

THE EFFECTIVENESS OF CHROMIUM IN TREATING  
PATIENTS WITH TYPE 2 DIABETES MELLITUS

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## ABSTRACT

Chromium is an essential nutrient that has been extensively researched over the years in its role in glucose metabolism. The previous trials have shown the beneficial effects of chromium in improving glycemic control in patients with type 2 diabetes mellitus. This study was aimed to find out the effect of chromium on haemoglobin A1c (HbA1c), fasting insulin levels and fasting glucose levels in patients with type 2 diabetes mellitus. A computer-aided search on PubMed, Cochrane and Google scholar was conducted to identify relevant studies published from 2003 up to December 2013. This study was a structured review of 16 articles which met the inclusion and exclusion criteria during literature search on databases; of these, 8 used chromium picolinate, 4 used chromium enriched yeast, 2 used brewer's yeast, 1 used chromium containing-milk powder and 1 used herbo-chromium. 16 studies evaluated effects of chromium on HbA1c, 15 addressed effects on fasting glucose levels and 7 studies reported the effects of chromium on fasting insulin levels. From this review, 9 studies showed reduction in HbA1c levels, 13 studies reported improvement in fasting glucose levels and 4 studies showed trend towards lowering fasting insulin level after chromium supplementation. The results from the selected studies in this review indicate that the beneficial effect of chromium in diabetes mellitus type 2 still remains inconclusive and controversial. Thus, the future studies with larger sample size and longer follow-up duration together with the control group for comparison are needed to confirm the efficacy and safety of the chromium supplementation in the management of type 2 diabetes mellitus.