

Causes of Inflammation & Cellular Dysfunction

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We have over 20,000 genes in our cells that affect every aspect of our health. If we turn on one gene we activate a process that causes inflammation, turn on another gene and we get cancer. Turn off a gene and we stop cancer. As we turn genes on and off we affect the cytokines or messengers that talk to our immune system.

Now we are learning that the amount of additional genetic material existing in microbes and fungus is even more staggering than we knew. What we used to call bacterial flora, is now called human microbiota or human microbiome. The microbiome also includes the microbial cells on the surface and deep layers of the skin, saliva, the mucosa of the mouth, the conjunctiva and of course the majority being in the gastrointestinal tract.

The sheer number of the microbiome cells is mind blowing. Scientists are estimating the ratio of these microbial cells to the cells in our body could be 10-1. But the known number of genes associated with the human microbiome is close to a million. What an amazing concept that "beyond the 20,000 genes in our



cells, we have an additional million genes from microbiome that affect the chemical signaling in our body and have a profound effect on the way our immune and inflammatory systems work."

What are some of the things that directly or indirectly affect the genes either in our body or in microbiome? That's the purpose of Dr. Vasquez's webinar titled "Functional Inflammation Protocol: Past, Present, and Future." The term inflammology refers to the study of inflammation and the functional ways to treat the underlying causes.

For those of you who are familiar with Dr. Vasquez you will be refreshed by his summary and specific product applications. For those of you who have never heard his presentations, fasten your seat belt and get the pause button ready because he moves very quickly.

One thing you will appreciate is his systematized approach to organize potential causes of inflammation and cellular dysfunction. Think about it, if a patient comes in with rheumatoid arthritis we know they can be affected by: dysbiosis, toxic metal exposure, smoldering or hidden infections, leaky gut, vitamin /mineral deficiency, essential

fatty acid imbalance, a toxin, a parasite, an over-oxidized metabolism, food sensitivities, mitochondrial dysfunction, excess cortisol, not enough cortisol, a dysregulated immune system, etc.

Dr. Vasquez has two acronyms that I find extremely helpful as I sort through all the potential issues.

The first is F.I.N.D.S.E.X., FIND SEX. That's easy to remember.

F = Stands for food and the basic nutrients needed to support health.

I = Stands for infection particularly dysbiosis.

N = Reminds you to address nutritional immunomodulation, we'll come back to that one later.

D = Are there dysfunctional mitochondria?

S = Is the patient sleeping?
How are their stress levels?
Are they sweating as in exercise?

E = Is there endocrine or hormonal dysfunction?

X = What is the level of xenobiotics or toxin exposure?

In his postgraduate lectures, he spends an entire day going through these in detail so you are just getting a thumbnail sketch but I thought the acronym might help you organize your treatment protocols. Obviously you won't address all these on the first visit. But it's nice to have a guide or checklist as you look for clues for your patient's ill health.

Let's go back to the "N" in F.I.N.D.S.E.X., nutritional immunomodulation. Modulate refers to the ability to turn up or down a process. Research shows that we can cool down or restore immune competence by feeding the body nutrients needed to support healthy T regulator cells. These are the immune cells that regulate immune

function, by turning down or by balancing immune system over-activation.

His acronym for this is MI. P. L. A. I. D. F. I. G. S., MY PLAID FIGS.

MI =Mitochondrial Support

P =Probiotics

L =Lipoic Acid

A = Vitamin A

I = Infection/Dysbiosis Clearance

D = Vitamin D

F = Fatty acids: EPA, DHA and GLA

I = IL-6 Reduction: to create overall anti-inflammatory milieu for Th0 maturation.

G =Green Tea

S = Sodium Restriction

Some of the nutritional recommendations are overlapped in the food section of the FINDSEX acronym so you will see a little overlap.

Can you sense that I am really encouraging you to watch his webinar? This is the introduction to the introduction. But I want to leave you with the profound realization that we have an interdependence on the organisms in our gut. We are literally feeding and breeding the microbiota in our gut by what we eat, how we sleep, the emotions we experience, the toxins we are exposed to and more.

Learning to articulate these processes in your own language is a critical step to motivate patients to eat healthier foods and stay connected to your treatment programs. And staying connected means getting their health back.

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