Meta-analysis looks at efficacy of D2 vs D3

Posted on November 16, 2011 by Dr John Cannell

Many people write me and ask, “My doctor prescribed Drisdol, is that OK?” Drisdol is D2 and the form of vitamin D that doctors write prescriptions for. The body doesn’t produce vitamin D2 in response to sun exposure. It is made by irradiating fungus and plant matter. When you take it, a number of metabolic forms of D2 are found in the body, and some studies show D3 (produced by the skin) is more potent, meaning it is more effective at raising blood levels than D2, while some show they are equal. However, there are few studies comparing the efficacy of D2 vs. D3. Or in other words, which form has better health outcomes, better mortality rates?

Recently, a review and meta-analysis address this question. The meta-analysis study was led by Professor Dr. Goran Bjelakovic.

Bjelakovic G, Gluud LL, Nikolova D, Whitfield K, Wetterslev J, Simonetti RG, Bjelakovic M, Gluud C. Cochrane Database Syst Rev. 2011 Jul 6;(7):CD007470.

He analyzed 50 randomized controlled trials (RCTs) with a total of 94,000 participants that used some form of vitamin D and reported mortality rates as either primary or secondary outcomes. Within these RCTs, 32 of the studies used D3 (74,000 subjects) and 12 of them used D2 (18,000 subjects). He found there was a 6% relative risk reduction when supplementing with vitamin D3, as opposed to a 2% relative risk increase when supplementing with vitamin D2

Amazingly, this study somehow slipped under the radar and neither the press nor I picked up this study in July. Luckily, Professor Dr. Harvey Murff of Vanderbilt University reviewed this study yesterday in the Annals of Internal Medicine recently, allowing the general public to examine the study once again.

Murff HJ. Review: Cholecalciferol (vitamin D_3) reduces mortality in adults; other forms of vitamin D do not. Ann Intern Med. 2011; 155:JC5-04.

You would think a paper that took a look at tens of thousands of subjects and analyzed the efficacy of prescription vitamin D (D2) and over-the-counter vitamin D (D3) would warrant a news story or two. To my knowledge, these papers are the first to paint such a clear picture about the efficacy between D3 and D2. While there may be explanations for D3’s superiority other than improved efficacy, for the time being, these papers send doctors a message: use D3, not D2.

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