

# Gastric Bypass at 6 Years: Diabetes Remission Maintained

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ORLANDO – Cardiometabolic improvements following gastric bypass surgery persist over time, according to findings from the first prospective, long-term controlled trial to focus on gastric bypass patients.

After 6 years of follow-up, patients in the Utah Obesity Study who underwent the bariatric procedure maintained significant total weight loss and significant improvements in cardiovascular and metabolic measures and other disease end points relative to severely obese patients in the control group who did not undergo the surgery, according to Dr. Ted D. Adams, of the University of Utah in Salt Lake City.

Of the 1,156 morbidly obese subjects enrolled in the study, 418 underwent

the surgical group, Dr. Adams said. Echocardiography showed reduced left atrial volume and left ventricular mass, improvements that could potentially lead to reduction in obesity-related heart failure over time, he pointed out. The left atrial volume increased in the control group. Significant reductions in waist circumference, systolic blood pressure, heart rate, triglycerides, low-density-lipoprotein cholesterol, and insulin resistance were maintained at 6 years in the surgical

group, as were higher levels of high-density lipoprotein cholesterol, he said.

The claim that there was a 97% follow-up after 6 years is hard to believe, said Dr. Bruce Schirmer, who was asked to comment on the study. "We are unable to get anywhere near that percentage of follow-up of our bariatric patients," said Dr. Schirmer, an ACS Fellow and the Stephen H. Watts Professor of Surgery at the University of Virginia Health Sciences Center, Charlottesville. He also

wondered about who paid for the tests conducted for cardiac and pulmonary function, blood tests, and so on, in the nonsurgical group. Nonetheless, he said that this is an important report.

The findings complement other cohort studies in bariatric surgery, Dr. Adams stated. The cohort will continue to be followed to provide additional insight in the long-term durability of the improvements, he said.

Dr. Adams said he had no conflicts. ■

**BARIATRIC PATIENTS  
MAINTAINED SIGNIFICANT  
WEIGHT LOSS, IMPROVED CV  
AND METABOLIC MEASURES,  
AND DISEASE END POINTS.**

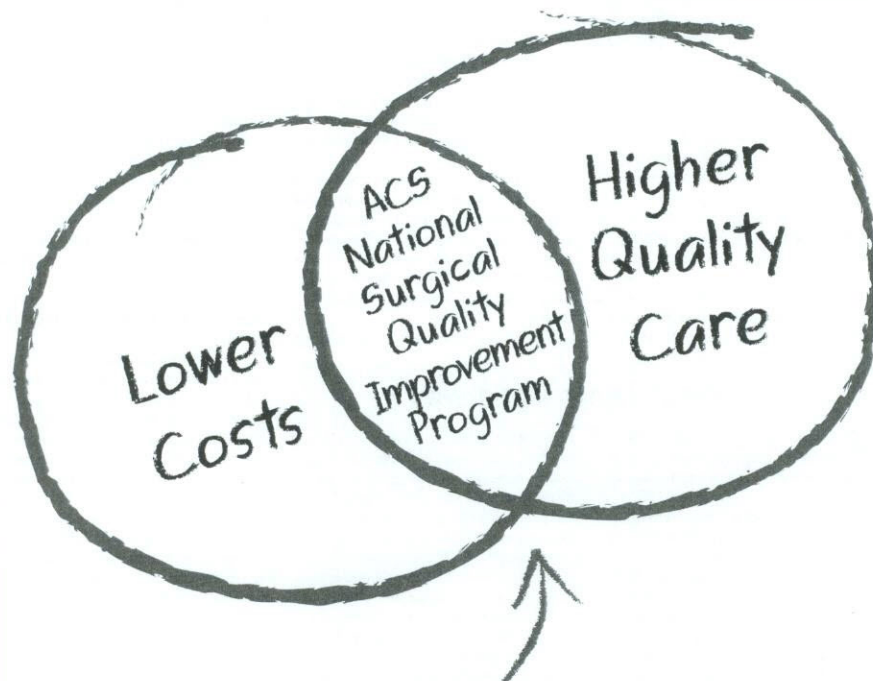
gastric bypass surgery; 417 sought the procedure but were unable to have it, primarily because of lack of health insurance; and 321 were randomly selected as community controls from the Utah Health Family Tree program.

All the participants underwent physical examinations and health evaluations at baseline, 2 years, and 6 years, including a physician interview and detailed medical history; resting electro- and echocardiograms; a submaximal exercise treadmill test and electrocardiogram; pulmonary function; limited polysomnography; resting metabolic rate; anthropometry; resting and exercise blood pressure; comprehensive blood chemistry; urinalysis; and dietary, quality of life, and physical activity questionnaires, Dr. Adams stated, noting that the 6-year follow up was "excellent," at 97%.

"In the surgical group, nearly all of the clinical measures improved significantly between the baseline and 2-year exams, and they remained significantly improved, compared with baseline at 6 years," Dr. Adams said. In contrast, he noted, "the clinical variables in the combined control groups changed minimally if at all over the 6-year period."

With respect to weight loss, the total weight reduction from baseline in the surgery group was 35% at 2 years and 28% at 6 years, while the average weight loss in the nonsurgical control subjects was negligible, Dr. Adams reported. Further, the rate of diabetes remission at 6 years was 75% in the surgical group and 1% in the combined controls, and the incidence of diabetes in the surgical and control groups at 6 years was 2% and 16%, respectively, he said.

Cardiac morphology measures were also significantly improved at 6 months in



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