

# Surgery for obstructive sleep apnea reduces daytime drowsiness

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Patients with obstructive sleep apnea who undergo surgery to improve their breathing get a better night's sleep and therefore are less drowsy during the day, according to a new study from Henry Ford Hospital in Detroit.

The study finds surgery greatly reduces [daytime sleepiness](#) – a common side effect from this disorder in which the upper airway is partially or completely blocked during [sleep](#) – when compared to other non-surgical treatments for [obstructive sleep apnea](#).

"This study validates what patients have told us regarding their improved alertness after surgery," says study author Kathleen L. Yaremchuk, M.D., Chair of the Department of Otolaryngology-Head and Neck Surgery at Henry Ford Hospital.

Results from the study will be presented Jan. 29 at the Triological Society's Combined Sections Meeting in Scottsdale, Ariz.

Obstructive sleep apnea syndrome (OSAS) affects an estimated 2 percent of women and 4 percent of men in the U.S., putting them at an increased risk for hypertension, coronary artery disease, congestive heart failure, stroke and death.

This sleep disorder occurs due to the collapse of the airway in the throat during sleep.

The blocked airway causes loud snoring and periodic pauses in breathing, sometimes hundreds of times a night. This can lead to excessive daytime sleepiness, and as a result decreased quality of life and an increased risk for injuries from motor vehicle accidents.

The treatment of choice for has been continuous positive airway pressure (CPAP) therapy during sleep, which uses a machine to increase air pressure in the throat to prevent the airway from collapsing. But it isn't the only treatment option.

Several surgical interventions are available to help patients with obstructive sleep apnea. Some surgical approaches work to open up the airway by removing excess tissue in the back of the throat, removing the tonsils or using radiofrequency waves to destroy tissue at the base of the tongue.

As part of their study, Dr. Yaremchuk and co-author Brandy Tacia, D.O., sought to determine if surgery may offer patients more relief from daytime sleepiness than CPAP.

The retrospective study looked at 40 patients who underwent one of three surgical interventions – uvulopalatopharyngoplasty, tonsillectomy or radiofrequency ablation of the base of tongue – between January 2007 and December 2009.

All patients in the study had at least mild obstructive sleep apnea, defined as five or more apnea/hypopnea events per hour of sleep and excessive daytime sleepiness. Many patients prior to surgery reported experiencing fatigue, snoring and failure to successfully use CPAP.

Both prior to and following surgery, patients were asked to complete the Epworth Sleepiness Score (ESS) questionnaire, which measures patients' general level of daytime sleepiness by rating their level of sleepiness (0 =

never doze/sleep; 3 = high chance of dozing/sleeping) during eight common daytime activities such as watching TV, reading or driving. The ratings for each activity are then added together for a total Epworth Score.

Before surgery, all patients in the study reported having an ESS score of 10 or more, which is considered "very sleepy" during the day.

Following surgery, 38 patients' scores were significantly reduced, with a postoperative average score of 5.5. One patient in the study had no change in his score, while two experienced an increase.

Patients in the study also experienced a 50 percent reduction in apnea/hypopnea events during sleep following surgery.

"While this is not a prospective study, the results show an improvement in Epworth Sleepiness Score after surgery that is greater than typically reported with continuous positive airway pressure therapy," notes Dr. Tacia.

Provided by Henry Ford Health System

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