

Head injury does not worsen drinking behavior in heavy drinkers

November 15 2017

Head injury, which often damages brain regions overlapping with those involved in addictive behaviors, does not worsen drinking behavior in people with heavy alcohol use, according to a new study published in *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*. The study, led by Dr. Andrew Mayer of the Mind Research Network and University of New Mexico in Albuquerque, New Mexico, also found that combining head injury with heavy alcohol use did not further alter the structure or function of the brain.

"Individuals who consume too much alcohol are prone to experience more accidents as a result of their intoxication," said Dr. Mayer. Importantly, he added, heavy alcohol use and traumatic brain injury (TBI) affect similar regions of the brain. This has led researchers to think that the common combination of head injury and heavy drinking may interact to worsen the brain damage already caused by chronic [alcohol exposure](#).

The study compared people with a recent history of heavy alcohol use and TBI with a control group carefully matched on lifetime history of alcohol exposure. Mayer and colleagues found the opposite of what they expected—heavy drinkers with a history of a TBI did not have worse [drinking behavior](#), such as how often and how much they drank, compared with drinkers without a history of TBI.

The researchers also used imaging techniques to measure the structure of the brain and its activity when the participants were given a taste of their

favorite drink. "On average, the brains of the two groups were similar both in terms of the amount of lost tissue, as well as how each person's brain responded to their favorite drink," said Dr. Mayer, suggesting that TBI does not further damage brain circuitry in heavy drinkers.

"The observation that the participants with TBI did not have greater neurocircuitry dysfunction than those without TBI might translate into greater therapeutic optimism for the treatment of individuals with a combination of TBI plus heavy drinking histories," said Dr. Cameron Carter, Editor of *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*.

More information: Andrew R. Mayer et al, An Examination of Behavioral and Neuronal Effects of Comorbid Traumatic Brain Injury and Alcohol Use, *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging* (2017). [DOI: 10.1016/j.bpsc.2017.09.012](https://doi.org/10.1016/j.bpsc.2017.09.012)

Provided by Elsevier

Citation: Head injury does not worsen drinking behavior in heavy drinkers (2017, November 15) retrieved 23 April 2024 from

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