

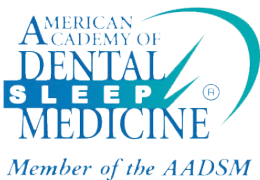
Dr. Les Priemer

## HEAVY SNORING, SLEEP APNEA MAY SIGNAL EARLIER MEMORY AND THINKING DECLINE

According to research from the NYU Langone Medical Center in New York, abnormal breathing patterns during sleep such as heavy snoring and sleep apnea are common in the elderly, affecting about 52 percent of men and 26 percent of women.

For the study, the medical histories for 2,470 people ages 55 to 90 were reviewed. Participants were categorized as either free of memory and thinking problems, in early stages of mild cognitive impairment (MCI), or with Alzheimer's disease. The researchers looked at people with untreated sleep breathing problems versus those without the sleep breathing problems, as well as those who are untreated versus those who are treated with sleep breathing problems.

The study found that people with sleep breathing problems were diagnosed with MCI an average of nearly 10 years earlier than people who did not have sleep breathing problems. For example, when researchers examined people who developed MCI or Alzheimer's disease during the study, those with sleep breathing problems developed MCI at an average age of 77, compared to an average age of 90 for those who did not have sleep breathing problems. Among that group, those who had sleep breathing problems also developed Alzheimer's disease five years earlier than those who did not have sleep breathing problems, at an average age of 83 versus 88.

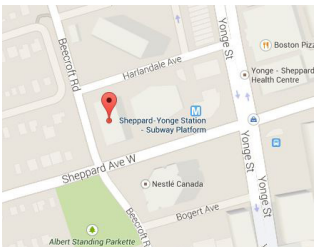


The researchers found that people who treated their sleep breathing problems were diagnosed with MCI about 10 years later than people whose problems were not treated, or at age 82 instead of age 72.

"The age of onset of MCI for people whose breathing problems were treated was almost identical to that of people who did not have any breathing problems at all," Osorio said.

"Given that so many older adults have sleep breathing problems, these results are exciting -- we need to examine whether using CPAP could possibly help prevent or delay memory and thinking problems."

Osorio noted that more research is needed. "These findings were made in an observational study and as such, do not indicate a cause-and-effect relationship," said Osorio. "However, we are now focusing our research on CPAP treatment and memory and thinking decline over decades, as well as looking specifically at markers of brain cell death and deterioration."



American Academy of Neurology (AAN). "Heavy snoring, sleep apnea may signal earlier memory and thinking decline." ScienceDaily. ScienceDaily, 15 April 2015. <[www.sciencedaily.com/releases/2015/04/150415203338.htm](http://www.sciencedaily.com/releases/2015/04/150415203338.htm)>.

## SLEEP APNEA LINKED TO POOR AEROBIC FITNESS

A recent study shows that people with sleep apnea, in which breathing repeatedly starts and stops during slumber, have a lower peak oxygen uptake during aerobic activity than those who do not suffer from the sleep disorder. People who suffer from apnea are more likely to be obese and thus are also expected to be less fit. The researchers, however, found that apnea patients had a reduced aerobic fitness, even compared with those of similar body mass indices's.

Scientists performed sleep studies of men and women to clinically evaluate the severity of the patients' apnea and to screen participants for other sleep disorders besides apnea that could alter the study results. Fifteen men and women with moderate to severe apnea and nineteen with mild or no apnea were asked to pedal a stationary bike at incrementally harder resistance levels (similar to what a person would experience climbing up a progressively steeper hill) until they were fully exhausted.

From the exercise test results, and previous measurements of participants' resting metabolic rates, scientists calculated each person's VO<sub>2</sub> max -- a measure of the maximum amount of oxygen the person can uptake during strenuous exercise -- and its deviance from the expected VO<sub>2</sub> max for a person of the same age, gender and body mass index. Researchers believe the sleep apnea itself causes structural changes in muscle that contributes to their difficulty exercising.

After adjusting for baseline differences, results showed that people with sleep apnea had on average a 14 percent lower VO<sub>2</sub> max than the control subjects. Furthermore, the number of times a person stopped breathing, for 10-seconds or more, per hour of sleep, could predict 16 percent of the variability observed in the group's peak VO<sub>2</sub>.

The study shows that VO<sub>2</sub> max measurements may be an early marker for those who are at higher risk of stroke and heart attack and that VO<sub>2</sub> max measurements could motivate early interventions to treat apnea, which is under diagnosed and often untreated.

Source: University of California, San Diego Health Sciences. "Sleep apnea linked to poor aerobic fitness." ScienceDaily. ScienceDaily, 24 November 2014. <[www.sciencedaily.com/releases/2014/11/141124125058.htm](http://www.sciencedaily.com/releases/2014/11/141124125058.htm)>



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