

MEDICINES FOR THE 21ST CENTURY

PO Box 131, CHAPPAQUA, NY10514,

raghavan@nanorxinc.com

Metadichol is nature's back up for Vitamin D

Vitamin D: The Immunity Steroid.

In medical school, one is taught that Vitamin D was a hormone that was important in bone metabolism. The major effect is that it modulates the immune system as its receptor is found on T helper cells (regulator cells), the same cells that the HIV infection wipes out in AIDS victims. So if your Vitamin D levels are low, they turn off the epigenetic switches on genes that turn on the immune system protector cells and keeps us free of diseases from viruses, bacteria and fungal infections.

DISEASES ASSOCIATED WITH LOW VITAMIN D. LEVELS: (below 30 ng/ml on a Vitamin D 25 (OH) test

***•Rickets and osteomalacia and psoriasis
•Hypocalcemia
•Seizures, muscle tetanus and heart failure in the newly born
•Osteoporosis and Osteopenia
•Cancer of all types, Heart disease (the number killer of men and women), High blood pressure, Obesity from all causes, Osteo and Rheumatoid Arthritis
Mental illness of all types, Chronic pain centrally or peripherally mediated, Muscular weakness, Radiation poisoning, Diabetes.....especially metabolic syndrome and T2D development
Multiple sclerosis and most autoimmune diseases***

Metadichol works on all these diseases !!!

What does Vitamin D do—and what should you know about Vitamin D?

- 1. Facilitates increased intestinal absorption of phosphorus and calcium as well as suppression of parathyroid hormone secretion to increase our plasma calcium concentrations. It, however, does not dictate or direct where this calcium will be deposited in our bodies. (Metadichol dictates where calcium will be deposited in our bodies and improves bone density)***
-

2. *Levels above 50 ng/ml are associated with increased adiponectin levels. High adiponectin means you are less likely to be obese. So higher vitamin D levels can help us trim our fat stores. By decreasing fat levels, we can avoid the initial steps that lead to insulin resistance and eventually develop Type 2 Diabetes. (metadichol increases Adiponectin levels)*

3. *It's a natural antibiotic that assists WBCs in clearing infections. It does this by stimulating immune cells to make a protein called cathelicidin. This protein is found on T cells, macrophages, neutrophils, and on our epithelial cells in our guts and respiratory system. It actually helps defend us from viruses and bacteria all the time when its optimized. In our gut linings, it also activates the T regulator cells to protect the intestinal lining. It now appears that low vitamin D status in the gut maybe a huge risk factor for the development of HIV general infection. Another major immune affect of Vitamin D is that is has the ability to block intracellular signals of NF Kappa beta and of TNF alpha. Both of these chemicals are part of the machinery that causes up regulation of the stressful cellular response mechanisms in many pathologic diseases like cancer, autoimmunity and in obesity.(Metadichol inhibits both Nf-KB and TNF-alpha and also produces anti microbial peptides)*

4. *It's a direct inhibitor of the hormone renin in our kidneys and helps protect us from developing systemic systolic blood pressure elevation. It also protects the kidney directly from high levels of uric acid production that come from end stage fructose metabolism. (Metadichol reduces Blood pressure and reduces uric acid)*

5. *A single nucleotide polymorphism (SNP) has been linked to the development of early heart disease. This SNP is on the C allele of SNP # rs4646536 and is being studied in the NIH VITAL trial currently ongoing. This is a second mechanism to prevent heart disease but a more common one will be discussed below. (polymorphisms do not affect Metadichol binding to VDR)*

6. *When the skin makes Vitamin D3 naturally, usually 10-20,000 IU are made locally in the skin. The excess Vitamin D3 is then broken down to its degradation products, which have been shown to inhibit the development of psoriasis in studies. These degradation products prevent the proliferation of the lower levels of the skin from reproducing at a faster rate than normal. This is the pathology found in psoriasis. The lower epidermis is known to grow 25-40 times faster and the skin gets a large red plaque on its surface as a result. This is why light therapy is so effective in treating psoriasis. Its kind of ironic that dermatologists don't look at the pathological causes of this disease. Here, sunlight is curative because it stimulates Vitamin D3 production to make excess Vitamin D3 to make degradation products. Anyone with psoriasis should have their Vitamin D levels checked and optimized before they do anything else. Most have extremely low levels and they tend to be obese and have higher cancer rates across the board. (Metadichol actions does not depend on Vitamin D levels)*

7. *In autoimmune diseases, we need to advocate for much higher levels of Vitamin D. Why? In order for circulating vitamin D to perform its functions, it must first activate the vitamin D receptor (VDR). The problem is that many people with autoimmune disease have a genetic polymorphism that affects the expression and activation of the VDR and thus reduces the biologic activity of vitamin D. (METADICHOL BINDS TO VDR) Studies have shown that a significant number of patients with autoimmune diseases have several VDR polymorphisms. There are over 25 variants of VDR polymorphisms now known and the list grows monthly. If you have a VDR problem, you require much higher circulating levels of Vitamin D to bind to these defective receptors. A leaky gut predisposes to the development of autoimmunity. Moreover, optimal Vitamin D levels are also linked to “tighter junctions” between the enterocytes of our intestinal lining making our guts “less leaky.” If the gut is less leaky, our immune system is stronger because it does not have to be activated constantly to protect the rest of the body. Vitamin D levels play a huge role in our immune surveillance in our GI tracts. It appears to be critical to push your levels to much higher plasma levels in these cases. The fears of toxicity are very overblown and the risk of too low a level for disease propagation is far too common and risky for your health. There is now very recent evidence out from Dr. Hector DeLuca (University of Wisconsin a pioneer in Vitamin D research) about MS and autoimmune encephalitis. Dr. DeLuca believes that the degradation products of vitamin D3 and/or some byproducts of solar radiation confer health to us in some fashion. Vitamin D3 degradation and sunlight is somehow active against a range of autoimmune illnesses. MS, ALS and Guillian Barre are tied in some fashion to vitamin D metabolism. (Metadichol does not depend on Vitamin D or its metabolism)*

8. *Vitamin D is a fat soluble molecule. It means you should take it with fat for absorption. But it also means that some people will not absorb it well at all. Who? Those with a leaky gut, who have people with IBD, Crohn’s, Ulcerative colitis, liver disease, those without a gallbladder, and those on a low fat diet that 99% of nutritionists and dietitians recommend. Who else has to worry? Those who are on NSAIDs, steroids longer than a two weeks, those on blood thinners or anticoagulants, those on reflux medicines and antacids, and synthetic hormones like birth control pills. Are you starting to understand now why we have an epidemic of hypo vitaminosis of vitamin D? (Metadichol directly binds to VDR in our mouth and overcomes the limitations of Vitamin D absorption and is non toxic and safe as it is a food ingredient that we consume on a daily basis)*

9. *Can you have a normal plasma D level and still have low vitamin D activity? Yes you can, and it is probably the biggest silent epidemic today commonly seen this in obese folks with hypothyroidism. 90% of the cases of hypothyroidism in the USA are cause by Hashimoto’s disease. This disease is an autoimmune disease and these patients universally have defective VDR receptors. That means they need very high levels of blood Vitamin D levels and optimization of their thyroid function to get results. Often, many obese people get stuck not losing weight because their doctors are fooled into thinking their thyroid and Vitamin D levels are fine. Most of the time, the levels are sub therapeutic and patients find amazing results when their plasma levels are pushed a bit by the clinician. Patients with*

high cortisol levels suffer the same fate. (Metadichol overcomes these problems and works on thyroid and Hashimoto disease)

10. Age will decrease your skin's ability to make vitamin D3 from sunlight and cholesterol. As we go from age 20 to 60, we lose that ability by a four-fold magnitude. The darker our skin, the worse the conversion. So as we age, we need more sun or supplementation, not less of either. This is why so many older people see a higher incidence of neolithic diseases as well. (Metadichol is designed by nature as a substitute for Vitamin D as all systems in nature have redundancy factors built in)

11. Humans have a Vitamin D savings bank in our body. It is supported by a good protein diet and a leads to a better Vitamin D level. An Epi-paleo diet is an optimal choice for this bank account. It works by making a protein called Vitamin D binding protein (DBP). It acts like albumin does in the blood. The vitamin D-binding protein (DBP) is a highly specific carrier for vitamin D and all of its metabolites found in the plasma. This allows us to store vast amounts of Vitamin D. Why do we need that from an evolutionary standpoint? Vitamin D synthesis from cholesterol by the sunlight is thus maintained within physiological limits estimated to be 0.01 to 2.5 mg of cholecalciferol per day. 2.5 mg per day translates to 100,000 IU per day! If we are protein deficient, we do not have this ability and our stores are low in low light levels. It not only protects our Vitamin D stores, but it also prevents the toxic effects of a high vitamin D level in the blood. Humans start to store Vitamin D3 when Vitamin 25(OH)D level is above 40 ng/ml. The interesting finding is that it is only around a level of 60 ng/ml that the stores are sufficient to see us through a winter with a resultant optimal D level. This is why dietary composition is critical for immunity. This information also shows why flu season peaks in winter months in epidemiological studies. It also helps explain why those who are chronically ill or have serious diseases like cancer have very weakened immune systems. This is why cancer patients have higher risks for developing multiple neolithic diseases as they age. Peripheral neuropathy and pain is one such example. Those with low HDL levels or liver disease tend to make the lowest amounts of DBP. This is true in hepatitis cases and in patients with metabolic syndrome as well. It also explains why other neolithic diseases afflict those people and why they all seemingly have low vitamin D levels, too. This is why we see an epidemic in the USA today. Before, we never looked for it, but now we are beginning to understand just how vital Vitamin D is for immunity and health. (Metadichol increases HDL and also balances liver enzymes).

12. In 2007, Richards found that higher vitamin D levels are also associated with longer telomere lengths. This means that optimal vitamin D levels reduce our cellular aging risk, reduce utilization of our stem cells, and decrease the leakiness of our mitochondria which drive the action of the telomerase enzyme that dictates telomere length. So it makes sense if your D level is low, your telomeres will be shortened and this, too, will put you at heightened risk for neolithic disease. All cellular systems seem to point to disease and increased aging with lower vitamin D levels. (Metadichol is designed by nature as a substitute for Vitamin D as all systems in nature have redundancy factors built in)

13. *When you optimize your vitamin D3, you will notice your HDL will rise 10-30% in the first year. This signifies that the liver is doing a better job of “skimming” the portal circulation for endotoxins. This is the major mechanism that Vitamin D protects the heart, in my view. We all hear from doctors that a high HDL protects the heart. This is how: It makes the liver a master of defense. It also protects the brain from endotoxin assault, it reduces all causes of mental illness and it is a main defense in the brain gut axis. (Metadichol increases HDL in a short time).*
14. *Cancer and Vitamin D3: The gene that codes for E-cadherin can be epigenetically silenced via promoter hyper methylation. This explains why Vitamin D3 cannot “prevent” or “cure” all cancers, since the E-cadherin gene is under the direct regulation of Vitamin D3. Many people do not understand this on off switch as it pertains to cancer. (Metadichol works on cancers as it prevents methylation)*

Conclusions

- *Many of our life style changes in the last 50 years have contributed to low levels of Vitamin D*
- *Air conditioning has resulted in a larger percentage of our time spent inside, both at home and office.*
- *Growing cities have reduced our time outside, and today most people on the planet live in cities.*
- *With increasingly diverse populations and global integration, darker skinned persons are now living farther from the equator where their skin pigments had evolved to protect them from sun overexposure Their dark skin thus over-protects them from producing vitamin D with less available sunlight.*
- *Fast food has led to an international crisis in obesity, which often results in spending more time indoors or covered up. Fat takes about 2/3 of the vitamin D which otherwise would have gone to the blood.*
- *Smoking, while on the decrease, is still a prevalent habit in many parts of the world, and consumes vitamin D in your system.*
- *Factory farm raised livestock that is not "open range" has lower vitamin D content than open range food.*
- *Low cholesterol diets rob the body of the primary raw material, cholesterol, used to produce vitamin D naturally.*
- *A natural fear of skin cancer has resulted in the widespread use of sunscreens or avoiding sun exposure, robbing your skin of the UV rays it needs to create vitamin D.*

- *People are living longer, and the body loses its ability to manufacture vitamin D naturally as we age. Up to 4 times more sun exposure is required of a 60 year old versus a 20 year old.*
- *Video games and TV are keeping many people indoors and away from sunlight. Many factors have led to an epidemic of vitamin D deficiency*
- *The misinformation of the last six decades is only now being corrected as science and medicine work to gather the hard evidence needed to properly understand the importance of Vitamin D in our diet and lifestyles.*

*We have a solution Metadichol[®] and appropriately the anagram of this word is
METHODICAL !*