

Freezing hunger-signaling nerve may help ignite weight loss

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Freezing the nerve that carries hunger signals to the brain may help patients with mild-to-moderate obesity lose weight, according to a study presented at the Society of Interventional Radiology's 2018 Annual Scientific Meeting. The treatment was determined safe and feasible in the initial pilot phase.

"We developed this treatment for patients with mild-to-moderate obesity to reduce the attrition that is common with [weight](#)-loss efforts," said David Prologo, M.D., FSIR, ABOM-D, an interventional radiologist from Emory University School of Medicine, and lead author of the study. "We are trying to help people succeed with their own attempts to lose weight."

During the procedure, an interventional radiologist inserts a needle through the patient's back and, guided by live images from a CT scan, uses argon gas to freeze the nerve, known as the posterior vagal trunk. This nerve, located at the base of the esophagus, is one of several mechanisms that tells the brain that the stomach is empty.

In the study, 10 subjects with a Body Mass Index (BMI) between 30 and 37 underwent the procedure and were followed for 90 days. All subjects reported decreased appetite and the overall average weight loss was 3.6 percent of initial body weight and an average decline of nearly 14 percent of the excess BMI. No procedure-related complications were reported, and there were no adverse events during the follow up.

"Medical literature shows the vast majority of weight-loss programs fail, especially when people attempt to reduce their food intake," said Prologo. "When our stomachs are empty, the body senses this and switches to food-seeking survival mode. We're not trying to eliminate this biological response, only reduce the strength of this signal to the brain to provide a new, sustainable solution to the difficult problem of treating mild obesity."

Following the success of this preliminary safety and feasibility study, more patients are being recruited for a larger clinical trial of the procedure to test the efficacy and durability of the [procedure](#). In presenting the study, the authors note several limitations, including the small sample size and the interim nature of the results.

The study was funded by HealthTronics, a medical technology company that manufactures the ablation probes used for the treatment.

More information: Late-breaking Abstract 2186: Percutaneous CT Guided cryovagotomy for the management of mild- moderate obesity: a pilot trial. J.D. Prologo; S. Cole; S. Bergquist; D. Corn; J. Knight; H. Matta; A. Singh; E. Lin. Emory University School of Medicine, Atlanta, GA; University at Buffalo, Buffalo, NY; Emory Healthcare, Roswell, GA; Penn State University Milton S. Hershey Medical Center, Hershey, PA. SIR Annual Scientific Meeting, March 17-22, 2018. This abstract can be found at sirmeeting.org

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