

Vitamin B12 Supplementation in Diabetic Neuropathy (DN): A 1-Year, Randomized, Double-Blind, Placebo-Controlled Trial

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- In this prospective, double-blind, placebo-controlled trial, 90 patients with type 2 diabetes on metformin for at least four years and with both peripheral & autonomic diabetic neuropathies, were randomized into two groups.
- An active treatment group (n=44) receiving vitamin B12 and control group (n=46) receiving placebo.
- Vitamin B12 levels increased from 232.0 ± 71.8 at baseline to 776.7 ± 242.3 pmol/L after 1 year follow-up, in the active group but not in the control group.
- Vibration perception threshold (VPT), michigan neuropathy screening instrument questionnaire (MNSIQ), quality of life (QoL), pain score, sural nerve conduction velocity (SNCV), sural nerve action potential (amplitude) (SNAP), and electrochemical skin conductance in feet (ESCF) significantly improved in the active group.

The treatment of patients with DN with oral Methylcobalamin for 12 months increased plasma B12 levels and improved all neurophysiological parameters.