

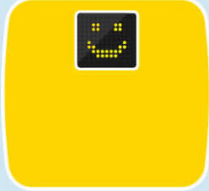



Bariatric surgery more effective than medical and lifestyle interventions for diabetes control and remission: Study


February 27 2024

Bariatric surgery vs medication for Type 2 diabetes
ARMMS-T2D Trial

Bariatric surgery:

 <p>More effectively lowers A1C</p>	 <p>Leads to less medication use</p>
 <p>Sustained weight loss over 12 years</p>	 <p>Higher rates of diabetes remission</p>

Source: JAMA

 **Cleveland Clinic**

Credit: Cleveland Clinic

Bariatric surgery is more effective than medical and lifestyle modifications for achieving long-term type 2 diabetes control and remission, according to new research led by a University of Pittsburgh School of Medicine surgeon-scientist and [published](#) in *JAMA*.

In the largest and longest randomized follow-up study to date, the researchers also found that bariatric surgery improved cholesterol and triglyceride levels more effectively than did medical and [lifestyle modifications](#). Since diabetes and cholesterol are important risk factors for [heart disease](#), the management of both may contribute to fewer heart attacks, strokes and other complications.

"This analysis is the strongest evidence we have to date that bariatric surgery is a safe and effective tool for achieving [diabetes control](#) and remission," said lead author Anita Courcoulas, M.D., M.P.H., professor in Pitt's Department of Surgery and chief of the Minimally Invasive Bariatric Surgery Program at UPMC.

Researchers compared various outcomes—measures of blood sugar control (HbA1c), [weight loss](#), as well as insulin and other diabetes medication usage—for participants enrolled in four separate, randomized [clinical trials](#) carried out between May 2007 and August 2013.

All four trials included patients with type 2 diabetes and obesity who either underwent bariatric surgery or participated in a medical and lifestyle program based on established interventions shown to reduce

diabetes risk. The researchers then pooled the data together into one study completed in 2022. Long-term outcomes were analyzed at seven and, when possible, 12 years post-randomization.

Patients in the bariatric surgery group consistently had lower HbA1c levels—reflecting better blood sugar control—than did the medical/lifestyle group at each follow-up point, despite starting the study with higher baseline values.

At year seven, 18.2% of participants in the surgery group had achieved diabetes remission, compared to 6.2% in the medical/lifestyle group. At year 12, the difference was even more stark: no patients in the medical/lifestyle group were in diabetes remission, compared to 12.7% in the surgery group. Even in those who did not experience remission, bariatric surgery led to superior blood sugar control with less diabetes medication use than did medical/lifestyle treatment.

The results were consistent across weight class groups, showing that surgery is equally beneficial for patients with body mass indexes (BMI) below and above 35 kg/m²—the typical cutoff for bariatric surgery treatment.

"This indicates that people with type 2 diabetes—even those below the BMI threshold for bariatric surgery for weight loss alone—should be offered bariatric surgery as a treatment for inadequately controlled diabetes," said Courcoulas. "These results further support the need for flexible and patient-centered care, based on an individual's health problems and goals."

Though the goal of this study was to analyze rates of diabetes control and remission, researchers also found that bariatric surgery was superior to medical/lifestyle interventions in terms of durable weight loss. At year 12, surgery patients had sustained an average of 19.3% weight loss,

compared to 10.8% for patients in the medical/lifestyle intervention group.

Researchers did not find differences in mortality or major cardiovascular events between the two groups. However, anemia, fractures and adverse gastrointestinal symptoms such as nausea and [abdominal pain](#) were more common among participants who underwent [bariatric surgery](#).

The analysis used data from randomized clinical trials performed at Pitt, Cleveland Clinic, Joslin Diabetes Center and Brigham and Women's Hospital, and the University of Washington and Kaiser Permanente Washington. Taken together, the trials included 355 patients with type 2 diabetes. The trials were performed before the widespread availability of GLP-1 agonist medications for diabetes management and weight loss.

Medical and lifestyle interventions across all four sites were based on national standards for intensive diabetes management and included physical activity and nutrition tracking, enhanced engagement with the health care team, stress management, [support groups](#) and medications available at the time of the studies' enrollment. Bariatric surgery procedures included Roux-en-Y [gastric bypass](#), sleeve gastrectomy, and adjustable gastric banding.

More information: Anita P. Courcoulas et al, Long-Term Outcomes of Medical Management vs Bariatric Surgery in Type 2 Diabetes, *JAMA* (2024). DOI: 10.1001/jama.2024.0318 , jamanetwork.com/journals/jama/.../1001/jama.2024.0318

Provided by University of Pittsburgh

Citation: Bariatric surgery more effective than medical and lifestyle interventions for diabetes control and remission: Study (2024, February 27) retrieved 27 April 2024 from <https://medicalxpress.com/news/2024-02-bariatric-surgery-effective-medical-lifestyle.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.