

# Sleep apnea puts patients at risk for delirium after surgery

27 March 2012

An anecdotal observation of a possible link between sleep apnea and post-surgical delirium has been measured and confirmed by a team of researchers at the Duke University Medical Center.

"The association between sleep apnea and postoperative [delirium](#) is big news because it may offer us a way to control postoperative delirium which can be devastating," said senior author Madan Kwatra, Ph.D., who is associate professor of [anesthesiology](#) at Duke.

The study appears in the April 2012 issue of *Anesthesiology*.

Delirium is not a minor consequence. The condition involves an acute and fluctuating consciousness and ability to understand, and is associated with [health problems](#) and higher risk of death right after surgery. Delirium is a strong predictor of mortality even 10 years after surgery.

There is hope for prevention, Kwatra said. "If the association between pre-existing sleep apnea and postoperative delirium discovered in this study is confirmed by a larger study, we may be able to prevent postoperative delirium by treating sleep apnea before and immediately after surgery."

The prospective study investigated patients who were having a total [knee replacement](#), a routine procedure for older patients that restores function and reduces pain.

Out of 106 patients in the study, 27 developed delirium after surgery. Eight out of the 15 patients in the study who had been diagnosed with obstructive sleep apnea experienced post-operative delirium, or 53 percent. By comparison, 20 percent of the patients without apnea (19 out of 91) experienced delirium.

In the analysis, apnea was the only statistically

significant factor that predicted delirium out of many medical conditions that were analyzed.

The study provides early evidence that doctors might do better presurgical screening for sleep apnea and introduce [effective therapy](#) for obstructive sleep apnea as a way to reduce the risk of delirium, Kwatra said. The causes of postsurgical delirium are still unknown, but [lack of oxygen](#) before or after surgery or possibly immune factors that lead to inflammation may play a role, he said.

The study findings support recent recommendations to screen for and treat obstructive sleep apnea in an effort to reduce respiratory and cardiovascular problems associated with obstructive [sleep apnea](#).

Provided by Duke University Medical Center

APA citation: Sleep apnea puts patients at risk for delirium after surgery (2012, March 27) retrieved 6 May 2021 from <https://medicalxpress.com/news/2012-03-apnea-patients-delirium-surgery.html>

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