

## HYPOVITAMINOSIS D AND HYPOTESTOSTERONEMIA IN SCHIZOPHRENIA PATIENTS

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**Introduction:** Several studies have suggested that vitamin D and testosterone levels may be physiologically and pathologically interlinked. However this relationship has not been studied in schizophrenia.

**Objectives:** To demonstrate an association between vitamin D and testosterone levels in schizophrenia.

**Aims:** To establish that hypovitaminosis D is associated with hypotestosteronemia.

**Methods:** Laboratory data of all male patients with schizophrenia seen for annual physicals in our office was reviewed. Vitamin D was measured as 25-hydroxyvitamin D and classified as follows: more than 30 ng/ml: normal; 21 to 30 ng/ml: mild deficiency; 11 to 20 ng/mL: moderate deficiency; 10 ng/ml or less: severe deficiency. Testosterone levels were tested by L/MS-MS methodology (normal: 348.0-1197 ng/dL).

**Results:** 47 male patients had both vitamin d and testosterone measured: Of these 47, 36 (77%) had hypovitaminosis D and 20 (43%) had LTL. Of the 11 with normal vitamin d levels, 2 (18%) had LTL and 8 (82%) had NTL. Of the 36 with low vitamin D, 18 (50%) had LTL and 18 had NTL (50%). Of the 6 with severe deficiency, 4 (66%) had low and 2 had normal testosterone levels (NTL); of the 15 with moderate deficiency, 7 (47%) had LTL and 9 had NTL and of the 15 with mild deficiency, 7 (47%) had LTL and 8 had NTL.

**Conclusions:** Vitamin D deficiency appears to be closely related to low testosterone levels in a male schizophrenic population. Supplementation with both vitamin D and testosterone may be needed in these patients.