



Diabetes is Cured!

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It is a bold statement and a provocative one as well.

Could it be possible that we as surgeons have finally conquered the disease that has afflicted millions of people not only in the United States but around the world for hundreds of years?

Well this is the case according to an increasing amount of solid, validated and scientifically-proven data. Bariatric surgeons have observed for decades now the amazing rates of diabetes resolution that patients experience after undergoing a bariatric operation.

Although weight loss itself clearly plays a significant role in the reversal of diabetes after these kinds of surgeries, with gastric bypass and now with the sleeve gastrectomy, the reversal of diabetes often precedes the weight loss. The mechanism as to why this happens is still poorly understood and it is a hot topic of research in the scientific world.

There are several theories proposed; two of the most accepted involve the lower intestinal hypothesis and the rapid delivery of food to the distal small bowel increasing the secretion of hormones. This, in turn, will improve glucose metabolism. The upper intestinal hypothesis suggests that by virtue of bypassing the duodenum and proximal jejunum, we would be preventing the secretion of a yet-to-be-determined "anti-incretin" hormone.

Even though both of these theories do not apply to the increasingly popular sleeve gastrectomy, the diabetes resolution rates are amazingly similar to those observed with the gastric bypass. Much is being done looking at the effect of removing most of the Ghrelin-producing mass with this operation. More to come in the future about all this, but the facts remain. Diabetes is cured in up to 84 percent of the cases and, if not cured, it is significantly improved in greater than 90 percent of the patients that undergo bariatric surgery.

Furthermore, in a society that is struggling with increasing health care costs and the very same health care system looking to contain the immense economic health burden associated with diabetes, bariatric surgery has proven to be cost effective over and over again.

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A paper recently published in the Archives of Surgery by Dr. Makary and the group from Johns Hopkins University, looks at the annual health care costs in patients with type 2 diabetes before and after bariatric surgery. The researchers examined administrative claims data from 2,235 adults with type 2 diabetes who underwent bariatric surgery in the United States from January 1, 2002 through December 31, 2005. Surgery eliminated the use of anti-diabetes medication therapy in 75 percent of patients at six months; 81 percent of patients at one year; and 85 percent of patients at two years.

The median cost of the surgical procedure and hospitalization was about \$30,000. However, in the three years following surgery, total annual health care costs, which increased by about 10 percent in the first year after surgery, decreased by around 35 percent in year two and by over 70 percent in year three compared to costs before surgery.

The authors point out, *"Because weight loss following bariatric surgery has been observed to be sustained for decades, we believe that the protective effect against complications of diabetes is also likely to be long-term."*

If you add to this the International Diabetes Federation position statement calling for bariatric surgery to be considered earlier in the treatment of eligible patients to help stem the serious complications that can result from diabetes, you have a bold and provocative statement that would have tremendous public health implications.

For too many years, obesity was thought to be the result of lack of will, lack of commitment or just pure laziness on the part of the affected individuals. We now know that this is wrong, not scientific and largely counterproductive at dealing with a national and international pandemic that will not get any better unless we, as a society and as care providers at large, decide to do something about it once and for all.

Dr. Claros serves as Chief of the Bariatric Surgery Section and Medical Director, Bariatric Surgery Program, St. Luke's University Health Network, and Clinical Assistant Professor of Surgery, Temple University School of Medicine.

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