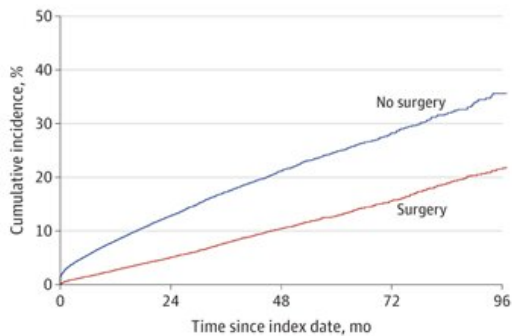


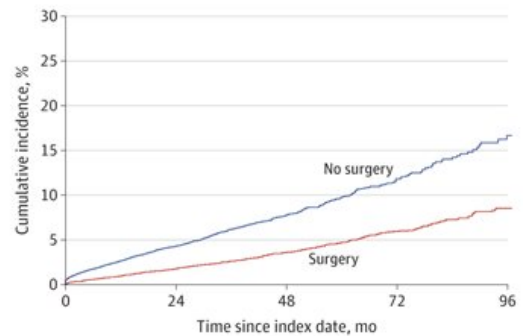
# Bariatric surgery decreases risk of heart disease

November 14 2022

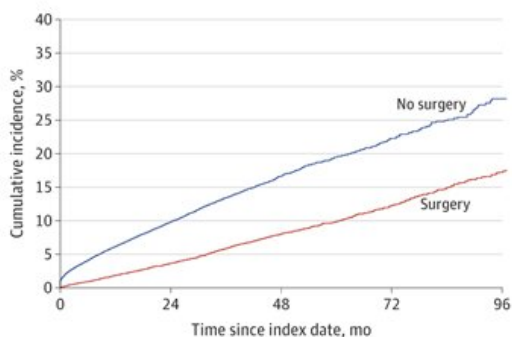
**A** Composite CVEs



**B** Primary outcomes



**C** Secondary outcomes



Individuals who received nonsurgical care (n = 58 356) and individuals with surgical care (n = 28 608) experienced 7215 and 1568 incidences of CVEs (A), 2401 and 549 incidences of primary composite CVD outcome (B), and 5424 and 1191 incidences of secondary composite CVD outcome (C), respectively. Bariatric surgery status was modeled as a time-varying variable. Survival estimates were obtained using the Simon-Makuch method. The Mantel and Byar

test for survival comparisons of data with a time-varying covariate had P 40), has shown that those who underwent bariatric surgery suffered far fewer extreme cardiovascular events subsequently.

Reporting their results in *JAMA Network Open*, the Rutgers team, along with collaborators from Ohio State University, reported that [obese patients](#) undergoing bariatric surgery were nearly 50% less likely to develop adverse cardiovascular events such as heart attacks, angina or strokes.

"The findings provide evidence in support of bariatric surgery as an effective therapeutic tool to lower elevated risk of cardiovascular disease for select individuals with obesity and NAFLD," said Vinod K. Rustgi, Distinguished Professor of Medicine, clinical director of Hepatology and director of the Center for Liver Diseases and Liver Masses at Rutgers Robert Wood Johnson Medical School. "These finding are tremendously impactful for many reasons."

Heart disease is the leading cause of death for men and women across the board for racial and [ethnic groups](#) in the United States. About 697,000 people in the country died from [heart disease](#) in 2020, according to the U.S. Centers for Disease Control and Prevention.

NAFLD, and a more advanced form known as NASH, are rapidly increasing causes of [liver disease](#), and can impact people who drink little to no alcohol. The condition, which occurs because too much fat is being stored in liver cells, inciting an inflammatory state, is more common in people with obesity and type 2 diabetes.

In the study, researchers analyzed outcomes data, using the MarketScan Commercial Claims and Encounters medical insurance database, from 2007 to 2017. Of 230 million covered individuals, 86,964 adults between the ages of 18 and 64 who had obesity and NAFLD were

identified. Of those, 68% of the [study group](#) were female, 35% underwent bariatric surgery and 65% received nonsurgical care.

Bariatric surgery patients experienced a 49% decrease in the risk of developing major cardiovascular events such as heart attacks, heart failure or ischemic strokes. They were also far less likely to experience angina, atherosclerotic events or arterial blood clots.

The association between bariatric surgery and risk reduction of developing cardiovascular disease has not been studied to this level of detail before, the researchers said.

There is growing evidence that bariatric surgery, because of the weight reduction it brings about in patients, offers definitive health benefits. A [study](#) conducted by Rustgi and colleagues, published in the journal *Gastroenterology* in March 2021, showed that bariatric surgery can also significantly reduce the risk of cancer—especially obesity-related cancers—in obese individuals with NAFLD. Importantly, these cancers included colorectal, pancreatic, endometrial, thyroid cancer, multiple myeloma and hepatocellular carcinoma.

"Although [bariatric surgery](#) is a more aggressive approach than lifestyle modifications, it may be associated with other benefits, such as improved quality of life and decreased long-term health care burden," Rustgi said.

Other Rutgers physicians and statisticians in the study included You Li, and Carlos Minacapelli, both in the Division of Gastroenterology and Hepatology at Rutgers Robert Wood Johnson Medical School. Mohamed Elsaid, who worked with this team while obtaining his Ph.D. at Rutgers, is now on faculty at Ohio State.

**More information:** Mohamed I. Elsaid et al, Association of Bariatric

Surgery With Cardiovascular Outcomes in Adults With Severe Obesity and Nonalcoholic Fatty Liver Disease, *JAMA Network Open* (2022).

[DOI: 10.1001/jamanetworkopen.2022.35003](https://doi.org/10.1001/jamanetworkopen.2022.35003)

Provided by Rutgers University

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