

Study: 40-year follow up shows significant reduction in death rates after bariatric surgery

January 25 2023



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A new retrospective study with up to 40 years of follow up shows significant reductions in death rates from all causes and cause-specific

conditions such as cardiovascular disease, diabetes and cancer in patients who have undergone bariatric surgery compared to non-surgical participants with severe obesity, according to a new study in *Obesity*.

The study also found evidence suggesting increased risk of death from [chronic liver disease](#), in addition to [higher death rates](#) from suicide in younger patients who had bariatric surgery compared to non-surgical participants. The study's authors observe that the findings of increased suicide rates among younger patients who have had bariatric surgery may promote more aggressive, pre-surgical psychological screening and post-surgery follow up.

As a result of the decades-long durability of bariatric surgery in reducing death from all causes and decreasing deaths related to cardiovascular disease, diabetes and cancer compared to matched participants, researchers note the findings may not only increase interest in bariatric surgery treatment for patients with [severe obesity](#) but, in addition, further stimulate important research related to the discovery of physiologic and biomolecular mechanisms leading to non-surgical treatment that results in weight loss and improved mortality similar to that achieved by bariatric surgery, said Ted D. Adams, Intermountain Surgical Specialties/Digestive Health Clinical Program, Intermountain Healthcare, Salt Lake City, Utah; Division of Epidemiology, Department of Internal Medicine, School of Medicine and Department of Nutrition and Integrative Physiology, University of Utah, Salt Lake City. Adams is the corresponding author of the study.

Experts explain that multiple association studies connecting bariatric surgery and mortality outcomes have been reported, pre-dominantly retrospective, with wide variation in [study design](#) pertaining to participant number, control cohorts, mean follow up, procedure type, age at surgery, clinical end points such as life expectancy and [death rates](#) for all causes and specific causes, and presence or absence of prevalent

diabetes. The new study builds upon the groups' reported mortality outcomes following gastric bypass surgery by extending follow up to 40 years, tripling the number of surgical patients, and using four, instead of one, bariatric surgery procedures.

Researchers used data from the Utah Population Database (UPDB) for the current study. The UPDB includes linked, population-based information from Utah with statewide birth and death certificates, driver licenses and ID cards, and voter registration cards. The UPDB creates and maintains links between the database and the medical records held by the two, largest health care providers in Utah.

Patients who had undergone bariatric surgery in Utah between 1982 and 2018 were identified from three, large bariatric surgical practices in Salt Lake City, Utah, and from [medical records](#) from the University of Utah and Intermountain Healthcare Enterprise Data Warehouses in Salt Lake City. Non-surgical participants were selected from Utah driver license records or ID cards. Because driver licenses are generally renewed every five years, multiple records were available for selection for matching to the bariatric surgeries.

Nearly 22,000 participants with bariatric surgery and without were matched (1:1) for age, sex, body mass index and surgery date with a driver license/renewal date. Mortality rates were compared by Cox regression and stratified by sex, surgery type and age at surgery. Whereas mortality after [gastric bypass surgery](#) was previously reported from 1984 to 2002, this study extends mortality follow up through 2021. The four bariatric surgery procedures included Roux-en-Y gastric bypass, adjustable gastric banding, sleeve gastrectomy and bilio-pancreatic diversion with duo-denal switch.

Results revealed that all-cause mortality was 16% lower in patients who had bariatric surgery compared to non-surgical participants. Lower

mortality was observed for both males and females. Mortality after surgery versus non-surgery decreased by 29%, 43% and 72% for [cardiovascular disease](#), cancer and diabetes, respectively. Death rates for males and females from chronic liver disease were 83% higher in patients who had surgery compared to non-surgical participants. The hazard ratio for suicide was 2.4 times higher in surgery compared with non-surgery participants, primarily in individuals with ages at surgery between 18 and 34 years.

"This important study adds to the mounting evidence that [bariatric surgery](#), not only improves quality of life for patients, but will also increase their life expectancy. This work will hopefully improve patients' access to this effective treatment for obesity, which is still limited to only one percent of qualified patients. Also, the study highlights the importance of providing more resources for pre-surgical psychological screening and post-[surgery](#) follow up, especially for [younger patients](#)," said Jihad Kudsi, MD, MBA, MSF, DABOM, FASMBS, FACS, Bariatric Surgery Division, Duly Health and Care, Downers Grove, Ill. Kudsi was not associated with the research.

The study, titled "Long-term All-Cause and Cause-Specific Mortality for Four Bariatric Surgery Procedures" will be published in the February 2023 print edition of *Obesity*.

More information: Long-term All-Cause and Cause-Specific Mortality for Four Bariatric Surgery Procedures, *Obesity* (2023). [DOI: 10.1002/oby.23646](https://doi.org/10.1002/oby.23646). onlinelibrary.wiley.com/doi/10.1002/oby.23646

Provided by The Obesity Society

Citation: Study: 40-year follow up shows significant reduction in death rates after bariatric

surgery (2023, January 25) retrieved 25 April 2024 from
<https://medicalxpress.com/news/2023-01-year-significant-reduction-death-bariatric.html>

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