Calcium and Vitamin D Supplementation After Gastric Bypass Surgery
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Individuals who undergo gastric bypass surgery have reduced ability to absorb vitamins and electrolytes which places them at higher risk of developing severe nutritional and vitamin deficiencies. These deficiencies include, but are not limited to, vitamin A, B, C, D, E, K, folate, calcium, iron, zinc and magnesium. Calcium and vitamin D deficiencies are commonly seen before and after the surgery and generally require additional supplementations.

In patients who have had gastric bypass or sleeve gastrectomy, there is a significant reduction in stomach acid interfering with the absorption of calcium. It is suggested that calcium citrate improves the absorption regardless of acidic environment in stomach compared to calcium carbonate. The recommended dose of calcium citrate is 1500 mg to 2000 mg of calcium daily. The total daily dose of calcium should be divided into 500 mg to 600 mg per dose two to three times a day and should be taken two hours before or after ingestion of iron or multivitamins.

Vitamin D is necessary for the absorption of calcium to maintain adequate serum calcium. Many studies have also linked low levels of vitamin D to various diseases such as cancer, osteoporosis and cardiovascular diseases. Most over-the-counter vitamin D products are available in forms of vitamin D3 also known as cholecalciferol. Due to decreased absorption of vitamin D in small intestine after the surgery, it is recommended to take additional 800 IU to 2000 IU of vitamin D per day.

Research has shown that majority of patients with gastric bypass surgery have nutritional deficiencies regardless of daily use of multivitamins. Therefore, additional supplementations of calcium in the citrate form and vitamin D are necessary to maintain adequate serum levels and to prevent secondary long-term complications.

References


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