

SCIENTIFIC INFORMATION STEROGYL

CONTROL OF PLASMATIC LEVELS OF VITAMIN D₃

Deficiency of Vitamin D is not only related to the increase of the incidence of osteoporosis and fractures, but also of diabetes, cancer, cardiovascular alterations and other diseases. Nowadays, as a result, besides the supplementation, it is recommended an annual measurement of the plasmatic levels of vitamin D in the pursue of getting and maintaining values that are higher than 30 ng/ml.

Vitamin D status: measurement, interpretation, and clinical application

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Abstract

Vitamin D, the sunshine vitamin, is now recognized not only for its importance in promoting bone health in children and adults but also for other health benefits, including reducing the risk of chronic diseases such as autoimmune diseases, common cancer, and cardiovascular disease.

Vitamin D made in the skin or ingested in the diet is biologically inert and requires 2 successive hydroxylations first in the liver on carbon 25 to form 25-hydroxyvitamin D [25(OH)D], and then in the kidney for a hydroxylation on carbon 1 to form the biologically active form of vitamin D, 1,25-dihydroxyvitamin D [1,25(OH)(2)D].

With the identification of 25(OH)D and 1,25(OH)(2)D, methods were developed to measure these metabolites in the circulation. Serum 25(OH)D is the barometer for vitamin D status. Serum 1,25(OH)(2)D provides no information about vitamin D status and is often normal or even increased as the result of secondary hyperparathyroidism associated with vitamin D deficiency.

Most experts agree that 25(OH)D of <20 ng/mL is considered to be vitamin D deficiency, whereas a 25(OH)D of 21-29 ng/mL is considered to be insufficient. The goal should be to maintain both children and adults at a level >30 ng/mL to take full advantage of all the health benefits that vitamin D provides.

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