with?

Twenty-five years ago the thought was all probiotics had to be refrigerated and only the products with the 100s of millions were any good.

When I started working with Biotics I didn't have a firm understanding of their ethics and microbiology department. So I sent a bottle of Lactozyme, which had around 5 million lactobacilli, to Dr. Lucretta Dowell a friend of mine who was a parasitologist to test it. Interestingly, Dr. Dowell had been an army doc who worked with G.I.'s in the Philippines. I asked her if the product was any good because of the low numbers. She called me back about a week later and said it was one of the best products she had ever tested. "One tablet on a Petri dish and the next morning the whole plate was exploded with good bacteria."

Dr. Dowell hated the refrigerated products; she said "the cold made the bugs inactive for days. By the time they woke up they were already in the septic field." She loved Biotics' Lactozyme because it was so alive. Here's another example of the viability of probiotics from Biotics Research even when exposed to heat.

As part of Biotics ongoing internal quality control they intentionally sent an unopened bottle of BioDophilus-FOS from Texas to Arizona and back again in the middle of summer. The combination of hot UPS trucks

and temperatures over 110 degrees should have denatured any delicate probiotic. Once the sample arrived in Texas, it was put on a shelf and sat for a year. When retested, the product was viable and exceeded label claim.

Biotics fascination with probiotics began 30 years ago when they bought a microbiology lab to make the enzyme superoxide dismutase. Because of their in-house lab, they culture sprouts and enzymes in ways most companies haven't even thought about. Their in-house lab also allows them to maintain quality control on both raw materials and finished product. There is no sense in putting dead cultures in a capsule and expecting it will reproduce living bacteria.

Unfortunately some companies don't have the capacity to know what percentage of the bacteria they purchase is dead or alive. They rely on their raw material supplier's certificate of analysis.

Biotics makes three different probiotics: Lactozyme, BioDophilus-FOS in capsules or powder and BioDoph-7 Plus.

As a side note: most of the strains Biotics uses in their probiotics are resistant to both acid and bile salts. You can see a link below with specifics on the products, dosing and ideas for cultivating the healthy environment for bacteria to proliferate.

We are just beginning to understand the depth of these microorganisms. My earlier quote suggesting the possibility that "the mammalian immune system which seems to be designed to control microorganisms is in fact controlled by microorganisms." It may be just a possibility, but it seems more credible every day.

Thanks for reading this week's edition. I'll see you next Tuesday.