

# Intestinal barrier sleeve shows benefit in rat model of diabetes

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Image courtesy of Blausen Medical

"Our preclinical results validate DES as a promising therapeutic approach to diabetes and obesity, which offers reversibility, low risk, low invasiveness and triple benefits including [fat mass](#) loss, glucose and [lipid metabolism](#) improvement which mechanistically may involve increased villus growth in the upper gut," the authors conclude.

Several authors disclosed financial ties to the biopharmaceutical industry.

**More information:** [Abstract](#)  
[Full Text \(subscription or payment may be required\)](#)

(HealthDay)—Implantation of a duodenal-endoluminal sleeve (DES) correlates with reductions in body weight (BW) from loss of fat mass, and with improvements in glucose and lipid homeostasis in a rat model of diabetes, according to an experimental study published online Oct. 9 in *Gut*.

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Kirk M. Habegger, Ph.D., from the University of Cincinnati, and colleagues randomized Zucker Diabetic Fatty rats to naive, sham ad libitum, sham pair-fed, and DES implanted groups. For 28 days postoperatively, food intake, BW, and body composition were measured. In addition, [glucose](#), lipid, and bile acid metabolism were evaluated and histological assessment of the upper intestine was made.

The researchers found that DES implantation led to a sustained reduction in BW throughout the study, which was matched by pair-fed sham animals. Loss of fat, but not lean mass, led to decreased BW. Compared with ad libitum-fed or pair-fed sham controls, DES rats were found to be more glucose tolerant. Circulating triglyceride and glycerol levels were also reduced with DES, while circulating bile acids increased. DES triggered increases in villus length throughout the upper intestine.

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