

Treatment of central sleep apnea in adults: an American Academy of Sleep Medicine clinical practice guideline.

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The American Academy of Sleep Medicine (AASM) commissioned a task force of experts in sleep medicine to develop recommendations and assign strengths based on a systematic review of the

literature and an assessment of the evidence using the Grading of Recommendations Assessment, Development and Evaluation methodology. The task force provided a summary of the relevant literature and the certainty of evidence, the balance of benefits and harms, patient values and preferences, and resource use considerations that support the recommendations. The AASM Board of Directors approved the final recommendations.

The following good practice statement is based on expert consensus, and its implementation is necessary for the appropriate and effective management of patients with CSA. The optimal approach to CSA treatment should incorporate clinical features, comorbid conditions, and polysomnographic findings in an individualized manner. Specifically, clinicians must prioritize optimizing therapy for the conditions contributing to central apneas and improving patient-reported outcomes rather than solely focusing on eliminating disordered breathing events. Once therapy for CSA has been initiated, persistence of central respiratory events should prompt re-evaluation of the underlying risk factors and consideration of alternative treatment options.

The following recommendations are intended as a guide for clinicians in choosing a specific treatment for adults with CSA. Each recommendation statement is assigned a strength (“Strong” or “Conditional”). A “Strong” recommendation (ie, “We recommend ...”) is one that clinicians should follow under most circumstances. A “Conditional” recommendation (ie, “We suggest ...”) is one that clinicians should offer to most patients if clinically appropriate. Some recommendations include remarks that provide additional context to guide clinicians with the implementation of this recommendation. The AASM suggests using continuous positive airway pressure over no continuous positive airway pressure in adults with CSA due to the following etiologies: primary CSA, CSA due to heart failure, CSA due to medication or substance use, treatment-emergent CSA, and CSA due to a medical condition or disorder. (Conditional recommendation, low certainty of evidence)

The AASM suggests using bilevel positive airway pressure with a backup rate over no bilevel positive airway pressure with a backup rate in adults with CSA due to the following etiologies: primary CSA, CSA due to medication or substance use, treatment-emergent CSA, and CSA due to a medical condition or disorder. (Conditional recommendation, very low certainty of evidence)

The AASM suggests against the use of bilevel positive airway pressure without a backup rate in adults with CSA due to the following etiologies: primary CSA, CSA due to heart failure, CSA due to medication or substance use, treatment-emergent CSA, and CSA due to a medical condition or disorder. (Conditional recommendation, very low certainty of evidence)

The AASM suggests using adaptive servo-ventilation over no adaptive servo-ventilation in adults with CSA due to the following etiologies: primary CSA, CSA due to heart failure, CSA due to medication or substance use, treatment-emergent CSA, and CSA due to a medical condition or disorder. (Conditional recommendation, low certainty of evidence)

Remarks: Prior to initiation of adaptive servo-ventilation, patient-provider shared decision-making is recommended, and treatment decisions should be based on expectations of symptomatic or quality-of-life improvement. Treatment with adaptive servo-ventilation in patients with heart failure with reduced ejection fraction should be limited to centers with experience, along with close monitoring and follow-up.

The AASM suggests using low-flow oxygen over no low-flow oxygen in adults with CSA due to heart failure. (Conditional recommendation, low certainty of evidence)

The AASM suggests using low-flow oxygen over no low-flow oxygen in adults with CSA due to high altitude. (Conditional recommendation, very low certainty of evidence)

Remarks: Patients with transient and mild CSA symptoms at high altitude may reasonably decline treatment with low-flow oxygen.

The AASM suggests using oral acetazolamide over no acetazolamide in adults with CSA due to the following etiologies: primary CSA, CSA due to heart failure, CSA due to medication or substance use, treatment-emergent CSA, and CSA due to a medical condition or disorder. (Conditional recommendation, low certainty of evidence)

The AASM suggests using oral acetazolamide over no acetazolamide in adults with CSA due to high altitude. (Conditional recommendation, very low certainty of evidence)

The AASM suggests using transvenous phrenic nerve stimulation over no transvenous phrenic nerve stimulation in adults with CSA due to the following etiologies: primary CSA and CSA due to heart failure. (Conditional recommendation, very low certainty of evidence)

Remarks: Given that transvenous phrenic nerve stimulation requires an invasive procedure, is not universally accessible, and is associated with high costs, it may be more appropriate to consider other treatments first.

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