

## **METABOLIC & BARIATRIC SURGERY**

### **OVERVIEW**

- Metabolic and bariatric surgery, the treatment of morbid obesity and obesity-related diseases and conditions, limits the amount of food the stomach can hold, and/or limits the amount of calories absorbed, by surgically reducing the stomach's capacity to a few ounces
- Candidates for bariatric surgery have a body mass index (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
- An estimated 220,000 people with morbid obesity in the U.S. had bariatric surgery in 2008
- About 15 million people in the U.S. have morbid obesity; only 1% of the clinically eligible population is being treated for morbid obesity through bariatric surgery
- Bariatric surgery costs an average of \$17,000 - \$25,000; Insurance coverage varies by provider
- Bariatric surgery can improve or resolve more than 30 obesity-related conditions, including type 2 diabetes, heart disease, sleep apnea, hypertension and high cholesterol

### **TYPES OF BARIATRIC SURGERY PERFORMED BY DR. FULLUM**

- **Laparoscopic Roux en Y Gastric Bypass**
  - Stomach is reduced from size of football to size of golf ball
  - Smaller stomach is attached to middle of small intestine, bypassing the section of the small intestine (duodenum) that absorbs the most calories
  - Patients eat less because stomach is smaller and absorb fewer calories because food does not travel through duodenum
- **Laparoscopic Adjustable Gastric Banding**
  - Silicone band filled with saline is wrapped around upper part of stomach to create small pouch and cause restriction
  - Patients eat less because they feel full quickly
  - Size of restriction can be adjusted after surgery by adding or removing saline from band
- **Vertical Sleeve Gastrectomy**
  - Emerging procedure
  - Approximately 85% of the stomach is removed, leaving a sleeve-shaped stomach
  - No published studies on long-term results

### **IMPACT ON OBESITY-RELATED DISEASES**

- Studies show bariatric surgery resolves type 2 diabetes in 73% - 83% of patients<sup>1,2,3</sup>

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- Study shows bariatric surgery cuts the risk of developing coronary heart disease in half<sup>4</sup>
- Studies show bariatric surgery is an effective treatment for obstructive sleep apnea and resolves the condition in more than 85% of patients<sup>5,6</sup>

### **BARIATRIC SURGERY: RISKS VS. BENEFITS**

- The federal government (AHRQ) and studies report significant improvements in safety<sup>6,7</sup>
  - Risk of death from bariatric surgery is about 0.1%
- Morbidly obese individuals who have bariatric surgery increase their longevity, as compared to those who do not have surgery
  - Patients can improve life expectancy by 89%<sup>8</sup>
  - Patients can reduce their risk of dying by 30% - 40%<sup>9,10</sup>
- Morbidly obese patients who have surgery dramatically reduce their risk of dying from an obesity-related disease, as compared to those who do not have surgery
  - Risk of death from diabetes down 92%, from cancer down 60% and from coronary artery disease down 56%<sup>10</sup>

### **LONG-TERM EFFECTIVENESS OF BARIATRIC SURGERY**

- In general, bariatric surgery patients experience their maximum weight loss 1-2 years after surgery and maintain a substantial weight loss, with improvements in obesity-related conditions, for years
- Patients may lose 30% - 50% of their excess weight 6 months after surgery and 77% of their excess weight as early as 12 months after surgery<sup>11</sup>
- Long-term studies show up to 10-14 years after surgery, morbidly obese patients who had surgery maintained a greater weight loss and more favorable levels of diabetes, cholesterol and hypertension, as compared to those who did not have surgery<sup>3,12</sup>

### **ADOLESCENTS AND BARIATRIC SURGERY**

- As obesity rates rise in the U.S., an increasing number of adolescents (12-17 years old) are receiving bariatric surgery, an estimated 349 in 2004<sup>7</sup>
- Bariatric surgery has been performed on morbidly obese adolescents for more than 10 years; doctors are gaining more experience with surgery for this age group
- Long-term efficacy and impact remains unknown, but is a topic of ongoing research

### **FOLLOW-UP CARE**

- Bariatric surgery is considered a tool to help morbidly obese patients lose weight, to be used in conjunction with changes in eating and exercise habits

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- Research shows that bariatric surgery patients who keep all doctors appointments for at least 3 years after surgery lost an average of 24% more weight, as compared to those who skipped appointments<sup>13</sup>
- Studies show that bariatric surgery patients who attend support groups maintain about 20% - 30% greater excess weight loss as compared to patients who do not attend support groups<sup>14,15,16</sup>

**Facts compiled and provided by the American Society for Metabolic & Bariatric Surgery.**

**For the latest facts related to metabolic and bariatric surgery, visit:**

[http://www.asbms.org/Newsite07/media/asbs\\_presskit.htm](http://www.asbms.org/Newsite07/media/asbs_presskit.htm)

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<sup>1</sup> Dixon, JB et al. Adjustable Gastric Banding and Conventional Therapy for Type 2 Diabetes. *JAMA* 2008; 299(3): 316-323.

<sup>2</sup> Schauer, PR et al. Effect of Laparoscopic Roux-en-Y Gastric Bypass on Type 2 Diabetes Mellitus. *Nutrition in Clinical Practice*. 2004: Vol. 19, No. 1, 60-61.

<sup>3</sup> Pories, WJ et al. Who Would Have Thought It: An Operation Proves to Be the Most Effective Therapy for Adult-Onset Diabetes Mellitus. *Ann Surg* 1995;222(3):339-352.

<sup>4</sup> Torquati, Alfonso, MD, MSCI, FACS, Wright, Kelly, MD, FACS, Melvin, Willie, MD, FACS, and Williams, Richard, MD, FACS. "Effect of Gastric Bypass Operation on Framingham and Actual Risk of Cardiovascular Events in Class II to III Obesity." *Journal of the American College of Surgeons*. Vol 204, No. 5, May 2007.

<sup>5</sup> Rasheid, Sowsan et al. Gastric Bypass is an Effective Treatment for Obstructive Sleep Apnea in Patients with Clinically Significant Obesity. *Obes Surg* 2003; 13, 58-61.

<sup>6</sup> Buchwald H, et al. Bariatric Surgery: A Systematic Review and Meta-analysis. *JAMA* 2004; 292 (14): 1724-38.

<sup>7</sup> Agency for Healthcare Research and Quality (AHRQ). Statistical Brief #23. Bariatric Surgery Utilization and Outcomes in 1998 and 2004. January 2007.

<sup>8</sup> Christou, NV et al. Surgery Decreases Long-term Mortality, Morbidity, and Health Care Use in Morbidly Obese Patients. *Ann Surg* 2004;240: 416-424.

<sup>9</sup> Sjöström, Lars. Effects of Bariatric Surgery on Mortality in Swedish Obese Subjects. *N Engl J Med* 2007; 357:741-52.

<sup>10</sup> Adams TD. Long-Term Mortality after Gastric Bypass Surgery. *N Engl J Med* 2007; 357:753-61.

<sup>11</sup> Wittgrove, AC, et al. Laparoscopic Gastric Bypass, Roux-en-Y: Technique and Results in 75 Patients With 3-30 Months Follow-up. *Obesity Surgery* 1996; 6, 500-504.

<sup>12</sup> Sjöström, Lars, et al. Lifestyle, Diabetes, and Cardiovascular Risk Factors 10 Years after Bariatric Surgery. *N Engl J Med* 2004; 351: 2683-2693.

<sup>13</sup> Gould JC. Impact of routine and long-term follow-up on weight loss after laparoscopic gastric bypass. *Surg Obes Relat Dis* 2007 Nov-Dec; 3(6):627-30.

<sup>14</sup> Song Zirui, et al. Association between support group attendance and weight loss after Roux-en-Y gastric bypass. *SOARD* 2008 (4): 100-103.

<sup>15</sup> Orth, WS. Support Group Meeting Attendance is Associated with Better Weight Loss. *Obes Surg* 2008 (18): 391-394.

<sup>16</sup> Elakkary, Ehab, et al. Do Support Groups Play a Role in Weight Loss After Laparoscopic Adjustable Gastric Banding? *Obes Surg* 2006; 16, 331-334.