

Bypass method alone does not improve insulin resistance

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Patrick Tso, PhD

(PhysOrg.com) -- Bypass weight-loss surgeries do not improve insulin resistance independent of weight loss, say researchers from the University of Cincinnati (UC).

"These findings should raise caution regarding the clinical investigation of duodenal bypass as a surgical or interventional treatment for type 2 [diabetes](#) …," the authors say.

Results of the study, led by senior author Patrick Tso, PhD, of UC's pathology and laboratory medicine department, and Tammy Kindel, MD, now at Northwestern University, are reported in the Oct. 28, 2010, advanced online publication of the journal *Obesity*.

Surgical [weight-loss](#) procedures like the Roux-en-y gastric bypass (RYGB) include bypassing the top and middle sections of the intestine (the duodenum and jejunum). These procedures have been associated with weight loss and improvement in insulin resistance, a precursor to [type 2 diabetes](#) occurring when insulin is produced but not used properly by the body.

"There are compelling data that RYGB may improve insulin resistance beyond that which can be explained by surgical weight loss," the authors

say.

For their study, Kindel and Tso performed duodenal-jejunal bypass (DJB) on animal models with diet-induced obesity, glucose intolerance and insulin sensitivity. DJB is a modification of RYGB that does not include gastric restriction. With the stomach capacity left preserved, weight loss would not be expected after surgery and changes in [insulin resistance](#) could be tested independent of body weight alteration.

The UC study suggests that improved insulin sensitivity, which often follows RYGB, may be linked directly to a reduction in caloric intake or to the surgery's exclusion of the stomach with possible changes in endocrine signaling

The authors say further investigation is needed to determine the procedure's efficacy on glucose tolerance.

Provided by University of Cincinnati

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