

Abstract

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Vitamin D2 is as effective as vitamin D3 in maintaining circulating concentrations of 25-Hydroxyvitamin D.

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BACKGROUND: Two reports suggested that vitamin D2 is less effective than vitamin D3 in maintaining vitamin D status.

OBJECTIVE: Determine whether vitamin D2 was less effective than vitamin D3 in maintaining serum 25-hydroxyvitamin D levels or increased the catabolism of 25-hydroxyvitamin D3.

SUBJECTS AND DESIGN: This was a randomized, placebo-controlled, double-blinded study of healthy adults ages 18-84 years who received either placebo, 1,000 IU of vitamin D3, 1,000 IU of vitamin D2, or 500 IU of vitamin D2 plus 500 IU of vitamin D3 daily for 11 weeks at the end of the winter.

RESULTS: Sixty percent of the healthy adults were vitamin D deficient at the start of the study. The circulating levels of 25-hydroxyvitamin D (mean +/- SD) increased to the same extent in the groups that received 1,000 IU daily as vitamin D2 (baseline 16.9 +/- 10.5 ng/ml; 11 weeks 26.8 +/- 9.6 ng/ml); vitamin D3 (baseline 19.6 +/- 11.1 ng/ml; 11 weeks 28.9 +/- 11.0 ng/ml) or a combination of 500 IU vitamin D2 and 500 IU vitamin D3, (baseline 20.2 +/- 10.4 ng/ml; 11 weeks 28.4 +/- 7.7 ng/ml). The 25-hydroxyvitamin D3 levels did not change in the group that received 1,000 IU vitamin D2 daily. 1,000 IU of vitamin D2 or vitamin D3 did not raise 25-hydroxyvitamin D levels in vitamin D deficient subjects above 30 ng/ml.

CONCLUSION: 1,000 IU of vitamin D2 daily was as effective as 1,000 IU of vitamin D3 in maintaining serum 25-hydroxyvitamin D levels and did not negatively influence serum 25-hydroxyvitamin D3 levels. Therefore, vitamin D2 is equally as effective as vitamin D3 in maintaining 25-hydroxyvitamin D status.

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