Study: Bariatric Surgery Restores Pancreatic Function By Targeting Belly Fat

n a substudy of the STAMPEDE trial (Surgical Therapy And Medications Potentially Eradicate Diabetes Efficiently), Cleveland Clinic researchers have found that gastric bypass surgery reverses diabetes by uniquely restoring pancreatic function in moderately obese patients with uncontrolled type 2 diabetes.

The two-year substudy evaluated the effects of bariatric surgery and intensive medical therapy on blood sugar levels, body composition, and pancreatic beta-cell function. Striking metabolic changes were observed in patients who underwent bariatric surgery compared with intensive medical therapy, particularly in the gastric bypass treatment group.

"The substudy results extend the findings from our initial 12-month report that showed bariatric surgery can eliminate the need for diabetes medications in many obese patients with uncontrolled diabetes," said lead investigator Sangeeta Kashyap, M.D., an endocrinologist at Cleveland Clinic's Endocrinology & Metabolism Institute. "Furthermore, we observed that gastric bypass can resurrect a failing pancreas."

The cells of the pancreas that produce insulin, a hormone that helps the body store and use sugar, are called beta cells. Malfunctioning pancreatic beta cells can cause the pancreas to not release enough insulin; they can also produce insulin that the body does not recognize. When the body can't use insulin properly, it can't regulate the amount of glucose in its bloodstream.

"Gastric bypass surgery seems to uniquely restore pancreatic beta-cell function, presumably by targeting belly fat and modifying the hormones in the gastrointestinal tract," said Kashyap. "Gastric bypass remarkably targets belly fat where hormones that are toxic to the body develop."

Researchers observed that patients who underwent gastric bypass saw a greater reduction in belly fat compared to the patients who underwent sleeve gastrectomy. The substudy results indicate a correlation between a decrease in belly fat and the ability of the pancreas to start working again.

Diabetes Care published the study results online today.

The prospective, randomized, controlled substudy followed 60 patients from the original STAMPEDE trial to determine the durability of the initial results and examine the metabolic changes observed with bariatric surgery. The patients were divided into three groups of 20: those who received intensive medical therapy of their diabetes, those who received intensive medical therapy plus gastric bypass surgery, and those who received intensive medical therapy plus sleeve gastrectomy. The

researchers measured metabolic parameters at baseline, and at 12 and 24 months.

After two years, 41 percent of the patients who underwent gastric bypass saw their blood sugar levels back to normal. Only 10 percent of the patients who underwent sleeve gastrectomy and 6 percent who received intensive medical therapy achieved the same results.

At 12 and 24 months, patients who underwent gastric bypass achieved near normal blood sugar levels following a mixed meal test. These results were associated with a remarkable 5.8-fold increase in overall pancreatic cell function. Patients who received intensive medical therapy or underwent sleeve gastrectomy saw a 2-fold increase.

The substudy results show that gastric bypass surgery is a viable therapeutic option for the treatment of uncontrolled type 2 diabetes in moderately obese patients. The authors will continue to follow these patients for three years as further studies examining hormonal effects are warranted.

Source URL (retrieved on *11/28/2014 - 6:24am*):
http://www.surgicalproductsmag.com/news/2013/02/study-bariatric-surgery-restores-pancreatic-function-targeting-belly-fat