

Vitamin D: A Simple Yet Effective Strategy for Preventing Diabetes

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Received: 9 November 2024 / **Revised:** 10 December 2024 / **Accepted:** 15 December 2024 / **Available Online:** 21 December 2024

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Citation: Owais M, Dahara S, Shaikh Q. Vitamin D: A simple yet effective strategy for preventing diabetes. *J Sci Technol Educ Art Med.* 2024;1(2):44-45

Over a billion individuals worldwide lack sufficient amounts of vitamin D, a fat-soluble vitamin that regulates more than 300 genes. Concurrently, diabetes is a major worldwide health concern that raises mortality and morbidity in a variety of populations.

As diabetes is currently a common endocrine condition, the prevalence of type 2 diabetes (T2D) is predicted to rise sharply over the next several decades. Therefore, addressing prediabetes is essential for preventing its progression into diabetes.

Insufficient vitamin D levels significantly impact the pathogenesis of both type 1 and type 2 diabetes. Vitamin D is critical for regulating glucose homeostasis by enhancing insulin production, decreasing inflammation, and improving insulin sensitivity.¹ Many studies have linked low vitamin D levels to an increased risk of diabetes. However, further research is needed to understand the underlying mechanism fully. Although routine vitamin D supplementation is not recommended for the general public, it may be beneficial for those with prediabetes, according to current recommendations. In particular, Vitamin D supplementation has been shown in studies to reduce the incidence of type 2 diabetes progression by 10% to 15%.²

For those under 70 years of age, 600 IU is the recommended daily dosage; for those over 70, 800 IU. In addition, it is recommended to get at least

30 minutes of sun exposure every day between 9 and 11 a.m. during the spring and summer months to promote the synthesis of vitamin D. However, sun-induced vitamin D production can be affected by several factors, including age, skin pigmentation, sunscreen use, pollution in the air, location, height, daytime, and time of year. Furthermore, vitamin K2 is also essential as it enhances the benefits of vitamin D by assisting in the direction of calcium toward the bones rather than the artery walls.

Given the significant public health implications, we urge medical professionals and governments to prioritize vitamin D deficiency, prediabetes management and take important action. In addition, enhancing public awareness, conducting screenings, and providing suitable supplements could greatly reduce the likelihood of diabetes and its related medical expenses.

Acknowledgment

None

Funding

None

Conflict of Interest

None

Author Contribution

All authors 1) made substantial contributions to the conception and design, and acquisition of data; 2) drafted the article or revised it critically for important intellectual content; 3) gave final approval of the version to be published.

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