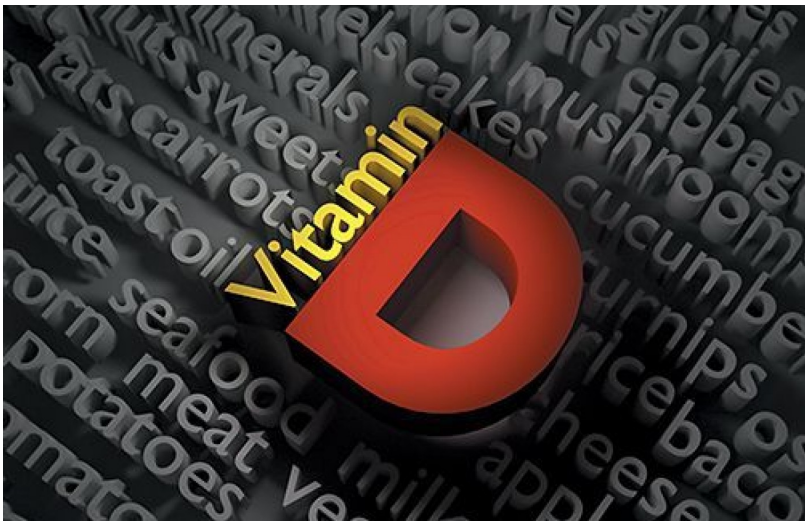
Dynamic Chiropractic



NUTRITION / DETOXIFICATION

Help Patients Achieve Optimal Vitamin D Levels

THE HEALTH CONSEQUENCES OF LOW D AND THE BENEFITS OF SUPPLEMENTATION.

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Much research has been done on vitamin D levels and their impact on health; optimal levels have been correlated with a reduced risk of developing numerous conditions. Those most relevant to the chiropractic practice include osteoporosis, cancer, depression, and pregnancy. Here are a few key pieces of exciting information:

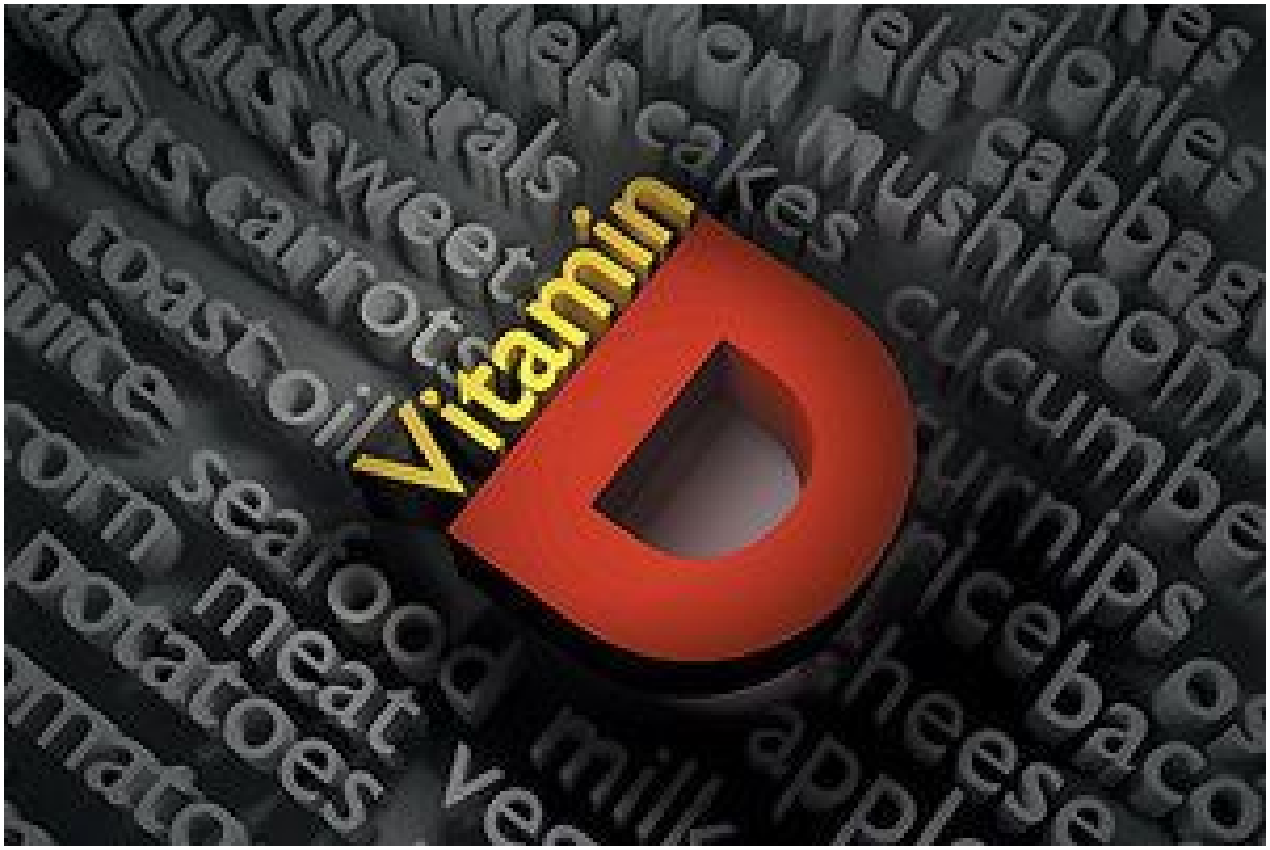
- Vitamin D increases intestinal absorption of calcium from 10-15 percent to 30-40 percent, and phosphorus from 50-60 percent to 80 percent.
- Twenty-two studies suggest women with higher vitamin levels will have a lower risk of developing cancer (especially reproductive cancers).
- Depression and vitamin D are linked due to the numerous vitamin D receptors located on the brain and theories that vitamin D increases the activity of serotonin.
- Low vitamin D levels increase the risk for pre-eclampsia by 3-4 times and can increase the risk of a C-section by 300 percent.

For more information, an easy-to-read overview of research on vitamin D can be found at VitaminDCouncil.org.

Vitamin D Production: The Basics

Vitamin D enters the body via sunlight on the skin (which generates about 90 percent of our supply) or via nutritional intake. It then travels to the liver, where it changes into a substance called 1,25-dihydroxycholecalciferol (1,25 OHD). (By the way, 24,25-dihydroxycholecalciferol is the deactivated form of vitamin D.) Next 1,25 OHD goes to the kidneys to become activated into the active hormone calcitrol. The next step takes the 1,25 OHD to the vitamin D receptors expressed by cells in most of our organs, including the brain, heart, gonads, prostate and breasts. Calcitrol performs numerous functions including stimulation of the intestinal absorption of calcium and phosphorus to promote bone remodeling, as well as supporting neuromuscular and immune function.

Low Vitamin D: Common Symptoms of Deficiency



Symptoms of vitamin D deficiency include muscle weakness, unexplained / unresolved musculoskeletal pain, skin conditions and/or gum / tooth disease. Risk for vitamin D deficiency increases with smokers and elderly or housebound individuals. Vitamin D levels influence cardiovascular function, the immune system, brain development and muscular function.

Always "Manage What You Measure"

One of my favorite business adages is, "You can't manage what you don't measure." We know from our experience with chiropractic adjustments that it is important to our patients for us to track and see tangible results. We are most effective when we're specific with our treatments; vitamin D levels are no different. They're measured with a simple, inexpensive blood test that can either be performed by the doctor in-office or ordered from a local laboratory. Depending upon each patient's needs, you may recommend vitamin D bloodwork every 3-12 months. You may also incorporate a survey of symptoms into your exam / consultation.

Boosting Vitamin D Levels

Sources such as the FDA boast that fortified or enriched cereals, dairy and grains are high in vitamin D levels. Not only are these items inflammatory, processed, chemical filled and destructive to the body, but they actually contain very little vitamin D. For example, the vitamin D in one cup of milk (whole, reduced fat or vitamin D fortified) is 125 IU. Fortified breakfast cereal (2 cups) contains 500 IU. Even a natural food known for having vitamin D, such as salmon, contains only 500 IU per 3-ounce portion.

One of the best natural sources of vitamin D is cod liver oil, with 1,400 IU in 1 tablespoon. A high-quality D3 supplement also will help boost vitamin D levels.

Dosages range and are unique to each individual, but the recommended optimal level to achieve is approximately 60 ng/dl, according to the Vitamin D Council. Levels above 100 ng/dl are considered undesirable. A typical wellness-focused dosage may range from 2,000 IU to 5,000 IU daily for adults, and 400 IU to 1,000 IU daily for infants and children.

Here's what you can expect to occur before your retest: supplementation with 1,000 IU daily for three months raising the overall level by 10 ng/mL. In my clinical experience, I have found that approximately 5,000 IU daily in a deficient individual with moderate digestive integrity will approximately double their vitamin D level in about one month.

If a patient has been compliant in supplementing with vitamin D, yet levels do not significantly change upon re-measurement, you may want to consider other conditions that are preventing the body from properly absorbing vitamin D by impairing the integrity of the digestive system. These could include food intolerances, Crohn's disease, inflammatory conditions, challenged fat absorption (such as in liver or bile malfunction), kidney malfunction, or conditions that affect the vitamin D receptors, such as Hashimoto's thyroiditis.

Cautionary Notes

Overall, supervised vitamin D supplementation is rated as safe by many organizations (Mayo Clinic, NIH and others); however, you may want to utilize caution if your patient presents with hypocalcaemia, sarcoidosis, histoplasmosis or renal disease. The main adverse side effect is hypocalcaemia.

In addition, supplementation could possibly interact with these medications: corticosteroids, Orlistat, cholestryamine and phenobarbital.

Vitamin D absorbed into the skin by sunlight will last 2-3 times longer in the body. Sunlight exposure does have risks, so here's what I recommend to my patients in terms of exposure: 5-15 minutes, three times per week (between 10 a.m. and 3 p.m.), with 25 percent of unprotected skin showing, for white adults during spring / summer / fall seasons.

It's also important to note that using a sunscreen with an SPF of 30 (found in sunscreen products, as well as many women's cosmetic products and lotions) will absorb approximately 95 percent of UVB radiation, thus reducing the production of vitamin D via the skin by about 95 percent.

Educating Patients: Step #1

In order to implement vitamin D testing into your patient protocols, I'd begin by educating patients on the importance of optimal vitamin D levels and sharing the facts above with your practice members. You can do this successfully by writing articles for your mailing list, utilizing easy-to-read, brief handouts in the office, or by initiating a conversation after asking about known vitamin D measurements during your initial patient evaluations.

Resources

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