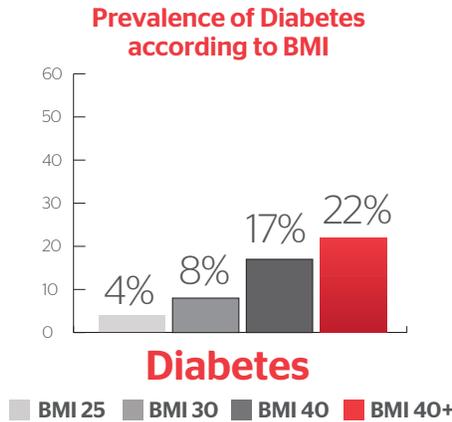


# Obesity and Type II Diabetes

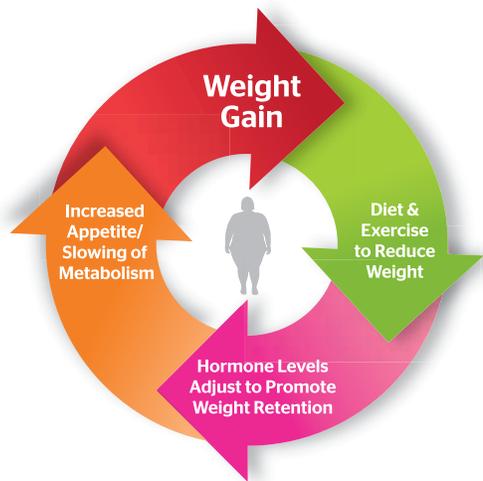


**90%**  
of individuals  
with T2DM  
are over weight  
or obese.<sup>1</sup>

As a patient's BMI rises, so does the prevalence of T2DM.<sup>2</sup>



Obesity is a complex metabolic disease. It is defined by an abnormal or excessive body fat accumulation and identified by a body mass index (BMI) of 30 or higher.<sup>4,5</sup> Research has demonstrated that hormonal changes with obesity make it very challenging for patients to lose significant weight and keep it off.<sup>6</sup>

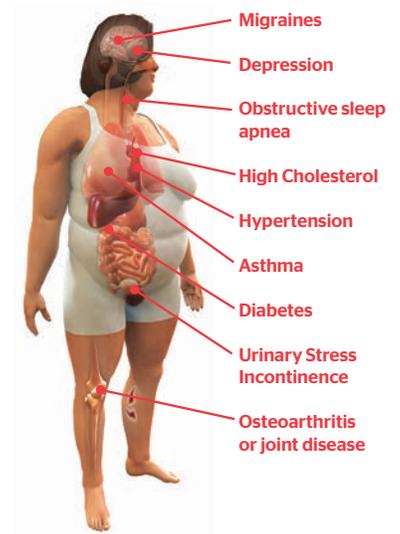


The presence of T2DM is a risk for surgery. High blood sugar levels are associated with **risk of infection** during surgery.<sup>7</sup> T2DM also creates coagulopathy, which affects wound healing.<sup>8</sup>

The longer a patient has T2DM, the more challenging it is to manage the disease and the more likely that there are other health issues. Improving or resolving a patient's T2DM condition, even if only for a period of time, provides a better health situation.<sup>10</sup>

**Treating T2DM doesn't help obesity. Treating obesity DOES help treat T2DM!<sup>11</sup>**

## Obesity-related diseases



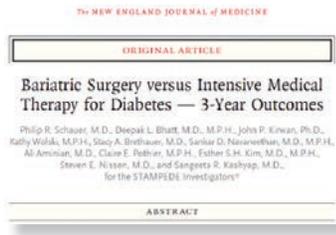
The presence of T2DM increases an individual's risk of:<sup>3</sup>

- Heart and blood vessel disease
- Neuropathy—nerve damage
- Nephropathy—kidney damage
- Eye damage
- Foot damage
- Skin conditions

Only about **20%** of overweight individuals who attempt to lose weight are successful.<sup>9</sup>

# Can bariatric surgery help treat T2DM for the obese patient?

According to the Ethicon funded STAMPEDE study, bariatric surgery with medical therapy resulted in:<sup>12</sup>



- **More effective management of poorly controlled diabetes** than with intensive medical treatment alone.
- **58% of RYGB patients and 33% of SG patients achieving glycemic control without medications** at 3 years post-surgery.

## Is it the post bariatric surgery weight loss or hormonal changes that help to improve health?

Bariatric surgery does drive the strongest, most durable weight loss results versus other obesity treatment options.<sup>13</sup>

Treatment	Average Weight Loss at 3 Years	Average Weight Loss at 5 Years
Diet and exercise	-0.1% <sup>14</sup>	-1.6% <sup>14</sup>
Drug therapy	10.7% <sup>15</sup>	Not enough data

Surgery	Average Weight Loss at 3 Years	Average Weight Loss at 5 Years
Gastric bypass	71.2% <sup>16</sup>	60.5% <sup>17</sup>
Sleeve gastrectomy	66.0% <sup>18</sup>	49.0% <sup>17</sup>

In many cases, early remission of Type II Diabetes occurs days after surgery, **even before major weight loss.**<sup>19</sup>



Bariatric Surgical procedures, especially Gastric Bypass and Sleeve Gastrectomy, provide physiological changes as a result of the anatomical changes. Bariatric Surgery is usually performed laparoscopically with serious complications occurring less than 2% of the time.<sup>20</sup> For a detailed description of the procedures and risks, go to [www.ethicon.com/obesity](http://www.ethicon.com/obesity). Results may vary in magnitude and duration. Risks are similar to any general surgery procedure and include cholecystitis, cholelithiasis, dilated pouch, dysphagia, GERD, incisional hernia, malnutrition, and vitamin and mineral deficiency.

## Many diabetes medical associations are endorsing bariatric surgery.

**“The most clinically relevant impact of surgically-induced weight loss is the ability of the former to completely reverse Diabetes Mellitus in a large percentage of the subjects.”** - American Heart Association.<sup>11</sup>



The American Diabetes Association (ADA) and the International Diabetes Federation (IDF) recognize bariatric surgery as an official treatment for Type II Diabetes itself.<sup>21</sup>



**For more information, visit [Ethicon.com/obesity](http://Ethicon.com/obesity) or contact a bariatric surgeon.**

Bariatric surgery is used in morbidly obese adult patients for significant long-term weight loss. Results following bariatric surgery may vary. Bariatric surgery may be appropriate for some patients, and not for others depending on their specific weight, age, and medical history. Patients and doctors should review all available information on non-surgical and surgical options in order to make an informed treatment decision.

**Reference: 1.** Obesity and overweight. World Health Organization Web site. <http://www.who.int/dietphysicalactivity/media/en/gsf Obesity.pdf>. 2003. Accessed August 25, 2016. **2.** Stommel M, et al. *Obesity*. 2010;18(9):1821-1826. **3.** A.D.A.M Health News. “Diabetes, Type 2 In-Depth Report.” *The New York Times*. 12 December 2008. <http://www.nytimes.com/health/guides/disease/type-2-diabetes/print.html>. Last accessed August 25, 2016. **4.** American Obesity Association. Fact Sheet. Obesity in the U.S. May 2, 2005. <http://www.obesity.org>. **5.** World Health Organization (WHO). Obesity and Overweight: Fact Sheet. 2014. **6.** Kaplan L, et al. *Bariatric Times*. 2012;9(4):12-13. **7.** Duncan AE. *Curr Pharm Des*. 2012;18(38):6195-6203. **8.** Ceriello A. *Diabetologia*. 1993;36:1119-1125. **9.** Wing RR, et al. *Am J Clin Nutr*. 2005;82(suppl 1):222S-225S. **10.** Garcia-Perez LE, et al. *Diabetes Ther*. 2013;4:175-194. **11.** Poirier P, et al. *Circulation*. 2011;123:1683-1701. **12.** Schauer PR, et al. *N Engl J Med*. 2014;370(21):2002-2013. **13.** Hoelscher D, et al. *J Acad Nutr Diet*. 2013;113(10):1387. **14.** Sjöström L, et al. *N Engl J Med*. 2004;351(26):2683-2693. **15.** Garvey WT, et al. *Am J Clin Nutr*. 2012;95(2):297-308. **16.** Garb J, et al. *Obes Surg*. 2009;19(10):1447-1455. **17.** Brethauer S, et al. *Ann Surg*. 2013;258(4):628-636. **18.** Himpens J, et al. *Obes Surg*. 2006;16:1450-1456. **19.** Piché ME, et al. *Can J Cardiol*. 2015;31(2):153-166. **20.** SRC BOLD report: summary of key statistics prepared for SRC’s strategic alliance partners. March 2010. Data is reported on 80157 research-consented patients who had a surgery entered in BOLD from June 2007 through Sept. 22, 2009. All patients with data in BOLD had their bariatric surgery performed by a surgeon participating in SRC’s Bariatric Surgery Center of Excellence (BSCOE) program. **21.** Rubino R, et al. *Diabetes Care*. 2016;39(6):861-877.