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Reversal of corticosteroid-induced diabetes mellitus with supplemental chromium.

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AIMS: To determine if the stress of corticosteroid treatment increases chromium (Cr) losses and if corticosteroid-induced diabetes (steroid diabetes) can be reversed by supplemental chromium. **METHODS:** The effects of corticosteroid treatment on chromium losses of 13 patients 2 days prior to steroid administration and the first 3 days following treatment were determined. Since steroid-induced diabetes was associated with increased chromium losses and insufficient dietary chromium is associated with glucose intolerance and diabetes, we treated three patients with steroid-induced diabetes with 600 microg per day of chromium as chromium picolinate. **RESULTS:** Urinary chromium losses following corticosteroid treatment increased from 155+/-28 ng/d before corticosteroid treatment to 244+/-33 ng/d in the first 3 days following treatment. Chromium supplementation of patients with steroid-induced diabetes resulted in decreases in fasting blood glucose values from greater than 13.9 mmol/l (250 mg/dl) to less than 8.3 mmol/l (150 mg/dl). Hypoglycaemic drugs were also reduced 50% in all patients when given supplemental chromium. **CONCLUSIONS:** These data demonstrate that corticosteroid treatment increases chromium losses and that steroid-induced diabetes can be reversed by chromium supplementation. Follow-up, double-blind studies are needed to confirm these observations.

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