

WMA STATEMENT ON VITAMIN D INSUFFICIENCY

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PREAMBLE

Vitamin D has major role in calcium and bone metabolism. Normal values are 75-100 nmol/L (30-40 ng/ml). Vitamin D deficiency is defined if serum hydroxyvitamin D levels are less than 50nmol/L (20 ng/ml), insufficiency as 50-75 nmol/L (20-30 ng/ml).

Studies demonstrate that vitamin D is essential also for overall health and well-being. In the body vitamin D is produced during exposure to sunlight and in lesser degree by food intake.

Vitamin D exists in two forms: vitamin D₃ (cholecalciferol in humans and other mammals) and vitamin D₂(ergocalciferol in plants), but both are similarly metabolized. Vitamin D₃ is more active than vitamin D₂.

The serum concentration of the hepatic metabolite of vitamin D₃, the 25-hydroxyvitamin D, is considered as the best biomarker of vitamin D status.

Vitamin D deficiency is an important health issue globally. About one third of the population is estimated to have lower serum concentration of vitamin D.

Many studies have shown that vitamin D deficiency is linked to impaired growth and development. Because vitamin D receptors are broadly distributed in tissues, vitamin D deficiency is associated with musculoskeletal disorders (osteoporosis), falls, fractures, autoimmune disorders, chronic inflammatory diseases, type 2 diabetes mellitus, and cardiovascular, neurologic and psychiatric disorders. High risk groups are young children, the elderly and pregnant women. Primary factors, contributing to vitamin D deficiency, include reduced sunshine exposure, poor quality diet, availability of fortified foods and supplement use.

RECOMMENDATIONS

Because of widespread occurrence of vitamin D deficiency/insufficiency it is desirable to focus attention on adequate preventive actions in populations at risk. Determining vitamin D levels requires only a blood test, and oral supplementation is a simple treatment method. Sun exposure is not generally recommended because it can increase the risk of skin cancer.

The World Medical Association recommends that national medical associations:

- Support continued research in vitamin D and its metabolites
- Educate physicians about the evolving science of vitamin D and its impact on health (documents, brochures, posters)
- Encourage physicians to consider measuring the serum concentrations of 25-hydroxyvitamin D in the patients at risk of vitamin D deficiency
- Monitor development of dietary recommendations for vitamin D.