

# Appetite hormones may predict weight regain after dieting

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Many people have experienced the frustration that comes with regaining weight that was lost from dieting. According to a new study accepted for publication in The Endocrine Society's *Journal of Clinical Endocrinology & Metabolism (JCEM)*, the levels of appetite hormones in the body prior to dieting may serve as a predictor of weight regain after dieting.

"Treating obesity with drugs or dietary programs can be very effective in the short-term, but the long-term success of maintaining the weight lost is usually poor," said Ana Crujeiras, PhD, of Complejo Hospitalario Universitario de Santiago in Spain and lead author of the study. "Our study sheds light on how the appetite hormones leptin and ghrelin affect [weight regain](#) after weight loss. This knowledge could be used as a tool to personalize weight-loss programs that could guarantee success in keeping off the weight."

In this study, researchers evaluated a group of 104 obese or overweight men and women during an 8-week low-calorie diet and again 32 weeks after treatment. Researchers measured body weight as well as plasma fasting ghrelin, leptin and insulin concentrations before, during and after dieting. They found that subjects with higher plasma leptin and lower ghrelin levels before dieting were more prone to regain weight lost after dieting and that these hormone levels could be proposed as biomarkers for predicting obesity-treatment outcomes.

"We believe this research is of foremost relevance in clinical terms as it may indicate that the outcome of weight therapy may be pre-

conditioned," said Crujeiras. "Furthermore, our findings may provide endocrinology and nutrition professionals a tool to identify individuals in need of specialized weight-loss programs that first target appetite hormone levels before beginning conventional dietary treatment."

**More information:** The article, "Weight regain after a diet-induced loss is predicted by higher baseline leptin and lower ghrelin plasma levels," will appear in the November 2010 issue of *JCEM*.

Provided by The Endocrine Society

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