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# Real-Life Data on Total Vitamin D3 (25-Hydroxyvitamin D) Concentrations in Basrah, Iraq

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**People from our region need a higher dose of vitamin D to maintain their serum 25(OH)D levels at concentrations greater than 20 ng/mL. This study aimed to obtain real data on vitamin D status in Basrah. Retrospective data analysis of patients seen over 2 years from May 2017 to the end of May 2019 at the Faiha Specialized Diabetes, Endocrine and Metabolism Centre (FDEMC) in Basrah, a tertiary referring center of southern Iraq. Results: The cohort included 3692 persons. Vitamin D deficiency was evident among 62.5% of the studied persons (66.5% of women and 48.7% of men). Univariate analysis for factors associated with vitamin D deficiency found it was significantly associated with female sex (OR, 2.095; 95% CI, 1.793 to 2.448; P<0.0001), age less than 44 years (OR, 2.6; 95% CI, 2.328 to 3.065; P<0.0001), nonmarried status (including single, widow and divorced) (OR, 0.768; 95% CI, 0.656 to 0.900; P<0.0001), nulliparous or unmarried status (OR, 0.684; 95% CI, 0.583 to 0.803; P<0.0001), housewife status (OR, 0.806; 95% CI, 0.673 to 0.967; P=0.020), and rural status (OR, 1.195; 95% CI, 1.034 to 1.382; P=0.016). No significant association was found between vitamin D deficiency and BMI. In multivariate logistic regression analyses, only female sex (OR, 0.513; 95% CI, 0.437 to 0.603; P<0.0001) and age less than 44 years (OR, 2.662; 95% CI, 2.252 to 3.147; P<0.0001), nulliparous or unmarried (OR, 0.814; 95% CI, 0.680 to 0.973; P=0.024) and rural residency (OR, 0.773; 95% CI, 0.647 to 0.924; P<0.0001) remained significantly associated. Women, a younger age, nulliparous, and a rural residency were associated with vitamin D deficiency.**

**Keywords:** Adults; Iraq; Vitamin D status.

Vitamin D is no longer considered a pure nutritional supplement involved only in bone and calcium metabolism. It is also clearly involved in the pathogenesis of many diseases, although it is not a single causative factor of any.[1]

There is a high but silent prevalence of vitamin D deficiency in the Middle East/North Africa, the MENA WHO region. People from this area need a higher dose of vitamin D to maintain their serum 25(OH)D levels at more than 20 ng/mL, which is the minimal level of vitamin D accepted by western countries.[2] For that reason, experts recommend higher doses of vitamin D supplements, up to 1000–2000 IU/d, to overcome this state of hypovitaminosis D.[2, 3]

Increasing dietary intake of fortified foods with adequate sun exposure is a recommendation