



American Society for Metabolic & Bariatric Surgery

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FOR IMMEDIATE RELEASE

**NEW STUDY SHOWS ABOUT 60% REMAIN DIABETES-FREE
5 TO 16 YEARS AFTER GASTRIC BYPASS
Long-Term Resolution Most Likely in Non-Insulin Dependent
And Those That Maintain Most Weight Loss**

DALLAS – JUNE 24, 2009 – Nearly 90 percent of morbidly obese patients with Type 2 diabetes experienced diabetes resolution within the first year of gastric bypass surgery and about 60 percent remained diabetes-free five to 16 years later, according to a new study presented today at the 26th Annual Meeting of the American Society for Metabolic & Bariatric Surgery (ASMBS).

Those most likely to experience a recurrence of diabetes regained the most weight or had a more severe insulin-dependent form of diabetes prior to surgery. More than 75 percent of patients who were controlling their diabetes with dietary and lifestyle management and more than 65 percent who were using oral medications before surgery continue to be diabetes-free after gastric bypass surgery. About 70 percent of insulin-dependent patients had a recurrence of diabetes independent of weight loss or gain, and 40 percent of those who regained about 20 percent of the weight also experienced a return of the disease.

“The severity of the diabetes at the time of surgery and the regain of excess weight loss long-term seem to be the primary determinants of long-term diabetes resolution after gastric bypass surgery,” said James W. Maher, MD, professor of Surgery at Virginia Commonwealth University and co-author of the study. “This study suggests that people with Type 2 diabetes and morbid obesity who get surgery before becoming insulin-dependent have the greatest chance for complete resolution and avoiding the progression of diabetes.”

In a retrospective analysis, researchers at Virginia Commonwealth University studied 177 people with morbid obesity and Type 2 diabetes who had gastric bypass surgery between 1993 and 2003. Researchers divided patients into three categories based on their diabetes treatment prior to surgery: insulin dependent (59); oral medications (83); diet and lifestyle changes only (35). Patients were followed from five to 16 years.

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Patients who had a recurrence of diabetes regained about 10 percent more of their excess weight than those with no recurrence. On average, patients who remain free of diabetes had excess weight loss of about 73 percent while diabetes returned in those that had 66 percent excess weight loss.

“Our study suggests that the short-term resolution of diabetes that is independent of weight loss may be different than the mechanism that is responsible for long-term resolution,” added Dr. Maher. “In any case, bariatric surgery remains one of the most effective treatments for diabetes and morbid obesity.”

Nearly 24 million Americans are affected by diabetes¹ and the total estimated cost of diabetes in 2007 was \$174 billion, including \$116 billion in excess medical expenditures and \$58 billion in reduced national productivity.² About 50 percent of men and 70 percent of women who have the disease are obese.³

People who are morbidly obese are generally 100 or more pounds overweight, have a BMI of 40 or more, or a BMI of 35 or more with an obesity-related disease, such as Type 2 diabetes, heart disease or sleep apnea. According to the ASMBS, more than 15 million Americans are considered morbidly obese and in 2008 an estimated 220,000 people had some form of bariatric surgery. The most common methods of bariatric surgery are laparoscopic gastric bypass and laparoscopic adjustable gastric banding (LAGB).

The American Diabetes Association (ADA) recently recommended bariatric surgery be considered for adults with BMI \geq 35 and Type 2 diabetes, especially if diabetes is difficult to control under current therapy.⁵

Two landmark studies, published in the *New England Journal of Medicine* in August 2007, showed patients with morbid obesity who have bariatric surgery (including gastric banding, gastric bypass, and vertical banded gastroplasty) lost significant weight over the long-term and are significantly less likely to die from heart disease, diabetes and cancer seven to 10 years following the procedure than those who did not have surgery.^{6,7}

A 2004 study in the *Journal of the American Medical Association* showed that bariatric surgery resolved or improved Type 2 diabetes in 86 percent of patients and resolved sleep apnea in more than 85 percent of patients.⁸

American Society for Metabolic & Bariatric Surgery (ASMBS)

The ASMBS is the largest organization for bariatric surgeons in the world. It is a non-profit organization that works to advance the art and science of bariatric surgery and is committed to educating medical professionals and the lay public about bariatric surgery as an option for the treatment of morbid obesity, as well as the associated risks and benefits. It encourages its members to investigate and discover new advances in bariatric surgery, while maintaining a steady exchange of experiences and ideas that may lead to improved surgical outcomes for morbidly obese patients. For more information on the ASMBS, visit www.asmb.org.

¹ Centers for Disease Control and Prevention. National diabetes fact sheet: general information and national estimates of diabetes in the United States, 2007. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2008.

² American Diabetes Association. "Economic Costs of Diabetes in the U.S. in 2007." *Diabetes Care*. Volume 31. Number 3. March 2008.

³ American Heart Association. Type 2 Diabetes. Updated 18 February 2009. [Cited 27 April 2009] Available from: <http://www.americanheart.org/presenter.jhtml?identifier=3044759>

⁴ Dixon JB. Adjustable Gastric Banding and Conventional Therapy for Type 2 Diabetes. *JAMA*. 2008; 299(3):316-323

⁵ American Diabetes Association. Standards of Medical Care in Diabetes – 2009. *Diabetes Care*, Volume 32, Supplement 1. January 2009. [Cited 2009 April 27].

⁶ Sjöström L, Narbro K, Sjöström CD, et al. Effects of bariatric surgery on mortality in Swedish obese subjects. *N Engl J Med* 2007; 357:741-52.

⁷ Adams TD, Gress RE, Smith SC, et al. Long-term mortality after gastric bypass surgery. *N Engl J Med* 2007;357:753-61.

⁸ Buchwald H. Bariatric Surgery: A Systematic Review and Meta-analysis. *JAMA*. 2004; 292:1724-1737.

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PL-101. DURABLE RESOLUTION OF DIABETES AFTER ROUX-EN-Y GASTRIC BYPASS IS ASSOCIATED WITH MAINTENANCE OF WEIGHT LOSS

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