A Cochrane review explored the effectiveness of strategies to improve adherence to continuous positive airway pressure treatment in patients with obstructive sleep apnoea

Adherence to CPAP in obstructive sleep apnoea

In this article...

▸ Why patients with obstructive sleep apnoea benefit from continuous positive airway pressure
▸ Results of a Cochrane review exploring strategies to improve concordance with treatment

Review question
Are educational, supportive or behavioural strategies effective in encouraging people who have been prescribed continuous positive airway pressure to use their machines?

Nursing implications
Obstructive sleep apnoea (OSA) is a condition whereby breathing is interrupted during sleep. Patients with this condition spend less time in the deep sleep phase of the sleep cycle, leading to daytime sleepiness and problems engaging in activities of daily living.

Continuous positive airway pressure provides a constant stream of pressurised air, with the aim of maintaining patency of the upper airways during breathing.

Consistent adherence to CPAP treatment has multiple benefits including improving the quality of sleep, reducing daytime sleepiness, enhancing neurobehavioural performance, preventing vehicle accidents, improving blood pressure control and reducing the risk of cardio-vascular events. However, despite the benefits of CPAP treatment, adherence is often low.

Because CPAP treatment for OSA has multiple health benefits, it is important that health professionals strongly encourage patients to adhere to their CPAP treatment regimen. Greater adherence to CPAP across the OSA population as a whole will lead to better health outcomes and less use of acute care hospital services. Effective methods to promote patient adherence to CPAP may include educational, supportive and behavioural interventions.

CPAP has numerous benefits, but patient adherence to the treatment is low

Study characteristics
The review included 30 randomised single blind or unblinded parallel group studies, with a total of 2,047 participants. The majority of the participants were newly diagnosed with OSA and ready to commence CPAP treatment; only 3.6% had received CPAP treatment before taking part in the study.

In all of the studies, the participants were allocated into one of three groups – supportive, educational and behavioural intervention groups. The duration of the studies varied widely, ranging from only four weeks to 52 weeks.

Many of the studies were at a high risk of one or more forms of bias, and it is important to consider this when reflecting on the results of this review.

Summary of key evidence
The review revealed low- to moderate quality evidence supporting the use of educational, supportive and behavioural interventions in improving adherence to CPAP treatment in patients with OSA.

Specifically, behavioural interventions were associated with the greatest increase in CPAP use compared with standard care, with an average increase of 1.44 hours per night across six studies of 584 participants. They also led to an increase in the number of patients using their CPAP machine for more than four hours a night, from 28% to 47% across three studies of 358 participants.

Supportive interventions were shown to be associated with an increase in CPAP use compared with usual care of approximately 50 minutes per night across 13 studies and 803 participants.

Additionally, CPAP use for more than four hours per night increased among those in the supportive intervention group, from 59% to 75% of participants across 12 studies and 903 participants.

Educational interventions increased CPAP use by approximately 35 minutes per night across seven studies of 508 participants, while CPAP use for more than four hours per night rose from 57% to 70% across three studies of 285 participants.

Best practice recommendations
Educational, supportive and behavioural interventions are of benefit in encouraging patients with OSA to use their CPAP machines and to do so for as long as possible each night. NT

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Reference

For more on this topic go online...
▸ Nurses’ role in managing and treating sleep disorders
▸ Bit.ly/NTSleepDisorder