

The association of obstructive sleep apnea with postoperative cognitive dysfunction and neuroinflammation

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Up to 40% of older adults who undergo surgery will develop a syndrome of postoperative thinking and memory deficits known as postoperative cognitive dysfunction (POCD). Strategies to prevent POCD are limited because we have a poor understanding of its risk factors. One potential risk factor is obstructive sleep apnea (OSA), a highly prevalent and frequently undiagnosed disorder in older adults that is associated with increased peripheral inflammation and long-term cognitive impairment. This study will determine the extent to which OSA is associated with POCD (as measured by change in global cognition from before to after surgery) and cerebrospinal fluid markers of inflammation. These data are expected to uncover potential mechanisms through which OSA impacts cognition, and to inform strategies to prevent both POCD and cognitive decline in OSA patients even outside of perioperative care.