

Vitamin D: A Simple Yet Effective Strategy for Preventing Diabetes

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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 levels of vitamin D have a significant impact on the pathogenesis of diabetes, both type 1 and type 2. 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 may not be recommended for the general public, it may be advantageous for those who have 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 80, 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 calcium's direction 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 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.

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