

CPAP Treatment for Adults With Obstructive Sleep Apnea: A Review

Context

Obstructive sleep apnea (OSA) is a common disorder in which the upper airway is partially or fully obstructed by soft tissue during sleep. OSA interferes with breathing, resulting in disrupted sleep. It affects 3% of adult Canadians, and is more prevalent in men and in people over the age of 45.

Technology

Treatment options for OSA include weight loss, dental devices or oral appliance therapy, surgical procedures, and continuous positive airway pressure (CPAP).

CPAP is the mainstay of OSA treatment and involves wearing a mask that pumps air into the nose or mouth during sleep. The airflow generates positive pressure, which opens the airway and prevents the soft tissue from collapsing.

There are several tests available for scoring the effectiveness of OSA treatments.

Issue

OSA has substantial patient health and economic implications. If left untreated, OSA can lead to fatigue, daytime drowsiness, headaches, cardiovascular disease, decreased quality of life, lowered occupational productivity, and increased risk of motor vehicle accidents. Studies evaluating the effect of CPAP on medical costs are limited and findings are inconsistent; a review of the clinical and cost-effectiveness evidence will therefore help inform decision-making.

Methods

A limited literature search was conducted of key resources, and titles and abstracts of the retrieved publications were reviewed. Full-text publications were evaluated for final article selection according to predetermined selection criteria (population, intervention, comparator, outcomes, and study designs).

Key Messages

For patients with moderate or severe OSA:

- CPAP is effective at improving sleep.
- CPAP is cost-effective.
- The American College of Physicians guideline on CPAP recommends CPAP treatment as initial therapy.

Results

The literature search identified 757 citations, and 3 additional reports were retrieved from grey literature searching. Of these, 8 articles met the criteria for inclusion in this review: 1 systematic review, 4 non-randomized studies, 2 economic evaluations, and 1 guideline.

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