



D POWER

to Optimize Glucose Control

Vitamin D has a potential impact on the optimization of diabetes control and prevention of various diabetes complications, besides its role in calcium and bone homeostasis. Vitamin D supplementation is known to effectively lower blood glucose, improve insulin sensitivity and promote anti-inflammatory response. Fermenta, a leading manufacturer of Vitamin D, presents this D-Essence Newsletter to highlight the latest research on the Role of Vitamin D in Blood Sugar Regulation.

Vitamin D supplementation may offer glycemic and lipid control in diabetes

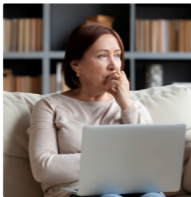
The impact of Vitamin D supplementation on glycemic control and lipid profile among 254 individuals with diabetes and Vitamin D deficiency (< 50 nmol/L) was investigated in a retrospective hospital-based study. After receiving Vitamin D supplements for ≥ 3 months, the mean Vitamin D level increased by 20.1 nmol/L compared to baseline, with 97.2% patients achieving sufficiency (> 50 nmol/L). Additionally Vitamin D supplementation significantly lowered HbA1c, FBG and LDL levels by 1.1%, 1.2 mmol/L and 0.5 mmol/L, respectively, Vs. baseline. Vitamin D supplementation resulted in the control of HDL and TC levels in 55.6% and 34.7% of patients who presented with their respective uncontrolled levels at baseline.

Alqadi A et al. Eur Rev Med Pharmacol
Sci. 2025 May;26(5):248-257

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Vitamin D deficiency possibly elevates diabetic complications in T2DM



The association between Vitamin D status and diabetic complications among T2DM patients was assessed in a case-control study (case: n = 873 and control: n = 566). After adjusting for appropriate variables, Vitamin D deficiency (<20 ng/mL) was found to be a significant predictor for the development of diabetic complications: with a greater odds of experiencing neuropathy (4-fold), nephropathy (5-fold), retinopathy (2.5-fold), ischemic heart disease (2-fold) and diabetic foot disease (2.7-fold). Vitamin D levels were significantly correlated with factors affecting sun exposure like gender, place of residence and type of occupation.

Chackochan A et al. Nutr Health.
2025 Jul;24:2601960251259708

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Vitamin D supplementation might promote diabetic foot ulcer healing



A meta-analysis of 7 studies evaluated the impact of Vitamin D supplementation on diabetic foot ulcer healing. Among 580 patients, Vitamin D supplementation was associated with a 42% greater rate of wound healing efficiency compared to the control group. Additionally, Vitamin D supplementation improved glucose metabolism and insulin indexes estimated by HbA1c, fasting insulin and HOMA- β with a mean difference of -0.44, -3.75 and -5.14, respectively, Vs. control (P < 0.01 for all indexes). Furthermore, Vitamin D supplementation also reduced inflammation and oxidative stress.

Wu X et al. Postgrad Med J.
2025 Jan;23:101(1192):100-107

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