



## Brain Injury and Mental Health

### What Is the Link Between TBI and Mental Health?

Brain injury and mental health are often seen and treated as two entirely separate diagnoses, or sometimes confused as being the same thing. However, both can be true; brain injury is sometimes an entirely separate issue to mental health, whereas other times brain injury can lead to mental health issues developing. It may also be that mental health issues prior to the injury are made worse by the brain injury. <sup>1</sup>

A new study revealed approximately 1 in 5 individuals may experience mental health symptoms up to six months after mild traumatic brain injury (mTBI). It also discovered weekend concussions were associated with a more than 30% increased risk of suicide compared with weekday concussions, regardless of the age, sex or race of the patient, and was independent of past psychiatric conditions. <sup>2</sup>

Other studies have shown links between moderate to severe brain injury and mental health issues:

- Those who had experienced TBI were more likely than other trauma patients to report symptoms of PTSD and/or major depressive disorder. If a TBI was caused by an assault, the risk of developing PTSD increased; the risk of developing a major depressive disorder did not. <sup>3</sup>
- 50% of persons in one study reported developing a major mental disorder after their TBI; 23% reported developing a personality disorder. <sup>4</sup>
- There is compelling evidence of TBI causation for depression, anxiety and Bipolar Affective Disorders. <sup>5</sup>

<sup>1</sup> <https://www.headway.org.uk/media/4051/mental-health-and-brain-injury-factsheet.pdf>

<sup>2</sup> Michael Fralick, Deva Thiruchelvam, Homer C. Tien and Donald A. Redelmeier CMAJ April 19, 2016 188 (7) 497-504; DOI: <https://doi.org/10.1503/cmaj.150790>

<sup>3</sup> Stein MB et al. Posttraumatic stress disorder and major depression after civilian mild traumatic brain injury: A TRACK-TBI study. JAMA Psychiatry. January 30, 2019

<sup>4</sup> Koponen S, Taiminen T, Portin R, Himanen L, Isoniemi H, Heinonen H, Hinkka S, Tenovuo O. Axis I and II psychiatric disorders after traumatic brain injury: a 30-year follow-up study. Am J Psychiatry. 2002 Aug;159(8):1315-21.

<sup>5</sup> Van Reekum R1, Cohen T, Wong J. Can traumatic brain injury cause psychiatric disorders? J Neuropsychiatry Clin Neurosci. 2000 Summer;12(3):316-27

- The average risk of developing a psychiatric diagnosis was more than 24% among those with a history of TBI, as opposed to 9% in a control group. <sup>6</sup>
- Lower levels of education, being African-American, and having a history of mental illness increased the risk of developing mental health issues after TBI. <sup>7</sup>



The effects of brain injury and mental illness can look very similar, so misdiagnosis is not only possible, it's probable if there are no medical records indicating the occurrence of a TBI

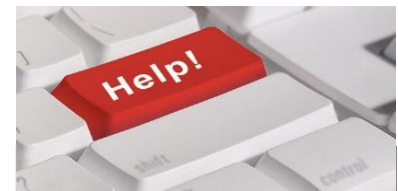
### How Do I Treat my Mental Health and TBI related issues?

A mental health disorder can increase risks associated with a brain injury, including social isolation, family breakdown, unemployment, aggression and risk of exploitation.<sup>4</sup> Because the exact mechanisms that lead from head injury to mental illness are still unknown, it is not clear whether there are specific ways to reduce the risk of mental illness.

If you've received a head injury, don't ignore it. If you feel anxious or depressed after a concussion, don't assume that the feeling is unrelated. Speak with your doctor, and get help. For patients with prior mental health problems, watchful waiting as well as antidepressant treatment and/or cognitive behavioral therapies should be done on an individual patient-by-patient basis.

Supports and strategies may help lessen the effects of a mental health issue include.

- Peer communities that reflect someone's ethnicity
- Positive interpersonal and social activities
- Developing stress management techniques
- Exercise
- Developing problem-solving skills
- Developing conflict management skills <sup>8</sup>



**Virginia**

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### Resources:

Virginia Department for Aging and Rehabilitative Services Brain Injury Services Coordination Unit

<https://www.vadars.org/cbs/biscis.htm>

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<sup>6</sup> Fann J, Leonetti A, Jaffe K, Katon W, Cummings P, Thompson R. Psychiatric illness and subsequent traumatic brain injury: a case control study. *J Neurol Neurosurg Psychiatry*. 2002 May;72(5):615-20.

<sup>7</sup> Stein *ibid*

<sup>8</sup> World Health Organization and Calouste Gulbenkian Foundation. *Social determinants of mental health*. Geneva, World Health Organization, 2014.