Caloric restriction restores glucose response in diabetes

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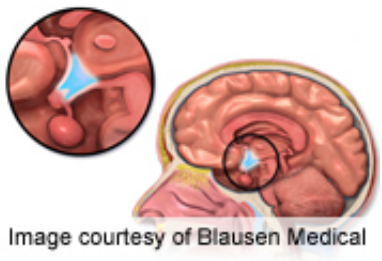

Neuronal responsiveness of the hypothalamus to glucose, critical in the regulation of feeding, can be restored in patients with type 2 diabetes by short-term caloric restriction, according to a study published online July 30 in *Diabetes*.

(HealthDay) -- Neuronal responsiveness of the hypothalamus to glucose, critical in the regulation of feeding, can be restored in patients with type 2 diabetes by short-term caloric restriction, according to a study published online July 30 in *Diabetes*.

Wouter M. Teeuwisse, from the Leiden University Medical Center in the Netherlands, and colleagues performed functional magnetic resonance imaging on 10 male patients with type 2 diabetes, before and after four days of a very low calorie diet. Neuronal activity in the hypothalamus in response to an oral glucose load was measured.

Before caloric restriction, the researchers found that glucose intake had no effect on the hypothalamus (no signal decrease), noting that glucose ingestion normally inhibits hypothalamic neuronal activity. After caloric restriction there was a prolonged signal decrease following glucose ingestion.

"The results of the current study demonstrate that short-term caloric restriction readily normalizes hypothalamic responsiveness to glucose ingestion in patients with type 2 diabetes," Teeuwisse and colleagues conclude.

More information: Abstract
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