

ABSTRACT

THESIS: Vitamin D Status of Morbidly Obese Bariatric Surgery Patients at a Community Bariatric Center

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The purpose of this ex-post facto study was to examine the link between serum 25-hydroxyvitamin D, BMI, and percent of excess weight loss after laparoscopic bariatric surgery among morbidly obese men and women at a Midwest bariatric center. Having a normal serum level of 25-hydroxyvitamin D is important for maintaining bone health and preventing osteomalacia in adults. Shown from past research morbid obese patients are often deficient in 25-hydroxyvitamin D. Deficiency in serum 25-hydroxyvitamin D has been documented in 50-80 % of patients after Roux-en-Y gastric bypass, suggesting that 25-hydroxyvitamin D deficiency after bariatric surgery is multifactorial and, in part, is caused by preoperative 25-hydroxyvitamin D deficiency rather than postoperative malabsorption alone. Pearson's Correlation test, independent samples t-tests, paired-samples t-test and a linear regression was performed to determine what degree BMI, calcium, 25-hydroxyvitamin D and PTH (six and twelve months post-surgery) are affected before surgery, and six and twelve months post-surgery. Statistical significance was set at $p \leq 0.05$. Pre-surgery 25-hydroxyvitamin D mean value was 20.50 ng/mL indicating on average that patients involved in this study were deficient prior to surgery. The results of this study show that the patient's 25-hydroxyvitamin D level did significantly improve

when BMI and total body fat decreased post-surgery with the help of the prescribed vitamin D₃ supplementation.