

# PROVISOIRE

## Insights on mandibular jaw movements during polysomnography in obstructive sleep apnea

Atul Malhotra, MD, Jean-Benoit Martinot, MD, Jean-Louis Pépin, MD, PhD

Published Online: January 1, 2024 • <https://doi.org/10.5664/jcsm.10830>

 View Full Text

 Epub

 PDF 

 Supplemental Material

### Abstract

A strong and specific comprehensive physiological association has been documented between mandibular jaw movements and related periods of normal or disturbed breathing across different sleep stages. The mandibular jaw movement biosignal can be incorporated in the polysomnography, displayed on the screen as a function of time like any standard polysomnography signal (eg, airflow, oxygen saturation, respiratory inductance plethysmography bands) and interpreted in the context of the target period of breathing and its associated respiratory effort level. Overall, the mandibular jaw movement biosignal that depicts the muscular trigeminal respiratory drive is a highly effective tool for differentiating between central and obstructive sleep episodes including hypopneas and for providing clinicians with valuable insights into wake/sleep states, arousals, and sleep stages. These fundamental characteristics of the mandibular jaw movement biosignal contrast with photoplethysmography, airflow, or oxygen saturation signals that provide information more about the consequence of the disturbed breathing episode than about the event itself.

**CITATION:** Malhotra A, Martinot J-B, Pépin J-L. Insights on mandibular jaw movements during polysomnography in obstructive sleep apnea. *J Clin Sleep Med*. 2024;20(1):151–163.