

## Mechanisms of diabetes control after bariatric surgery

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The bariatric surgery is an effective method for treating obesity, with beneficial results both in weight loss and glycemic control. Foregut and Hindgut Hypothesis were proposed to explain the rapid effects of bariatric surgery in the improvement of Type 2 diabetes mellitus control (T2DM). According to these hypotheses, T2DM results from the imbalance between the incretins and diabetogenic signals. The intestine seems to be an important endocrine organ involved on glucose levels regulation, and therefore on T2DM pathophysiology. The improvement in glycemic control is related to the exclusion of the proximal intestine and anticipation of the distal, reducing the secretion of anti-incretin factors and increasing levels of gut hormones (e.g. glucagon-like peptide 1 – GLP-1) contributing to improvement on insulin sensibility. The GLP-1 appears as one of the hormones responsible for this improvement because of its beneficial action in  $\beta$  cells, and in secretion and insulin action. These intestinal and metabolic changes provide preliminary evidence the benefits of bariatric-metabolic surgery on glycemic control of T2DM obese subjects. However more clinical trials are needed to investigate the effects of bariatric surgery in the cure of T2DM independently of weight loss. A safe and effective surgical procedure has being studied in order to obtain the cure for T2DM.

### Biography

Caio Reis is post-graduate in Human Nutrition and Health and Master in Nutrition Science. Ongoing PhD in Health Sciences researching in partnership with Human Nutrition Research (Medical Research Council, Cambridge, England) on glucose metabolism and diabetes risk. Is reviewer of International Journal of Applied and Basic Nutritional Sciences, International Journal of Nutrition and Metabolism and Journal of the American College of Nutrition. He has published 15 papers in reputed journals, including "Role of bariatric-metabolic surgery in the treatment of obese type 2 diabetes with body mass index <35 kg/m<sup>2</sup>: a Literature Review" in Diabetes Technology & Therapeutics Journal (2012).

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