

POSITION STATEMENT on VITAMIN D

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The American Academy of Dermatology recommends that an adequate amount of vitamin D should be obtained from a healthy diet that includes foods naturally rich in vitamin D, foods/beverages fortified with vitamin D, and/or vitamin D supplements. Vitamin D should not be obtained from unprotected exposure to ultraviolet (UV) radiation.

- Unprotected UV exposure to the sun or indoor tanning devices is a known risk factor for the development of skin cancer.¹
 - Studies have shown that UV radiation from both the sun and tanning devices can cause oncogenic mutations in skin cells.^{2,3} Use of sunbeds has also been associated with increased risk for melanoma and squamous cell carcinoma.⁴
- There is no scientifically validated, safe threshold level of UV exposure from the sun or indoor tanning devices that allows for maximal vitamin D synthesis without increasing skin cancer risk.
- To protect against skin cancer, a comprehensive photoprotective regimen, including the regular use and proper use of a broad-spectrum sunscreen, is recommended.⁵
- Many epidemiological studies have shown an association between low serum vitamin D levels and poor bone health. Emerging scientific evidence also suggests vitamin D status may influence certain types of cancers, neurologic disease, infectious disease, autoimmune disease and cardiovascular disease.⁶⁻¹⁵
 - It should be emphasized that a recent review of this topic by the National Academy of Sciences Institute of Medicine (IOM) concluded that the evidence for associating vitamin D status with outcomes not related to bone health was inconsistent, inconclusive as to causality, and insufficient to inform nutritional requirement.¹⁶
- A blood test to measure serum vitamin D level, expressed as the 25-hydroxyvitamin D [25(OH)D], is widely available.¹⁷

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- The IOM has concluded that a level of 20 ng/ml (=50 nmol/liter) should be considered adequate¹⁸; the long term safety of 25(OH)D levels above 50 ng/ml (=125 nmol/liter) is unknown.
- Based on currently available scientific evidence that supports a key role of calcium and vitamin D in skeletal health, the IOM Recommended Dietary Allowance (RDA) for calcium and vitamin D intake is shown in Table 1.
 - It should be noted that the RDA was derived based on minimal or no sun exposure due to inconsistent contributions of sunlight to Vitamin D in the population and the risk of cancer associated with sun exposure

TABLE 1
2011 IOM CALCIUM AND VITAMIN D DIETARY REFERENCE INTAKES¹⁸

Life Stage Group (age and gender)	Calcium		Vitamin D	
	RDA (mg/d) ^a	Upper Limit (UL) (mg/d)	RDA (IU/d)*	Upper Limit (UL) (IU/d)
0-6 mo (M+F)	200 ^b	1000 ^b	400 ^b	1000 ^b
6-12 mo (M+F)	260 ^b	1500 ^b	400 ^b	1500 ^b
1-3yr (M+F)	700	2500	600	2500
4-8yr (M+F)	1000	2500	600	3000
9-13yr (M+F)	1300	3000	600	4000
14-18yr (M+F)^c	1300	3000	600	4000
19-30yr (M+F)^c	1000	2500	600	4000
31-50 yr (M+F)	1000	2500	600	4000
51-70 yr (M)	1000	2000	600	4000
51-70yr (F)	1200	2000	600	4000
71+yr (M+F)	1200	2000	800	4000

^a RDA = intake that covers needs of 97.5% of the healthy normal population.

^b Reflects Adequate Intake (AI) reference value rather than RDA. RDAs have not been established for infants due to insufficient data.

^c Calcium and vitamin D RDAs are the same for pregnant or lactating females in these age groups.

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This statement reflects the best available data at the time the report was prepared. However, caution should be exercised in interpreting the data. The results of future studies may require alteration of the conclusions or recommendations in this report.