

Pleasure eating triggers body's reward system and may stimulate overeating

May 3 2012

When eating is motivated by pleasure, rather than hunger, endogenous rewarding chemical signals are activated which can lead to overeating, according to a recent study accepted for publication in The Endocrine Society's *Journal of Clinical Endocrinology & Metabolism* (JCEM). The phenomenon ultimately affects body mass and may be a factor in the continuing rise of obesity.

"'Hedonic hunger' refers to the desire to [eat](#) for pleasure, and to enjoy the taste, rather than to restore the body's energy needs," says Palmiero Monteleone, MD, of the University of Naples SUN in Italy and lead author of this study. "For example, desiring and eating a piece of cake even after a satiating meal is consumption driven by pleasure and not by energy deprivation. The physiological process underlying hedonic eating is not fully understood, but it is likely that endogenous substances regulating reward mechanisms like the hormone ghrelin and chemical compounds such as 2-arachidonoylglycerol (2-AG) are involved."

In this study, researchers assessed eight satiated healthy adults, aged 21-22 years, feeding them each their personal favorite food and, later, a less-palatable food of equal caloric and nutrient value. Researchers periodically measured 2-AG and ghrelin levels. The plasma levels of ghrelin and 2-AG increased during hedonic eating, with the favorite foods, but not with non-hedonic eating. This increase suggests an activation of the chemical reward system, which overrides the body's signal that enough has been eaten to restore energy.

"Hedonic [hunger](#) may powerfully stimulate [overeating](#) in an environment where highly palatable foods are omnipresent, and contribute to the surge in obesity," says Monteleone. "Understanding the physiological mechanisms underlying this eating behaviour may shed some light on the obesity epidemic. Further research should confirm and extend our results to patients with obesity or with other eating disorders in order to better understand the phenomenon of hedonic eating."

The article, "Hedonic eating is associated with increased peripheral levels of ghrelin and the endocannabinoid 2-arachidonoyl-glycerol in healthy humans. A pilot study," appears in the June 2012 issue of JCEM.

Provided by The Endocrine Society

Citation: Pleasure eating triggers body's reward system and may stimulate overeating (2012, May 3) retrieved 25 April 2024 from <https://medicalxpress.com/news/2012-05-pleasure-triggers-body-reward-overeating.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--