HEALTH SCIENCES BULLETIN

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The Need to Achieve Higher Blood Levels of Vitamin D

Shaklee Chairman and CEO Roger Barnett recently had the opportunity to meet with world-renowned nutritional epidemiologist, Walter Willett, MD, DrPH, *Chair, Department of Nutrition* at the *Harvard School of Public Health*. One subject of their discussion was vitamin D, and specifically the vitamin D levels in dietary supplements.

As it turns out, Dr. Willett is one of a number of prominent scientists drawing attention to the urgent need for a recommended intake of vitamin D that is truly optimal. In fact, he, along with 14 other leading experts in this field, recently authored an editorial in the *American Journal of Clinical Nutrition*, imploring public health policy makers, government agencies, the media, and vitamin manufacturers, to work together to reassess recommendations for vitamin D (1). The problem is that current recommendations for vitamin D are clearly inadequate, and the scare tactics used to dissuade consumers from taking supplements with vitamin D are outdated and counterproductive to good health (1).

Why all the attention on vitamin D?

This nutrient is in the spotlight because more and more published studies are pointing to vitamin D as protecting health in a variety of different and important ways (3-6). Scientists have determined that a key biomarker in the blood, *serum 25-hydroxyvitamin D*, is the best way to assess the adequacy of vitamin D in the body. And what the experts are finding is that higher concentrations of serum 25-hydroxyvitamin D are associated with higher bone mineral density, lower chance of bone fractures, stronger muscle function and less risk of falling in seniors, less periodontal disease – the leading cause of tooth loss as we get older, and a lower risk of contracting colorectal cancer – one of the leading causes of cancer in men and women in the United States.

And in the newest development, scientists like Dr. Willett are now starting to zero in on an *optimal concentration* of 25-hydroxyvitamin D in the blood (2,4,5). Evidence from the latest published studies indicates that the most advantageous serum 25-hydroxyvitamin D concentration for bone mineral density, reduced risk of fracture, enhanced lower extremity function, better dental health, and colorectal cancer prevention begins at a concentration of about 75 nmol/L, and may be even better at concentrations of 90-100 nmol/L.

The problem, and what's got Dr. Willett and his colleagues up in arms, is the fact that most Americans aren't even close to getting enough vitamin D to achieve these optimal blood concentrations. In fact, in a recent national survey, the *National Health and Nutrition Examination Survey III*, the majority of Americans, old and young, fell well short of having these higher blood concentrations of 25-hydroxyvitamin D (7).

Why the across-the-board shortfall?

According to Willett and colleagues, the current recommendations for vitamin D are inadequate, outdated, and in need of an overhaul. At just 200 IU per day for young adults, 400 IU per day for adults up to age 70, and 600 IU per day for those over 70 years (8), Americans simply aren't getting enough vitamin D to achieve the concentrations in the blood that are now viewed as more optimal for health.

While the vitamin D intake needed to boost serum 25-hydroxyvitamin D concentration to the 90-100 nmol/L range has not been precisely defined, many scientists think it may require doses of 1,000 IU per day or higher – well above current recommended levels.

Data from Shaklee's groundbreaking *Landmark Dietary Supplement Study* has provided Shaklee scientists and other researchers with intriguing insights into the question of optimum vitamin D intake. In the study of long-term multiple supplement consumers, daily vitamin D intakes from dietary supplements were estimated to be 1,000 IU or more. At this intake level, an impressive 92% of the multiple supplement group had blood concentrations that exceeded 75 nmol/L – the level where beneficial effects on health outcomes become clearly noticeable. And 74% of multiple supplement users had serum 25-hydroxyvitamin D concentration at or above the target 90-100 nmol/L level.

These unprecedented and important findings will certainly help to shape the scientific discussion as to what constitutes adequate and optimal dietary intake of vitamin D. And it is scientific evidence like this that has leading scientists such as Dr. Willett believing that vitamin D supplementation is a critically important tool for achieving an optimal intake of vitamin D.

Be well.

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