

Sleep apnea patients using oral appliance therapy show high efficacy and compliance

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According to new research that will be presented on Saturday, June 5, at the 19th Annual Meeting of the American Academy of Dental Sleep Medicine, between 31 and 53 months after beginning oral appliance therapy, the sleep apnea treatment remained effective. Subjective daytime sleepiness, fatigue severity, and quality of life also remained improved.

Mandibular advancement appliances (MAA) have been shown to safely and effectively treat mild to moderate obstructive [sleep apnea](#) (OSA). The aim of this study was to assess the efficacy of two different MAA over time from a previous comparative study (PCS).

This Canada-based study included four women and 10 men who had participated in a PCS that tested two oral appliances in a randomized cross-over design. The participants were 52 years of age on average.

Each participant took three polysomnograms (PSG): one baseline from the PCS, a night with the appliance they selected at the end of the PCS, and a follow-up night.

Results indicate that respiratory disturbance index (RDI) was significantly reduced from baseline (10.4 ± 1.3) to the night at the end of the PCS (5.7 ± 1.1) and remained low at follow-up (4.5 ± 0.7).

Before each PSG, subjects completed the Epworth Sleepiness Scale (ESS), the fatigue severity scale (FSS), and a quality of life questionnaire

(FOSQ). Questionnaire results revealed that the ESS, FSS, and FOSQ were all significantly improved from baseline to the night at the end of the PCS and remained improved at follow-up. Participants reported a high compliance, wearing their MAA 7.1 hours a night, 6.4 nights a week.

A second arm was added to fit a dorsal harness in an attempt to eliminate positional apnea. The addition of a dorsal harness was effective, although compliance was poor. Five subjects agreed to wear the harness. It was effective for four subjects, but only one agreed to wear it after a one-month trial.

"The study showed excellent long-term compliance with oral appliances as well as a high efficiency and a very positive effect on blood pressure and cardiac rhythm," said lead author Luc Gauthier, DMD, MSc.

"Efficiency continued to improve even though, on average, the subjects had a higher body mass index during follow-up," said Gauthier.

Provided by American Academy of Sleep Medicine

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