

## Facts Every Health Care Professional Needs to Know About Vitamin D

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Vitamin D first caught my eye in 2003 when I noticed it had been removed from many protein bars and meal-replacement protein drink mixes due to an FDA order. At the time, I thought I would look into vitamin D toxicity as a possible cause, although I cannot recall ever having a patient with hypervitaminosis D in my 18 years of practice. I was very worried that I had possibly missed or overlooked this problem. That is why I wrote, "FDA's Crackdown on Vitamin D Is Troubling,"<sup>1</sup> two years ago.

When I researched that article, it was very apparent that there was a growing problem with vitamin D. However, the problem I found was not excessive vitamin D, but the opposite: a deficiency that is commonly overlooked. I have no idea what literature the FDA regulators reviewed, but from what I can tell, there is mounting evidence that vitamin D deficiency is more important than many health care professionals are aware of. Interns in my office who are at or near the top of their classes academically in chiropractic college do not appear to know much more about vitamin D than I did as a student. I have also talked to colleagues in other allied health professions, and believe that schools of all disciplines may not be incorporating new literature into their curriculums fast enough.

The following information expands on what I wrote about in my "FDA's Crackdown..." article in 2003 and in last year's "Vitamin D Deficiency" piece.<sup>2</sup>

### Vitamin D - Did You Know?

- Lower serum and intake levels of vitamin D increase the rate of osteoarthritis (OA).<sup>3</sup>
- Obesity alters endocrine function and promotes storage of vitamin D, rather than utilization. Women with a body mass index over 30 have triple the rate of vitamin D deficiency compared to age-matched women with a BMI of 18-25.<sup>4</sup>
- Running serum tests on the active form of vitamin D 1,25-dihydroxyvitamin D [1,25-(OH)2D] showed no association between changes and OA. But in the same study, low serum levels of its precursor, 25-hydroxyvitamin D [25-(OH)D], did correlate with joint space narrowing,<sup>5</sup> and is a much more accurate indicator of vitamin D status.
- Vitamin D deficiency can cause chronic lower back pain.<sup>6</sup>
- Vitamin D deficiency is often misdiagnosed as fibromyalgia.<sup>7</sup>
- Animals genetically susceptible to type 1 diabetes, rheumatoid arthritis, and multiple sclerosis did not develop these diseases when they were given vitamin D throughout their lifetime.<sup>7</sup>
- Human milk contains very low levels of vitamin D.<sup>8</sup>
- Individuals who do not get much sun exposure need at least 1,000 IU of vitamin D per day to prevent deficiency. The more time we spend indoors, the greater this problem becomes, and our avoidance of sun to protect the skin has further increased vitamin D deficiency.<sup>7</sup>
- Sunscreen rated SPF-8, when used properly, stops 95 percent of vitamin D production.<sup>7</sup>
- Very dark-skinned people may need six times more sun than very fair-skinned people to

produce adequate vitamin D.<sup>9</sup>

- Low vitamin D in adults has recently been identified as a risk factor for heart disease.<sup>10</sup>
- Vitamin D is extremely powerful in reducing the rate of cancer cell proliferation.<sup>7</sup>
- In the winter, women were over five times more likely to have vitamin D deficiency than in the summer.<sup>4</sup>
- Cancer death rates are higher in people who have low exposure to sunlight.<sup>7</sup>
- Pregnant women need at least 2.5-10 times more vitamin D (1,000-4,000 IU/d) than the current daily reference intake (DRI) of 200-400 IU/d.<sup>11</sup>
- 100,000 IU/d of vitamin D did not harm mothers or babies during pregnancy.<sup>11</sup>
- There is overwhelming evidence that healthy men use 3,000-5,000 IU/d of vitamin D.<sup>12</sup>
- Current research indicates that 4,000 IU/d of vitamin D maintains optimal levels. (The DRI states that the tolerable upper limit is 2,000 IU/d. Thus, the outdated research implies that the current finding would cause toxicity.)<sup>13</sup>
- In a Finnish study of over 10,000 infants and children, those who took 2,000 IU/d in their first year of life reduced the incidence of developing type 1 diabetes by 80 percent up to age 14.<sup>14</sup>

### References

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