

## CPAP improves daytime sleepiness even in patients with low levels of symptoms

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Continuous positive airway pressure, or CPAP, can increase alertness and even improve quality of life for sufferers of obstructive sleep apnea (OSA), even if their symptoms are minimal, according to a study conducted by researchers in Europe. Patients enrolled in the study reported an improvement in daytime sleepiness within six months of beginning CPAP treatment.

The study will be presented at the ATS 2011 International Conference in Denver.

"Treatment with CPAP clearly reduces daytime sleepiness and improves quality of life in patients with very limited [symptoms](#), at a rate of about half the improvement seen in patients with more severe symptoms," said Sonya Craig, research fellow at Churchill Hospital, Oxford.

"It is well-known that CPAP treatment greatly improves OSA patients who have substantial symptoms of daytime sleepiness," she added.

"However, OSA with few symptoms, and sometimes no symptoms, is much more common, yet the effect of CPAP on these patients has not been adequately evaluated. In this study, we wanted to investigate the effect of CPAP on sleepiness and quality of life measurements in patients with minimally symptomatic OSA."

Researchers analyzed data from 341 patients from 10 medical centers, with proven OSA but insufficient current symptoms as judged by both the patient and the sleep physician to justify CPAP therapy. Patients

were randomized to receive either six months of CPAP or no treatment. The Epworth Sleepiness Score, a standard scoring system used in sleep studies, was used to determine the change in daytime sleepiness measured at the start of the study, and again at follow-up six months later. [Wakefulness](#) and sleepiness were also measured using a second test, called the Oxford Sleep [Resistance Test](#) (OSLER), and quality of life was assessed using a standard [questionnaire](#).

The researchers found that after six months of treatment, CPAP significantly reduced [daytime sleepiness](#) and increased wakefulness compared to the standard treatment group. They also found that the odds of falling asleep during the OSLER test, which requires patients to lie quietly and react to a flashing light for prolonged periods of time at repeated intervals, were 49 percent lower in the CPAP treatment group compared to those in the standard care group. Quality of life scores were also significantly higher in the CPAP group compared to standard care patients. Ironically, about 25 percent of patients stopped treatment prior to the end of the study, reporting that they did not perceive adequate benefit.

Dr. Craig said the results of the study were surprising.

"The magnitude of the improvement in sleepiness and quality of life scores was greater than expected, particularly given that the patients were considered to have only very mild symptoms when assessed in clinic," she said.

"It appears clinical assessment of patients with OSA does not reliably identify all patients likely to benefit from treatment with CPAP," she added. "This suggests that a greater number of patients than originally thought may benefit from a trial of CPAP therapy."

Dr. Craig said further evaluation will focus on determining if the

improvements noted in the study are short-term improvement, or if they are long-lasting.

"We are continuing to follow these [patients](#) for a longer term to assess whether the improvements in quality of life and daytime symptoms are maintained over a longer time scale," she said. "If the benefits persist for a longer time period, it would strengthen the argument to expand the patient population that could benefit significantly from CPAP therapy."

Provided by American Thoracic Society

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