



Vitamin D Usage Among Iranian Population: A Toxicity Crisis is on the Way

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Dear Editor,

Vitamin D deficiency is one of the most common nutritional diseases worldwide, this is particularly true in Iran due to the populations limited exposure to natural sunlight, especially in urban areas. Several concerns exist regarding vitamin D deficiency, including disorders of calcium homeostasis, cardiovascular diseases, autoimmune disorders, and some common cancers.^{1,2} Hence, due to the devastating effects of vitamin D deficiency, Iranian people have been strongly encouraged to take vitamin D supplements and vitamin D is administered freely in schools and health centers. Consequently, products containing vitamin D became a popular medication and supplementation in the community. Additional amounts of vitamin D are ingested from processed foodstuffs such as fortified edible oil and dairy products.³ The irrational administration and consumption of vitamin D has transformed it into a double-edged sword. There are several reports regarding vitamin D toxicity after long-term consumption of vitamin D inappropriately. The toxicity of vitamin D may last for long duration because it is a fat-soluble vitamin with a high accumulation rate in adipose tissue. Remarkably, the 25-hydroxyvitamin D level has been reported to be up to 500 ng/mL in some case reports, which demonstrate that the irrational usage of vitamin D could lead to severe toxicity.^{4,5} A case series study concluded that hypervitaminosis is the most important differential diagnosis of patients with hypercalcemia, particularly in endemically vitamin D deficient regions.⁶ The study warned

physicians against prescribing vitamin D in high doses without careful monitoring.⁶ Vitamin D toxicity is accompanied by several serious problems. Early symptoms of toxicity include gastrointestinal disorders, bone pain, lethargy, severe headaches, arrhythmia, frequent urination, calcinosis, and nephrolithiasis.⁷ Therefore, it is necessary to employ effective strategies to correct this irrational pattern of vitamin D usage. The appropriate regimen of vitamin D should be prescribed based on age, associated risk factors, and 25-hydroxyvitamin D levels. The necessary education should also be provided to health care providers and the general public. In addition, high doses of vitamin D products should not be purchased from pharmacies without a vast medical or nutritional history. By employing these strategies, the toxicity of vitamin D can be diminished significantly and avoid any potential issues for the countries health system. This letter is the first published alarm for health professionals in Iran.

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