

Type 2 Revolution



Does bariatric surgery cause remission of type 2 diabetes?
by John McIntosh

Michael A. Snyder, M.D., FACS

Dr. Snyder is a board-certified general surgeon, director of the Denver Center for Bariatric Surgery and an active member of the American Society for Bariatric Surgery (ASBS).

Seventy to eighty-four percent of obese people with type 2 diabetes who undergo bariatric surgery—either laparoscopic gastric band or gastric bypass—see a remission of their disease. And not just because of the weight loss caused by the surgery. Here, we explore this medical mystery with Michael A. Snyder, M.D. Is bariatric surgery a breakthrough in diabetes care?

DIABETES FOCUS: Can you really cure type 2 diabetes?

DR. SNYDER: One of the things I say to doctors at medical conferences—and I speak at them all around the country—is that type 2 diabetes is very difficult to treat, but it’s easier to cure. I say that as kind of a wake-up call for people to pay attention to the importance of this treatment. It does seem to work.

DF: Could you tell us about your clinical findings and how those findings are backed up by other research?

DR. S: In October 2004, in *JAMA* (the journal of the American Medical Association), researchers

reported on their review of studies of some 22,000 obese patients who underwent bariatric surgery. Seventy-seven percent of those with type 2 had a complete reversal of the disease. These studies also showed that bariatric surgery resolved or improved high cholesterol, hypertension and sleep apnea in a substantial majority of patients with these conditions. Then, early this year, a *JAMA* editorial cited research showing that 84 percent of diabetes patients who had gastric bypass surgery experienced a complete reversal of type 2 diabetes. And a study in the same issue showed that 73 percent of diabetes patients who had laparoscopic gastric band surgery achieved remission of their disease, versus only 13 percent of those in the medical treatment group. Those numbers match our program’s findings.

I tell people that after they have a gastric bypass, there’s an 80 percent chance that they’ll be off diabetes meds before they leave the hospital. So it’s not simply the weight loss that ends type 2 following these procedures. It’s something else.

DF: What is that “something else” that seems to reverse type 2 diabetes?

DR. S: We’re not really sure exactly how these surgeries affect the endocrine system, but we know that they do and that they work. Many of us believe that there is something that sensitizes the pancreas, increasing the number of beta cells that produce insulin or the ability of the beta cells to produce the hormone. More research is needed to determine this.

DF: Can’t weight loss and exercise control or cure type 2?

DR. S: If you look at the data, including findings from this year’s *JAMA* study, physical management of type 2 doesn’t add up to significant weight loss. And weight loss



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doesn't necessarily lead to the abatement of type 2.

DF: Is the effect of gastric bypass surgery and lap-band surgery the same?

DR. S: In my program, following gastric bypass surgery, 67 percent of people with type 2 are cured and 23 percent of them are significantly improved. With the laparoscopic gastric band procedure, 73 percent go into remission, and that number matches the *JAMA* findings.

DF: Can anybody with type 2 have these surgeries?

DR. S: The surgeries aren't appropriate for everyone. Obesity is defined by the National Institutes of Health as a body mass index (BMI) of 30 or greater. If your BMI is more than 35, you are a candidate for bariatric surgery. I'd like to see that bar lowered. I believe there are many, many people who have a BMI of 30 to 34 who could benefit.

DF: How many people could be cured of type 2 by these surgeries?

DR. S: Seventy percent of the 21 million people who have type 2 diabetes in the United States and whose disease is associated with weight problems could be cured by bariatric surgery. Another 20 percent of those with type 2 would experience noted improvement.

DF: Are there risks involved with these surgeries?

DR. S: Bariatric surgery is like any other invasive procedure. Age and blood pressure, for example, can be problems. With gastric bypass, out of the more than 1,300 gastric bypass surgeries that I've done, I've had one mortality. For laparoscopic gastric banding,



I've had zero mortalities in over 600 procedures. The approved level for mortality following bariatric surgery is 1 in 200 to 300. The bottom line is that with laparoscopic gastric band

and gastric bypass, the surgical risks are quite minimal if the surgery takes place in a Bariatric Surgery Center of Excellence. Patients should only have them done in such a facility.

The Two Surgeries

● Gastric bypass

In this procedure, a small pouch is created out of the top of the stomach then reattached to a bypass limb of the small intestine. You digest food as before, but fewer calories and nutrients can be ingested and absorbed. You eat less because the small pouch is smaller than your stomach used to be.

● Laparoscopic adjustable gastric banding

Two medical devices—a silicone band and an injection port—are implanted in the patient to create a smaller stomach. The silicone band is placed around the upper part of the stomach and molds the stomach into two connected chambers. The injection port is slipped under the skin and attached to the abdominal wall; it's connected to the band with soft, thin tubing. The band itself is adjustable: Saline is added to or removed from the band via a needle that goes into the port, increasing or decreasing the amount of restriction provided by the band. Gastric banding requires more intensive follow-up care, even after reaching and maintaining your weight goal.