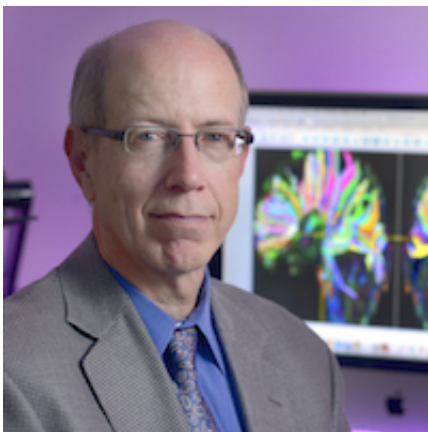


Researchers find higher risk of mild cognitive impairment after traumatic brain injury

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Dr. C. Munro Cullum Credit: UT Southwestern

Traumatic brain injury appears to be related to both increased risk and earlier onset of mild cognitive impairment, UT Southwestern Medical Center researchers report.

Researchers discovered those who had experienced a [traumatic brain injury](#) (TBI) with loss of consciousness for more than five minutes were at greater risk of being diagnosed with mild [cognitive impairment](#), or MCI, and showed signs of that impairment 2.3 years earlier on average than those with no TBI history. The study analyzed cases of 3,187 people diagnosed with mild cognitive impairment versus a normal-cognition

group of 3,244 in a large, multicenter national database.

Other studies have implicated traumatic [brain injury](#) as a risk factor for later development of neurodegenerative disorders, such as Alzheimer's disease, but this report was the first of a possible link between TBI and MCI. The study was published recently in the *Journal of Alzheimer's Disease*.

The researchers found several important variables associated with a higher risk for MCI: TBI with loss of consciousness for greater than five minutes, certain [genetic risk factors](#), and a history of depression. However, these MCI risk factors need closer examination, researchers said.

"This is one of the first studies to demonstrate later-life risks of [mild cognitive impairment](#) in relation to a remote history of traumatic brain injury in a large population sample," said senior author Dr. C. Munro Cullum, Professor of Psychiatry, and Neurology and Neurotherapeutics at UT Southwestern. "We cannot yet determine who is at greatest risk for later-life cognitive decline following TBI, but these results suggest that a relationship exists for some people. Our ultimate goal is to identify various [risk factors](#) that may play a role."

In 2010, the Centers for Disease Control and Prevention estimated that TBIs accounted for approximately 2.5 million emergency department visits, hospitalizations, and deaths in the United States. Mild cognitive impairment, which typically occurs later in life, affects 10 to 20 percent of those aged 65 and older, according to the Alzheimer's Association.

In the database sample group, researchers found TBI patients who had lost consciousness were 1.2 to 1.3 times more likely to be diagnosed with MCI than those who had not suffered brain injuries. Much of that elevated risk also was influenced by a history of depression, added Dr.

Cullum, who holds the Pam Blumenthal Distinguished Professorship in Clinical Psychology.

The data came from patient information documented in the National Alzheimer's Coordinating Center database, which is pooled from 29 National Institute of Aging-funded Alzheimer's disease centers in the U.S. The group studied included those age 50 or older who had initial and follow-up visits completed between September 2005 and December 2013.

"TBI is hypothesized to activate a neurodegenerative process that may interact with age and other factors over time," Dr. Cullum said. "This study shows a correlation between TBI and MCI, but more research remains to be done to explore this apparent link. Factors such as neuroinflammation and buildup in the brain of proteins such as tau or amyloid following injury and over a person's lifetime may play a role."

Provided by UT Southwestern Medical Center

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