

## Feeding hormone ghrelin modulates ability of rewarding food to evoke dopamine release

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New research findings to be presented at the upcoming annual meeting of the Society for the Study of Ingestive Behavior (SSIB), the foremost society for research into all aspects of eating and drinking behavior, finds that ghrelin, a natural gut hormone that stimulates feeding, also modulates the ability of tasty food and food-related cues to alter dopamine levels within the striatum, a critical component of the brain's reward system.

Scientists measured dopamine in 'real-time' while rats ate sugar, a highly rewarding food. Administering ghrelin to rats while they ate sugar increased peak dopamine "spikes" within the <u>striatum</u>, whereas administering a drug that blocks ghrelin's actions significantly reduced dopamine levels during <u>sugar intake</u>.

Study author Dr. Mitch Roitman (University of Illinois at Chicago) says, "The modulation of brain dopamine reward signals by a gut hormone that regulates appetite strongly supports this interaction as a way to direct the organism's behavior towards further intake, perhaps by making food more rewarding. The results shed light on how peripheral body signals in general can shape brain-directed behavior."

Provided by Society for the Study of Ingestive Behavior

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