

# Bariatric surgery linked to increased fracture risk

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People who have had gastric bypass surgery or other bariatric weight-loss surgery have an even higher increased risk of breaking bones than previously found. These study findings will be presented Tuesday at The Endocrine Society's 93rd Annual Meeting in Boston.

"A negative effect on bone health that may increase the risk of fractures is an important consideration for people considering bariatric [surgery](#) and those who have undergone bariatric surgery," said lead author Kelly Nakamura, a medical student at Mayo Clinic College of Medicine in Rochester, Minn.

Nakamura reported the final analysis of research presented two years ago in a small subset of the 258 patients included in this study. This full analysis showed that patients who had bariatric surgery have 2.3 times the chance of fractures compared with the general population, as opposed to the 1.8-fold increased risk found initially.

Patients who had bariatric surgery had an increased risk of a fracture at nearly all skeletal sites studied, according to the authors. The chance of breaking a foot or hand was especially high—about three times what would be expected, Nakamura said.

For comparison, the investigators studied the patients' actual fracture rates reported in their medical records versus the expected fracture rates among people of the same age and sex living in the same county in Minnesota. Patients underwent bariatric surgery at Mayo Clinic Rochester between 1985 and 2004, with 94 percent of patients having a gastric bypass.

A total of 79 patients had 132 fractures during an average follow-up of nine years, the authors reported. On average, they experienced their first fracture about six years after surgery. This is a time when their primary health care provider, rather

than their surgeon, usually is responsible for their care, said the study's principal investigator, Kurt Kennel, MD, an assistant professor of medicine in the endocrinology division at Mayo Clinic.

After evaluating various [fracture risk](#) factors, the researchers found that patients who were more physically active before surgery had a lower fracture risk than those who were less active. Some of these obese patients may have been too debilitated to exercise, Kennel suggested.

"Clinicians may need to consider measures to optimize bone health and reduce fracture risk after bariatric surgery, such as fall prevention and optimizing calcium and vitamin D nutrition," he said.

Kennel stressed, however, that the patients who had fractures did not necessarily develop osteoporosis. He said, "There are no data on whether bisphosphonates [osteoporosis medications] are safe or appropriate for this patient population. Further research is needed to understand why bariatric surgery negatively affects [bone health](#) and how best to prevent these fractures."

Provided by The Endocrine Society

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