

After bariatric op, controlled diet can aid CaOx supersaturation

9 August 2012



Image courtesy of Blaussen Medical

After bariatric surgery, following a diet that is normal in calcium, low in oxalate, and moderate in protein, can improve urinary calcium oxalate supersaturation, but not urinary oxalate excretion, in patients with a history of kidney stones, according to a study published in the August issue of *Urology*.

(HealthDay) -- After bariatric surgery, following a diet that is normal in calcium, low in oxalate, and moderate in protein, can improve urinary calcium oxalate (CaOx) supersaturation, but not urinary oxalate excretion, in patients with a history of kidney stones, according to a study published in the August issue of *Urology*.

Using data from nine patients with a history of CaOx [kidney stones](#) and mild hyperoxaluria who underwent bariatric surgery, Ran Pang, from the Mayo Clinic in Rochester, Minn., and colleagues investigated the effect of a controlled metabolic diet on reducing urinary CaOx supersaturation. Baseline 24-hour [urine samples](#) were collected while participants consumed a free choice diet. Before two final 24-hour urine collections, participants were then instructed to consume a controlled diet low in oxalate (70 to 80 mg/day), normal in calcium (1,000 mg/day), and moderate in protein.

The researchers found that urinary CaOx

supersaturation decreased significantly, from 1.97 ± 0.49 delta Gibbs (DG) with the free choice diet to 1.13 ± 0.75 DG with the controlled diet. This decrease occurred without a significant alteration in urinary oxalate [excretion](#) (0.69 ± 0.29 mmol/day with the free choice diet versus 0.66 ± 0.38 mmol/day with the controlled diet). The change in CaOx supersaturation was partially due to nonsignificant increases in urinary volume, citrate, and pH.

"The results of the present study suggest that a diet, normal in calcium and moderate in protein, can improve urinary CaOx supersaturation in patients after bariatric surgery," the authors write. "However, such a balanced low-oxalate diet did not normalize urinary oxalate excretion by itself."

More information: [Abstract](#)
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APA citation: After bariatric op, controlled diet can aid CaOx supersaturation (2012, August 9) retrieved 15 November 2019 from <https://medicalxpress.com/news/2012-08-bariatric-op-diet-aid-caox.html>

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