



Wellness Minute

Health Information You Can Use On Your Path To Wellness



Support Your T-Regs

“Did you know death from viral pandemic is primarily because our body mounts a last-ditch effort to save us and cranks up our immune system creating what researchers call a cytokine storm?”

Did you know death from viral pandemic is primarily because our body mounts a last-ditch effort to save us and cranks up our immune system creating what researchers call “a cytokine storm?” It is often our own immune system that kills.

Fortunately, our bodies have a natural mechanism to shut off or down regulate our immune system once the anti-microbial battle is won. These amazing cells are called T-Regulatory Cells or T-Regs. In an odd way T-regulatory cells or T-Regs are one of the most powerful forces in our body. Because the main function of the T- Regs is to stop or suppress our own immune system from killing us, because of inflammation and tissue destruction. So, whether we are talking about a cytokine

storm from viral infections, immune dysregulation from vaccines or autoimmunity, T-Regs are essential.

Autoimmune disease is considered the third leading cause of death, but some researchers consider type II diabetes, many forms of vascular disease, and some cancers autoimmune conditions as well. Many researchers believe we are all marching toward autoimmunity due to the toxicity of our planet and as a natural part of aging. Which is one more reason to pay attention and support T-Reg cells.

So, let's look at how we can take care of our T- regulatory cells or T-Regs. I am going to get a little technical for a minute,

but don't worry, we will make it practical. White blood cells are broken into two basic categories: the innate immune system cells and the adaptive immune system cells. Innate cells include mast cells, natural killer cells, monocytes, macrophages, dendritic cells, neutrophils, eosinophils, and basophils. The adaptive or acquired system has a group of cells called T cells or T lymphocytes which are a subset of lymphocytes. T lymphocytes are produced in the bone marrow and then migrate and mature in the thymus.

Newer research suggests that a significant number of undifferentiated T cells migrate to the gut. Undifferentiated cells are kind of a fancy way of saying they are easily changed

This is a transcript from a “video magazine” we send out each week called the Wellness Minute. If you're not getting our Wellness Minute videos each week, sign up at the front desk.

or modified by their environment. These undifferentiated cells are programmed by the chemical messengers in the gut called cytokines of the gut to either become T regulatory cells (T-Regs) or pro-inflammatory T cells like Th17. T-regulatory cells regulate the amount of inflammation and ultimately will assist or down regulate our immune system.

By the way, the old name for T regulatory cells was suppressor T cells. That's what these cells do; they suppress the immune system when it becomes overactive. This cell programming process takes place in the mucosal lining of the gut. A healthy gut means healthy programming. Once programmed, these T cells migrate throughout the body and are responsible for creating inflammation and tissue damage via Th17 cells or suppressing inflammation via the T-Reg cells.

Let me say that a little differently because it's really important. T-regulatory cells or T-Regs dampen immune responses, and they are an active part in the prevention and suppression of autoimmune diseases. They are the cells that stop a cytokine storm. Th17 cells are active in the promotion of autoimmunity and tissue destruction. The goal then is to enhance the performance of T-Regs and dampen Th17 expression.

How do we avoid Th17 expression? First, we want to make sure we are not deficient in vitamins A and D. Also, we want to reduce dysbiosis or obesity. Dysbiosis and obesity are commonly understood as proinflammatory conditions. Interestingly, both obesity and diabetes have been major variables for COVID infections and mortality. Most people don't realize adipose tissue is a precipitator of another chemical messenger called IL-6 which is pro-

inflammatory. So, obesity is a pro-inflammatory marker.

How do we support our T-Reg cells? As I mentioned, we want to make sure we have adequate levels of vitamin D. Vitamin D down regulates the pro-inflammatory cytokine IL-6. Remember, as IL-6 goes up, so does Th17. The balance of T-Regs and Th17 is determined in part by the amount of IL-6. A deficiency of vitamin D will cause IL-6 to increase; thereby decreasing T-Reg cells.

Vitamin A is also essential. Several studies show significant increases in T-Regs with vitamin A supplementation. This is the pre-formed vitamin A, not beta carotene.

A healthy gut is the next step, so that means an anti-inflammatory diet, the right fatty acids, and probiotics. We also want to add nutrients that lower inflammation by inhibiting NF-kappa B. We've talked about N-F- Kappa B in the past. It's like an amplifier for pain and inflammation. We need it for healthy physiology, but if it gets cranked up or over expressed, it makes everything worse. Besides Vitamins D and A, nutrients that keep N-F- Kappa B in balance are green tea, selenium, zinc, vitamin E, to name a few.

I think you can see that prevention at this level has profound side effects, but they are the positive side effects that will not only prolong life, but will enable us to enjoy the life we have, and that's what I call "true" prevention. Talk to your wellness professional about T regulatory cells and how they affect your immune system, and ask about supplements that will enhance T-Regs, build your immune system, and help keep your defenses strong.