

GLP-1 may mediate effects of gastric bypass on CNS activation

November 2 2017



(HealthDay)—The central effects of glucagon-like peptide-1 (GLP-1)

may mediate the effects of Roux-en-Y gastric bypass (RYGB) on central nervous system (CNS) activation in response to visual and gustatory food cues, according to a study published online Oct. 12 in *Diabetes Care*.

Jennifer S. ten Kulve, from VU University Medical Center in the Netherlands, and colleagues tested the effects of the GLP-1 receptor antagonist exendin 9-39 (Ex9-39) and placebo in 10 women before and after RYGB. Functional MRI was used to examine CNS activation in [response](#) to visual [food](#) cues (pictures) and gustatory food cues (consumption of chocolate milk). Results with Ex9-39 and placebo were compared before and after RYGB.

The researchers found that after RYGB, CNS activation was reduced in the rolandic operculum and caudate nucleus in response to viewing food pictures and in the insula in response to consuming palatable food. Postoperatively, GLP-1 levels were significantly elevated. The GLP-1 receptor blockade resulted in a larger increase in activation in the caudate nucleus in response to food pictures and in the insula in response to palatable food consumption after RYGB.

"Our findings provide further insights into the mechanisms underlying the weight-lowering effects of RYGB," conclude the authors.

Several authors disclosed financial ties to the pharmaceutical industry.

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

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Citation: GLP-1 may mediate effects of gastric bypass on CNS activation (2017, November 2) retrieved 6 May 2024 from

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