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Gastric bypass surgery patients warrant special attention for preventing urinary stones

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Obesity rates have steadily risen throughout the industrialized world, with America leading the way. Currently more than 15 million Americans fall into the extreme categorization of morbid obesity, defined as body mass index (BMI) >40. Several weight reduction treatment options exist for these patients, with surgical intervention representing an effective and popular approach. Overall, surgical approaches are categorized as restrictive, malabsorptive, or a combination of the two. Fortunately, restrictive approaches, “lap banding” or sleeve gastrectomy, do not yield an increased risk for nephrolithiasis. The same cannot be said for malabsorptive approaches, with the Roux-en-Y gastric bypass (RYGB) representing the most popular of these. These have been clearly shown to lead to increases in urinary oxalate and calcium while leading to a decrease in urine volume and urinary citrate where the risk of a future calculus after RYGB is 2-3 fold greater. To combat these changes, both human and animal studies support the utilization of dietary modifications (reduction of oxalate and fatty foods, increased oral hydration, and supplementation with citric salts and calcium) to reduce the risk of nephrolithiasis formation (1). These dietary change recommendations, however, must be carefully made

for patients, for whom changes in gut transit time and potentially hydration status and capacity to eat food may be drastically altered. For example, in these nephrolithiasis patients with a rapid gut transit time, we routinely recommend against restricted sodium intake, contrary to recommendations given to most stone formers. Additional routine recommendations we provide to stone-forming patients who are status post RYGB include increased oral hydration, calcium in the form of dairy or calcium tablets with all meals, and often times potassium citrate supplementation. These patients should have established, long term relationships with their dietary and stone specialists to prevent recurrence of stones.

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