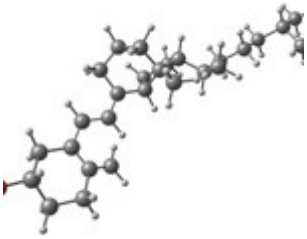
Vitamin D deficiency, the ignored epidemic of the developed world



This article originally appeared on Dr. Dach's website.

What if I told you I discovered a Bio-Tech company with a new drug that could reduce the number of cancer deaths in the US by 43,000 annually, reduce colon cancer by 50%, and breast and ovarian cancer by 30%. Would you be impressed? What if I then told you this same drug could safely prevent or alleviate the following medical conditions: Osteoporosis, Hypertension, Cardiovascular disease, Cancer, Depression, Epilepsy, Type One Diabetes, Insulin resistance, Autoimmune Diseases, Migraine Headache, Polycystic Ovary Disease (PCOS), Musculoskeletal and bone pain, Psoriasis, and Rheumatoid Arthritis, Inflammatory Bowel Disease (Cohn's), chronic lymphocytic leukemia (CLL)(15), as well as improve calcium absorption and reduce hip fractures.(5A)

Would you then be even more impressed, and rush out to buy the company stock and get rich quick? Of course you would, but we don't need a new Bio-Tech drug to do this, because, all of the above benefits can be obtained with Vitamin D, an inexpensive vitamin which is free with sun exposure.

Vitamin D Deficiency in Florida, Surely You must Be Joking:

We all know it's a fact: Everyone in Florida gets plenty of Vitamin D from the Florida Sun. This would have been true

except for the fact that as Floridians, we are all told to avoid the sun to prevent solar skin damage (brown wrinkling) and to avoid skin cancer.

So the question remains, do we get enough Vitamin D from sun exposure? To answer this question, we actually measured blood Vitamin D levels, and we were surprised to discover that the majority showed Vitamin D deficiency (less than 20 ng/ml), or insufficiency (less than 40 ng/ml).

What if you are not fortunate to live in sunny Florida and you live up north above the Mason Dixon Line, in Boston, New York, Chicago, Canada or Scandinavia? Northern latitudes have an even more serious vitamin D deficiency because of the lack of UV sunlight during the winter months. The angle of the sun through the atmosphere closes off the UltraViolet Light from reaching the earth.

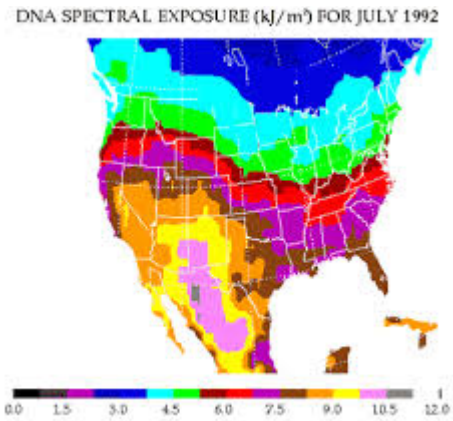
An Epidemic of Vitamin D Deficiency

Vitamin D deficiency has been reported in 57% of 290 medical inpatients in Massachusetts, 93% of 150 patients with overt musculoskeletal pain in Minnesota, 48% of patients with Multiple Sclerosis, 50% of patients with lupus and fibromyalgia, 42% of healthy adolescents, 40% of African American Women, and 62 % of the morbidly obese, 83% of 360 patients with low back pain in Saudi Arabia, 73% of Austrian patients with Ankylosing Spondylitis, 58% of Japanese girls with Graves's Disease, 40% of Chinese adolescent girls, 40-70% of all Finnish medical patients. (5A)

Vitamin D Toxicity

Vitamin D excess and toxicity requires daily dosage in excess of 40,000 units over a period of months, so 5,000 units a day is safe and far below the level needed to develop vitamin D toxicity. Remember Vitamin D is a fat soluble vitamin, so toxicity is possible with massive doses over long periods of time. Vitamin D toxicity causes elevated calcium levels.

That’s why Vitamin D supplementation should done only under your physician’s supervision with monitoring of serum 25-Hydroxy Vitamin D levels.



Maps of UV Sunlight exposure correlate with incidence of Cancer and Multiple Sclerosis.

If you take NASA space satellite photos of North America and color code the UV sunlight exposure as Dr. Grant has done on his web site, Sunarc.org (3), you will see a pattern remarkably similar to the incidence of cancer and multiple sclerosis. This is thought to be due to differences in Vitamin D levels. The farther north with less sun exposure and lower Vitamin D levels, there is an increased incidence of cancer and multiple sclerosis.

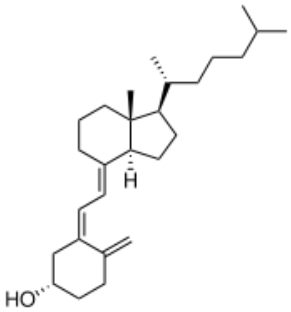
Diseases Caused By, or Associated With Vitamin D Deficiency:

Again here is the list: Osteoporosis, Hypertension, Cardiovascular disease, Cancer, Depression, Epilepsy, Type One Diabetes, Insulin resistance, Autoimmune Diseases, Migraine Headache, PolyCystic Ovary Disease (PCOS), Musculoskeletal and bone pain, Psoriasis, and chronic lymphocytic leukemia (CLL)(15).

The current recommendation for Vitamin D deficiency in those people who must avoid the sun is 5,000 IU of Vitamin D per day which costs 5 cents a day..

Vitamin D is not really a Vitamin, it is a Hormone.

Like all other steroidal hormones, vitamin D is made from a cholesterol precursor, converted in the skin by sunlight. Like all other hormones, Vitamin D enters the nucleus of the cell and binds to the DNA where it gives a message to the DNA to manufacture proteins.



Vitamin D Chemical Structure Courtesy Wikipedia

Vitamin D And Multiple Sclerosis.

A review by Dr. Brown reported that Vitamin D supplementation prevented the development and progression of experimental autoimmune encephalitis, an animal model of MS, in mice. A large, prospective, cohort study found that vitamin D supplementation was associated with a 40% reduction in the risk of developing MS. Four small, noncontrolled studies suggested that vitamin D supplementation may decrease exacerbation of MS symptoms. (20)

MRI studies of multiple sclerosis lesions show improvement during summer months and worsening during winter months suggesting a Vitamin D link. (36)

Vitamin D and Cancer

A four-year clinical trial, involving 1,200 women found those taking the vitamin had about a 60-per-cent reduction in cancer incidence, compared with those who didn't take it, a drop so large – twice the impact on cancer attributed to smoking – it almost looks like a typographical error. The study was done by professor of medicine Robert Heaney of Creighton University in Nebraska and was published in June 2007. (36A)(36)

Vitamin D and Total Mortality

A 2007 meta-analysis review of 18 studies showed a reduction in all cause mortality of about 10% in people supplementing with commonly used doses of Vitamin D.(39)

Vitamin D Supplementation for Adults

The RDA in America is only 400 IU per day, yet current research suggests that our daily Vitamin D requirement is closer to 4,000 to 5,000 IU. Twenty minutes of Sun exposure will give us ten to twenty thousand IU of Vitamin D.

Adult Supplementation with Carlson's Cod Liver Oil can provide Vitamin D along with Vitamin A . However, for an intake of 5,000 IU vitamin D per day, inexpensive Vitamin D3 capsules are widely available for about 5 cents a day. We provide these as a convenience to our office patients.

Vitamin D Testing at the Lab

Optimal serum 25-hydroxyvitamin D values are 45-50 ng/ml. Below 40 ng/ml is called Vitamin D insufficiency, and below 20 ng/ml is deficiency.

Conclusion

Our health care system is in crisis. We are spending billions on expensive procedures like coronary artery bypass and organ transplantation, yet measurements of health are lower than other countries that spend less. In terms of getting more bang for your health care buck, Vitamin D testing and

supplementation for the population is one solution which is guaranteed to improve overall health of the population at a ridiculously low cost.

The cost saving in reduced cancer rates, and lower osteoporotic fracture rates would be enormous, and we would all enjoy improved health. My goal as a physician in our community is to improve the health of of our community, and Vitamin D testing and supplementation is one way to achieve that goal with no adverse side effects and enormous cost savings.