

Vitamin D Part 3

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Why would you want to strengthen your body's barrier defense system? Well, if we support the body's barrier defense system we could block or reduce viruses from hijacking our immune system and replicating. The barrier defense system refers to our skin, mucosa surrounding the gut, vaginal and respiratory tract. It also includes the underlying immune cells that protect these surfaces like Secretory IgA, various antimicrobial peptides, lysosomes and approximately 40 intracellular junction proteins. Finally, the barrier defense system includes the underlying intradermal and submucosal immune cells.

The most well-known are the dendritic cells that communicate to other components of the immune system to either attack or tolerate what they are sensing. Guess which nutrient has a major effect on all these barrier functions? If you said vitamin D, you are correct. Dr. Alex Vasquez articulates 4 ways we can systematically prevent and limit viruses. The first way 1) The barrier



defense system. You can see a link to a stellar webinar that Dr. Vasquez presented on barrier function and vitamin D to the right. Three other areas Dr. Vasquez discusses to prevent viral overload are:

- 2) Inhibiting factors that encourage the replication of viruses.
- 3) Supporting and occasionally stimulating the immune defense system of the body
- 4) supporting intracellular system and whole-body health to optimize immune responses and limit viral damage.

Interestingly, Vitamin D supports all four categories. Here's a fascinating study

comparing Vitamin D, COVID, hospitalization and the ICU. Published in the Journal of Clinical Endocrinology and Metabolism, June 17, 2021. 838 patients hospitalized with severe Covid 19 were included in the final analysis. 447 received vitamin D while 391 did not initially receive vitamin D; of those 391 initially untreated patients, 53 of them were eventually given vitamin D and were analyzed separately. Patients were given Vitamin D as semi activated 25ohD; dosage was "532 ug on day one plus 266ug on day 3, 7, 15, and 30". This comes out to about 68,000 IU on day one and about 34,000

each of the other 4 dosage days.

The mean baseline serum 25 hydroxy vitamin D level of patients entering the hospital was 13 ng/mL. This shows a widespread deficiency of vitamin D. When patients were given Vitamin D, ICU utilization was reduced from 21% to 4.7%, a reduction of 87%. This same group of hospitalized patients experienced a reduction in mortality from 15.9% to 4.7%, which is a 79% reduction in death.

These are staggering numbers that have profound effects. As I mentioned earlier vitamin D supports multiple mechanisms. It strengthens barrier defenses, reduces viral replication, reduces viral load and transmission/shedding, reduces excessive inflammatory response, cytokine storm, promotes immunotolerance, reduces acute lung injury (ALI) and acute respiratory distress syndrome (ARDS), enhances immune response, reduces collateral damage, protects mitochondria. As a normal, natural and necessary component of human physiology, vitamin D is safer than all other drugs.

Let me shift gears to another subject that is killing women every year, breast cancer. Susan Wadia-Ellis PhD is the author of "Busting Breast Cancer: Five Simple Steps to Keep Breast Cancer Out of Your Body". Susan made this dramatic statement in her book, "leading vitamin D researchers believe that by raising blood levels to 60 ng/ml we could see at least 80% fewer breast cancer diagnosis each year."

This again is a stunning statement and yet not one news network mentions prevention at this level. She shared a great resource in her book, Grass Roots Nutrient Research Institute which provides a vitamin D calculator on her website to help determine dosage levels. The dosage levels are based on weight, serum vitamin D levels and current vitamin D intakes. It's a fun calculator. As clinicians know, some people are more prone to vitamin D deficiency: People with dark or brown type skin, the elderly, moms of

childbearing age and breast-fed infants not receiving vitamin D supplementation, people who are in pain, have autoimmune conditions, experience depression/anxiety, and anyone who uses sunscreen. The take home message is test and then retest to see if the dose is correct and that cofactors are present. For example, magnesium is essential for Vitamin D3 utilization.

I want to strongly encourage you to start testing every single patient for their vitamin D status. Don't wait until the fall or winter months because it takes time to raise vitamin D levels in the cells. As you know, Vitamin D affect over 3000 genes and processes. But we forget and certainly our patients don't understand that it takes time for cells to become sufficient. Then it takes time for cells to reproduce and function as normal healthy cells once they become sufficient to reverse the deficiency patterns that were created. So now is the time to get tested and then retested in 90 days to make sure numbers are changing. Now is the time to begin supplementing with Vitamin D. By the way, Zinc is another "cofactor" nutrient that supports all of the 4 functions Dr. Vasquez articulated to prevent viral overload.

A great screen is the zinc taste test. You can see link to the right. Supplementing these two nutrients in combination with a high potency multivitamin mineral, full spectrum essential fatty acid supplement with clean fish oil and an anti-inflammatory diet will go a long way to strengthen your body's defense system. Although zinc doesn't come close to the number of roles vitamin D plays, it is still necessary for over 200 enzyme reactions. Encourage your patients and remind them that drugs can never solve a nutrient deficiency. Thanks for watching and I look forward to being with you again next Tuesday.