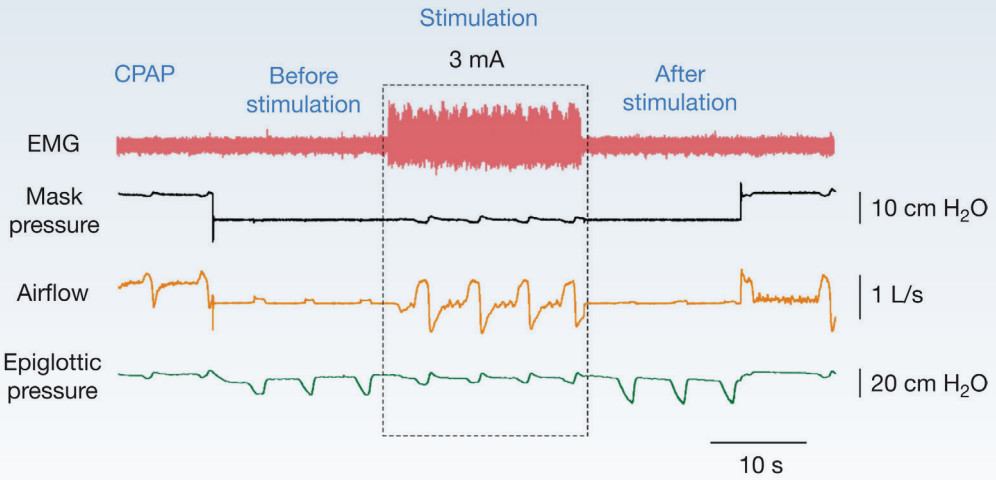
Can Hypoglossal Nerve Stimulation Applied via Percutaneous Electrode Implantation Improve Airway Collapsibility in OSA?

STUDY DESIGN

- 14 patients with OSA with BMI < 35 undergoing drug-induced sleep endoscopy
- Percutaneous insertion of linear, multisensor electrode stimulator for hypoglossal nerve

RESULTS



Raw data from a single patient: CPAP reduction from 10 to 6 cm H_2O leading to marked airflow limitation/apnea, followed by airflow restoration during brief hypoglossal nerve stimulation and then a return to marked airflow obstruction following cessation of stimulation

- Improvements in airflow obstruction and minute ventilation in 13/14 participants
- Airflow was restored to the equivalent of using CPAP

In this study, this novel, minimally invasive technique to stimulate the hypoglossal nerve showed improvement in airflow and apnea in patients with OSA.

Osman AM, et al. *CHEST* January 2026 | @journal_CHEST | https://doi.org/10.1016/j.chest.2025.08.020