ASMBS American Society for Metabolic & Bariatric Surgery

**FACT SHEET**

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# TYPE 2 DIABETES:
# Prevalence, Surgery, Complications & Cost

## PREVALENCE OF TYPE 2 DIABETES & OBESITY

- The U.S. Centers for Disease Control and Prevention (CDC) estimates that about 26 million Americans or 8.3% of the U.S. population, have diabetes[1]; this number is expected to increase to 44 million people by 2034[2]
- The number of Americans diagnosed with diabetes more than tripled from 1980 to 2007, increasing from about 5.6 million to 18.1 million[3]
    - 7 million people in the U.S. have undiagnosed diabetes
    - 1.9 million new cases of diabetes were diagnosed in 2010
- About 79 million people in the U.S. age 20 years and older have prediabetes and are at high risk of developing Type 2 diabetes[1]
- About 50% of men and 70% of women who have the disease are obese[4]

### THE DIABETES EPIDEMIC

- About 26 million Americans have diabetes[16], up 9 % since 2008; experts attribute the rise in part to an increase in obesity
- Diabetes was the seventh leading cause of death listed on U.S. death certificates in 2007. Risk for death among people with diabetes is about twice that of people without diabetes[1]
- Diabetes is associated with increased risk for heart disease and stroke, high blood pressure, blindness, kidney disease, nervous system disease, amputations, dental disease and pregnancy[1] complications
- Total estimated cost of diabetes is about $174 billion a year, including $116 billion in excess medical expenditures and $58 billion in reduced national productivity[12]
- A recent study shows bariatric surgery is associated with an elimination of diabetes medication in 84.5% of patients two years after surgery and a 70.5% decrease in annual health care costs per patient after three years[15]

## IMPACT OF BARIATRIC SURGERY ON TYPE 2 DIABETES

- American Diabetes Association (ADA) Guidelines 2009 recommend bariatric surgery be considered for adults with BMI $\geq$ 35 and Type 2 diabetes, especially if diabetes is difficult to control with lifestyle and pharmacologic therapy[5]
- International Diabetes Federation (IDF) 2011 guidelines state bariatric surgery should be an accepted option for people who have Type 2 diabetes and a BMI of 35 or more, and an alternative treatment option for people with BMI of 30-35 when diabetes cannot be adequately controlled with medical therapies[6]
- March 2009 study in *American Journal of Medicine* found bariatric surgery improved or resolved Type 2 diabetes in 86.6% of patients[7]
- January 2008 *Journal of the American Medical Association (JAMA)* study found 73% of patients resolved their Type 2 diabetes after gastric band surgery[8]
- People with morbid obesity who had gastric bypass surgery significantly reduced long-term mortality, particularly from diabetes (92%), according to a 2007 study in the *New England Journal of Medicine (NEJM)*[9]
- Gastric bypass patients who had Type 2 diabetes for the shortest duration (<5 years) and the mildest form of the disease (diet controlled) were most likely to achieve complete disease resolution after surgery, suggesting early surgical intervention is key, an *Annals of Surgery* study found[10]
- A 2011 *Archives of Surgery* study found gastric bypass is more effective than gastric banding for excess weight loss in Type 2 diabetics
    - Patients who underwent gastric bypass lost 64% excess weight
    - Patients who underwent gastric banding lost 36% excess weight[11]

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**COSTS ASSOCIATED WITH DIABETES**

- About 1 in 5 healthcare dollars in the U.S. is spent caring for someone with diagnosed diabetes[12]
- By 2034, annual diabetes-related spending is expected to triple to about $336 billion[1]
- Annual cost of diabetes drugs nearly doubled in six years, rising from $6.7 billion in 2001 to $12.5 billion in 2007, according to October 2008 *Archives of Internal Medicine* study [13]
- Bariatric surgery is associated with reductions in overall healthcare costs in patients with Type 2 diabetes:
    - Following bariatric surgery, annual healthcare costs decreased 34.2% after two years and by 70.5% after three years[14]

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