

Practice Guidelines

Surgical Treatments for Obstructive Sleep Apnea: Updated Guidelines From the American Academy of Sleep Medicine

Key Points for Practice

- PAP, when tolerated, is the most effective treatment for OSA.
- Surgical treatment of upper airway obstruction reduces sleepiness, snoring, and blood pressure and improves quality of life.
- People with OSA and a body mass index of 35 kg per m² or greater benefit from bariatric surgery, which improves excessive sleepiness, snoring, and oxygen saturation during sleep and reduces weight and blood pressure.

From the *AFP* Editors

Obstructive sleep apnea (OSA) is a common sleep disorder characterized by periods of absent or inadequate breathing from intermittent airway obstruction. Untreated OSA can have cardiovascular, metabolic, and neurologic consequences and contributes to insomnia, anxiety, and depression. Addressing OSA can reduce sleepiness; improve snoring and sleep quality; improve quality of life; and reduce cardiovascular disease, diabetes mellitus, and motor vehicle crashes. Finding a therapy that patients will use is the key to OSA treatment.

To support physicians in making treatment plans to address adherence for patients with sleep apnea, the American Academy of Sleep Medicine has updated its clinical practice guidelines on surgical referral for patients with OSA.

Coverage of guidelines from other organizations does not imply endorsement by *AFP* or the AAFP.

This series is coordinated by Michael J. Arnold, MD, contributing editor.

A collection of Practice Guidelines published in *AFP* is available at <https://www.aafp.org/afp/practguide>.

CME This clinical content conforms to AAFP criteria for CME. See CME Quiz on page 618.

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Nonsurgical Treatment

Although positive airway pressure (PAP), including continuous PAP and bilevel PAP, is the most effective therapy for OSA, benefits are often limited by poor tolerance or adherence. Mandibular advancement devices, positional therapy, and behavior changes are less effective nonsurgical options.

For patients using PAP to treat OSA, assessing adherence to therapy is crucial. Although some interventions can improve adherence, referral for surgical therapy should be considered for patients who will not accept or are intolerant of PAP therapy, who have persistent trouble adhering to PAP therapy because of pressure-related adverse effects, or who have obvious anatomic abnormalities in the upper airway.

Referral to Sleep Surgeon

A sleep surgeon is an oral and maxillofacial surgeon, or an otolaryngologist, trained in upper airway surgery, sleep medicine, and modern surgical techniques for OSA. Referrals for possible surgical interventions that address anatomic causes of obstruction are strongly recommended for patients with a body mass index less than 40 kg per m² who do not tolerate PAP. Based on low-quality evidence, surgical interventions seem to reduce sleepiness, snoring, and blood pressure and improve quality of life. Long-term adverse effects are rare but include dysphagia, taste alteration, mandibular paresthesia, aspiration, hemorrhage, globus pharyngeus (i.e., sensation of a foreign body in the throat), and a poor cosmetic result. In patients with inadequate PAP adherence due to pressure-related adverse effects, upper airway surgery can reduce the minimum therapeutic PAP level and improve adherence.

In patients with a major upper airway anatomic abnormality, a trial of PAP therapy should be considered before surgical referral to avoid surgical risks. Surgical correction of OSA in these

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patients reduces snoring and excessive sleepiness but not sleep-related quality of life.

Referral to Bariatric Surgeon

Referral to a bariatric surgeon is recommended for patients with a body mass index of 35 kg per m² or greater who cannot tolerate or who do not desire PAP. Bariatric surgery improves excessive sleepiness, snoring, and oxygen saturation during sleep, and reduces weight and blood pressure. Discussion of referral to a sleep surgeon or a bariatric surgeon does not need to result in a referral and does not preclude the patient from trying other nonsurgical alternative treatments for OSA.

The views expressed in this article are those of the authors and do not reflect the official policy of the U.S. Army, Navy, or Air Force; U.S. Department of Defense; or U.S. government.

Editor's Note: These recommendations help answer the question about when to refer for surgical therapies in adults with OSA. We are used to referring children with large tonsils and significant snoring, and this guideline suggests that upper airway surgeries are effective in adult patients

who do not tolerate PAP. This is also a good reminder that the benefits of bariatric surgery also include improvement in sleep apnea.—Michael J. Arnold, MD, Contributing Editor

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Evidence rating system used? Yes

Systematic literature search described? Yes

Guideline developed by participants without relevant financial ties to industry? No

Recommendations based on patient-oriented outcomes? Yes

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Answers to This Issue's CME Quiz

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Q3. D	Q8. D	Q13. A	Q18. D	
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