

***The role of Alzheimer's risk factors in cognitive decline after spine surgery***

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Cognitive decline after surgery and anesthesia is not well understood. In order to develop strategies for avoiding cognitive decline in this setting, we propose to monitor the cognitive outcomes of people who participate in elective surgery. Participants will have cognitive testing completed before surgery, and again several months later. The type and duration of anesthesia will be recorded for each person. They will also have genetic testing for genes that are associated with cognitive decline and dementia. This data will permit testing of the hypothesis that individuals who suffer cognitive decline after anesthesia are more likely to have dementia-related genes than individuals who do not decline, after accounting for types and duration of anesthesia. If the genetic risk factors for post-surgical decline can be identified in this study, then future studies can focus on how to improve outcomes in the individuals at risk.