

Blood Chemistry: Part 1

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I hope you have taken the time to watch the online complimentary blood chemistry seminar that we have provided. Dr. Peterson discussed the tests from his comprehensive metabolic panel, what they mean, and the nutrients that support the physiology around each test. As you click to see his presentation, you'll see the seminar broken into 3 sections. The first section centers around tests involved with blood sugar, the second, inflammation, and the focus on the third session is the microbiome.

With 70% of Americans having at least one chronic illness, the information in this seminar is a must. Patients are looking for someone to help them detect and correct physiological imbalances before aberrant physiology turns to advanced disease. And the beauty of this seminar is you can stop the presentation, think about the slides and which patients would benefit. Some of the introductory material is just that... introductory. So, if you don't remember your course material on blood chemistry,



don't be intimidated. However, not to brag about him, but after being in this field for over 40 years, he has accumulated a plethora of clinical pearls that you can apply today. I thought it would be fun to highlight a few of the clinical pearls in the blood sugar module, session one.

But before I do, I wanted to share a pearl I learned from Jeff Bland over 25 years ago. Jeff Bland, as you old timers remember, would overwhelm us with his knowledge of biochemical pathways, particularly as they applied to detoxification. He shared that his dad had blood sugar problems, and no matter what he did, he couldn't get the

levels down. He finally suggested his dad get tested for food sensitivities, and once he removed the foods that contributed to systemic inflammation, his blood sugar returned to normal.

Let me share a personal story while consulting a physician on a stubborn case. His female patient was ridden with chronic pain, had unstable blood sugar, and despite chiropractic care, was not recovering as fast as other patients under his care. I spent over an hour studying her chemistry and writing a report suggesting supplements and dietary changes. I also emphasized that she should get a blood spot food

sensitivity test from KBMO diagnostics to identify foods that induce inflammation. After testing, she removed the foods that contributed to systemic inflammation. He called about a month later to tell me his patient thought he was a miracle worker because her blood sugar was normal, and she was completely out of pain. What was interesting was that she never ordered the supplements I suggested.

I share these two examples because food affects our microbiome, which affects our blood sugar, which can then affect our level of inflammation.

Dr. Peterson shared this chart. Note the double arrows between each of the outer categories. Just as the microbiome affects blood sugar, blood sugar affects our microbiome. Each of these categories: stealth infections, stress, toxins, pH, nutrient deficiencies, lifestyle/diet, circadian rhythms, microbiome, blood sugar, and hormonal imbalances are all interconnected. Individually, each of these categories affect our level of systemic inflammation, but when dysfunctional, their collective effect intensifies. And as the diagram illustrates, systemic inflammation reduces our mitochondrial performance. A byproduct of mitochondrial dysfunction is an increase in free radicals, particularly the reactive oxygen species which can turn on or off genes. And finally, epigenetic changes can amplify inflammation. Dr. Peterson teaches us to look at the whole picture.

Here's a few other pearls centered around Berberine. Dr. Peterson shared this quote, "Berberine scores over Metformin as an anti-diabetic by certain pharmacological mechanisms like alpha glucosidase, reductase inhibition, release of GLP-1, modification of gut microbiota, inhibition of enzyme dipeptidyl peptidase 4, and as an insulin mimic. Thus, it can be concluded that Berberine can be superior to Metformin in

management of diabetes and its prevention and in prevention of its complications."

Did you catch that one mechanism... Berberine and the increase of GLP-1? GLP-1 is the focus of Ozempic, Wegovy, and drugs designed to induce satiety without the side effects. We've heard that Berberine activates the AMPK pathway as an alternative energy source. But he also shared another study that Berberine has anti-adipogenic, anti-hyperlipidemic, anti-inflammatory, and antioxidant properties. Remember our graph?

He shared another study that Berberine has possible therapeutic value on chronic kidney disease, to ameliorate chronic kidney disease by supporting the microbiome through the gut-kidney axis. Normally, his Berberine dose is 1-2 tid depending on the patient's weight. However, he suggests higher short term doses for resistive cases.

Berberine breaks down the biofilms many dysbiotic organisms secrete. In that case, he doses to "fire in the hole" short term. A corny way to say dose until you feel some heat as you eliminate. He also utilizes GlucoBalance, 2 tid to supply needed vitamins and minerals for co-factor support. Lipoic acid, 1 tid, to chelate metals and enhance mitochondrial health. Additional supplements can be added depending on the patient's age, diet, and progression of the disease.

So, I encourage you to grab some lunch and soak up some additional clinical insights on blood chemistry. It could change the whole focus of your practice or just help you expand the wellness side of your practice.

Thanks for watching. I look forward to being with you again next Tuesday.