

## Sleep Apnoea (OSA): CPAP

### → Summary

Obstructive sleep apnoea (OSA) is a common sleep disorder, which has been linked to many adverse health outcomes including excessive sleepiness, impaired quality of life including daytime alertness, cognitive function, mood, motor vehicle crashes and cardiovascular events. Positive airways pressure (PAP) is the primary treatment modality.

### → Indication & Benefits

Obstructive sleep apnoea (OSA) is a common sleep disorder, which has been linked to many adverse health outcomes including excessive sleepiness, impaired quality of life including daytime alertness, cognitive function, mood, motor vehicle crashes and cardiovascular events. Positive airways pressure (PAP) is the primary treatment modality.

Use of CPAP in people with OSA to improve daytime sleepiness, sleep-related quality of life and modest lowering of blood pressure, particularly nocturnal systolic blood pressure.

A 2019 systematic review commissioned by the American Academy of Sleep Medicine found that CPAP resulted in a reduction in sleepiness, blood pressure, and motor vehicle accidents, compared with no treatment in people with OSA. CPAP also improved sleep-related quality of life. The effectiveness of CPAP in reducing cardiovascular events and all-cause mortality in OSA was inconclusive.<sup>1</sup>

### → Contraindication and Adverse Effects

#### **Precautions**

Ensure that prior to treatment of OSA with CPAP, a diagnosis of OSA has been established using objective sleep apnoea testing.

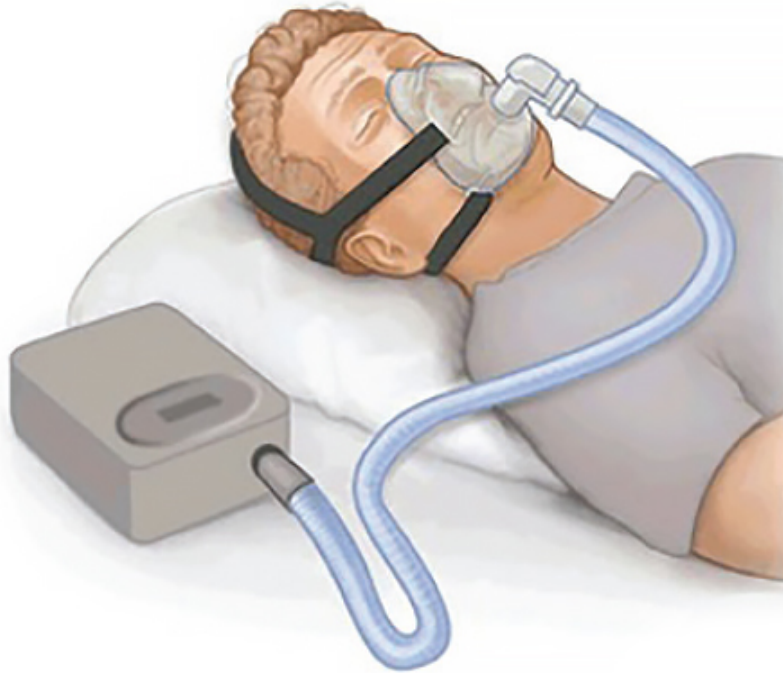
#### **Adverse effects**

Side effects that have been reported with CPAP include nasal dryness/irritation, dry mouth, sore throat and sinus infection.<sup>1</sup>

- Poor adherence (usually defined as less than of 4 hours in a 24-hour period) with CPAP limits its effectiveness. Technological advances have improved the fit and comfort of the masks but regular follow-up and troubleshooting are needed.<sup>1,2</sup>
- [Mandibular advancement devices](#) may be an alternative to CPAP.<sup>2</sup>

## → Practical Description

CPAP is the most efficacious therapy to treat OSA (Figure 1).<sup>2</sup> Neurocognitive benefits noticed by patients may not always closely correlate with improvements detected during polysomnography.<sup>2</sup> Despite this, a linear improvement in both subjective and objective daytime sleepiness in patients with severe OSA has been found when CPAP is used up to seven hours per night.<sup>2</sup>



**Figure 1.** A CPAP device fitted to provide positive pressure to nasal and oral cavities during sleep.

'CPAP.png' by PruebasBMA is licenced under CC BY-SA 3.0. The original image can be found at <https://commons.wikimedia.org/wiki/File:CPAP.png> [Accessed 17 February 2024].

## → Availability

Public funding of CPAP varies by state and territory in Australia. The cost of the CPAP, mask and other accessories has been estimated to be over \$1500. Access to CPAP is via a home or laboratory-based sleep study. The pathway to having a sleep study can be through referral to a sleep or respiratory specialist or via direct referral from the GP, when the following Medicare criteria are met: A high pre-test probability of symptomatic, moderate-severe OSA is confirmed by a [Epworth Sleepiness Scale \(ESS\)](#) score  $\geq 8$ , and OSA50 score  $\geq 5$  or STOP-Bang score  $\geq 3$ .

## → Resources

### Consumer resources

- Sleep Health Foundation. [CPAP – Continuous Positive Airway Pressure](#)

## Other resources

- Australasian Sleep Association. [On-the-spot management information for health professionals – Obstructive sleep apnoea](#)
- [AJGP article on OSA \(2019\)](#)

## → Evidence

### Grading

High for reducing OSA severity and for improving self-reported sleepiness; moderate to high for improving sleep-related quality of life and for reducing blood pressure; inconclusive for reducing cardiovascular events and all-cause mortality.

### References

1. [Patil SP, Ayappa IA, Kimoff RJ et al. Treatment of Adult Obstructive Sleep Apnea With Positive Airway Pressure: An American Academy of Sleep Medicine Systematic Review, Meta-Analysis, and GRADE Assessment. J Clin Sleep Med 2019;15\(2\):301-34.](#)
1. [Sarkissian L, Kitipornchai L, Cistulli P et al. An update on the current management of adult obstructive sleep apnoea. AJGP 2019;48\(4\):182-86.](#)

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