

# Upper airway stimulation in obstructive sleep apnea improves glucose metabolism and reduces hedonic drive for food

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© 2018 European Sleep Research Society Upper airway stimulation is a new and effective second-line treatment for obstructive sleep apnea, but possible consequences on glucose metabolism and central regulation of food intake are unclear. Twenty patients were prospectively studied before and 12 months after obstructive sleep apnea treatment by upper airway stimulation. Respiratory parameters and daytime sleepiness were assessed to document effectiveness of treatment. Glucose metabolism was assessed by the oral glucose tolerance test, and hedonic versus homeostatic drive to eat was characterized. At 12 months, upper airway stimulation significantly improved measures of obstructive sleep apnea (all  $p < 0.01$ ). Despite no change in body weight, fasting C-peptide insulin resistance index ( $p = 0.01$ ) as well as insulin and C-peptide levels at 60 min during the oral glucose tolerance test ( $p < 0.02$ ) were reduced. Hedonic drive to eat was strongly reduced ( $p < 0.05$ ), while leptin and ghrelin remain