

# Severity of post-operative delirium relates to severity of cognitive decline

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Researchers from the Harvard affiliated Hebrew SeniorLife Institute for Aging Research (IFAR), in collaboration with scientists from Beth Israel Deaconess Medical Center (BIDMC), Harvard Medical School (HMS), and Brown University, have found increasing evidence that the level of delirium in post-surgical patients is associated with the level of later cognitive decline in those same patients. Findings from this study were published today in the *Journal of Alzheimer's Disease*.

Delirium is a common, serious, often fatal disorder affecting as many as 50% of older people during the course of surgery or hospitalization and costing more than \$164 billion per year. Delirium has been associated with increased functional [decline](#), prolonged hospital stays, higher rates of institutionalization and greater mortality. Delirium is also associated with a significant decline in cognitive ability. The authors of this study have found that for those [patients](#) who develop [delirium](#) and later cognitive impairment, the severity of cognitive impairment has a direct correlation to the severity of prior delirium.

Sarinnapha Vasunilashorn, Ph.D., Division of General Medicine and Primary Care at BIDMC and contributing author on this study said, "Although the short-term adverse affects of delirium are well-recognized, our results underscore important implications for longer-term prognosis. The findings suggest that for patients with moderate to [severe](#) delirium, the decline in cognition may be both substantial and long-term, and most notably, it exceeds the rate of decline observed in patients with dementia."

Researchers studied a group of 566 patients over a total of 3 years. Before their surgeries, none of these patients displayed signs of dementia. After surgery, a total of 134 participants displayed signs of delirium, based on their evaluations using the Confusion Assessment Method (CAM). Of these 134 participants, those who displayed the highest severity of delirium later developed the most severe cognitive decline.

Sharon K Inouye, M.D., M.P.H, Director of the Aging Brain Center at Hebrew SeniorLife's Institute for Aging Research and senior author on the study said, "These results challenge the idea that delirium is reversible with only acute complications. Though delirium generally subsides after a period of time, it appears to have lasting effects, the severity of which are related to the severity of the delirium itself. This work suggests the need to target patients with high delirium severity for strategies to prevent progressive [cognitive decline](#) as they are at increased risk for dementia."

Provided by Hebrew SeniorLife Institute for Aging Research

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