

## Delirium and Long-Term Cognitive Decline: Real Data

*Meta-analyses of studies of both surgical and nonsurgical patients confirm the long-suspected association.*

Delirium is common in postoperative and critically ill hospitalized patients and has been estimated to occur in 25% of postsurgical patients and up to 82% of patients admitted to intensive care units. It has been associated with higher mortality and, anecdotally, with cognitive decline. To examine long-term cognitive impairment following delirium, researchers completed a systematic review and meta-analysis of articles that used quantifiable methods for diagnosis of delirium and that measured cognition at least 3 months after the delirium episode (to exclude the temporary, fluctuating cognitive decline that can be part of delirium itself).

The 24 included studies involved 3562 patients with delirium and 6987 controls without delirium. Patients' mean age was 75, and the mean duration of follow-up after a delirium episode was 2.4 years. Delirium was significantly associated with long-term cognitive decline, and *all* studies showed that the group with delirium had worse cognitive outcomes at the final study endpoint than the group without delirium. This result was true for both surgical and nonsurgical patients.

### COMMENT

Anecdotes about persistent cognitive decline after an episode of delirium have been discussed for decades. Delirium research has benefited in recent years from improved methodology and guidelines, thus allowing researchers to quantify the influence of delirium on cognitive decline. The present systematic review and meta-analysis confirm what memory disorder specialists have suspected for decades — there is a true association between delirium and subsequent cognitive decline. These results have important implications when counseling patients and their families about the risk for cognitive decline after surgery, especially in later life and among patients already diagnosed with a neurodegenerative condition. — **Matthew E. Peters, MD**

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Goldberg TE et al. Association of delirium with long-term cognitive decline: A meta-analysis. *JAMA Neurol* 2020 Jul 13; [e-pub]. (<https://doi.org/10.1001/jamaneurol.2020.2273>)