

# AASM Guideline for Sleep Apnea

more emphasis on postures

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What is Sleep Apnea?

AASM Guidelines on severity of sleep apnea

Supine Position and its Impact

Lateral/Side Positions and Benefits

Clinical Guidelines for Positional Management

Challenges

Conclusion

References

- Obstructive Sleep Apnea (OSA) is a sleep disorder where the throat's soft tissues, including the tongue, relax and obstruct the airway.
- This causes breathing to stop for typically 10-12 seconds per event, occurring multiple times throughout the night.
- Leads to sleeplessness and tiredness even after sleeping for a healthy amount.
- Almost 1 Billion people are affected by sleep apnea globally [1] and India being low in public awareness of OSA (Obstructive Sleep Apnea).

Diagnostic Cutoff (AHI)	Severity	High-Risk (%)	Low-Risk (%)
$\geq 5$ events/hour	Mild OSA	87	55
$\geq 15$ events/hour	Moderate OSA	64	25
$\geq 30$ events/hour	Severe OSA	36	10

- This table was referred from [2]
- AHI stands for Apnea-Hypopnea index.
- High-Risk Prevalance: High-Risk Prevalence: This refers to the estimated prevalence of OSA within a "sleep clinic cohort of middle-aged obese men with typical symptoms of OSA."
- Low-Rish Prevalance: This refers to the estimated prevalence of OSA within a "sleep clinic cohort of younger non-obese women with possible OSA symptoms."

- OSA symptoms often worsen significantly when sleeping in the **supine (on back) position**.
- Gravity causes the tongue and soft palate to fall backward, further obstructing the airway.
- This leads to more frequent and severe apneas and hypopneas compared to non-supine positions.
- During PAP titration, the optimal pressure needed in the supine position is often higher (e.g.,  $> 2$  cm H<sub>2</sub>O) than in lateral positions [3].
- Because supine REM sleep is the "worst-case scenario" for airway collapse, the AASM guidelines tell the sleep technologists: "You must see the patient breathing perfectly, with no apneas or hypopneas, while they are in supine REM sleep at the chosen pressure [3]."

- Sleeping in **lateral (side) positions** can significantly reduce the severity of OSA [3, 4].
- Gravity no longer pulls the tongue and soft palate directly into the airway, reducing obstruction.
- Benefits include:
  - Decreased frequency and duration of apneas/hypopneas.
  - Improved oxygen saturation levels.
  - Reduced snoring.
  - Potentially lower PAP requirements for effective treatment [3].
- For patients with **positional OSA**, where symptoms are primarily supine-dependent, lateral sleeping can be a highly effective intervention.

# Clinical Guidelines for Positional Management

- AASM recognizes positional therapy as a viable option for OSA management.
- **Medical Therapy Guidelines:** Positional therapy is an "effective secondary therapy" or "supplement to primary therapies" for patients with a low Apnea-Hypopnea Index (AHI) in non-supine positions [4].
- **Oral Appliance Therapy Guidelines:** Positional therapy is considered a "conservative measure" for snoring and can be discussed as an "alternative treatment option" to PAP or surgery [5].
- **Surgical Consultation Guidelines:** Positional therapy is listed among "other viable alternative treatment options" for patients considering surgical referral, especially if intolerant of PAP [6].
- It is often recommended for patients with **positional OSA**, where the AHI is significantly higher in the supine position.
- Clinical judgment is crucial in determining if positional therapy is appropriate for an individual patient [4].

- Despite its benefits, adherence to positional therapy can be challenging.
- **Discomfort:** Some devices or techniques may cause discomfort, disrupting sleep.
- **Consistency:** Maintaining a non-supine position throughout the entire night can be difficult, especially for deep sleepers.
- **Lack of Awareness:** Patients may not realize they are shifting positions during sleep.
- **Limited Efficacy for Severe OSA:** Positional therapy alone may not be sufficient for severe OSA or non-positional OSA.
- Patient education and consistent follow-up are important to improve adherence and assess effectiveness.



- Obstructive Sleep Apnea is a prevalent sleep disorder with significant health impacts.
- The AASM provides comprehensive guidelines for its diagnosis and treatment.
- Positional factors play a crucial role in OSA severity, with the supine position often worsening symptoms.
- Positional therapy is a recognized, non-invasive treatment option, particularly for positional OSA.
- While PAP remains the gold standard, positional therapy, oral appliances, and surgical interventions offer valuable alternatives or adjunctive treatments.
- Effective management of OSA requires a tailored approach, considering individual patient needs and the specific characteristics of their sleep apnea.

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- 4 Morgenthaler TI, et al. (2006). Practice parameters for medical therapy of OSA. *Sleep*. 29(8):1031-1035.
- 5 Ramar K, et al. (2015). Guideline for oral appliance therapy in OSA. *J Clin Sleep Med*. 11(7):773-806.
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