## Vitamin D deficiency in patients with chronic gastrointestinal disorders: response to UVB exposure.

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UVB irradiation of the skin of patients with chronic gastrointestinal disorder (CGD) and decreased serum concentrations of 25-OHD (6.8 +/- 3.0 ng/ml, n = 15) result in a subsequent increase in circulating vitamin D and 25-hydroxyvitamin D (25-OHD) levels and is associated with a marked increase in calcuria (mean increase: 82 mg/d). Before UVB irradiation the mean total 1,25-(OH)2D concentration (48 +/- 12 pg/ml) and free 1,25-(OH)2D index (2.0 +/- 0.5) in CGD was not different from the values obtained in age-matched healthy controls (51 +/- 12 pg/ml and 2.0 +/- 0.8, respectively), but the mean PTH levels were significantly higher in CGD (135 +/- 62 pg/ml) than those in controls (45 +/- 19 pg/ml, p < 0.01). During and after UVB irradiation of CGD, mean 1,25-(OH)2D levels (129 +/- 32 pg/ml) as well as free 1,25-(OH)2D index (5.5 +/- 1.5) were on the rise with a maximum reached on the 14th day and were paralleled with a drop in PTH (72 +/- 24 pg/ml) concentration. These data indicate that UVB stimulated calciuria in CGD is due to increased synthesis of 1,25-(OH)2D and suppression of PTH.

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