

# Researchers find drug combination may treat traumatic brain injury

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Traumatic brain injury (TBI) is a serious public health problem in the United States. Recent data show that approximately 1.7 million people sustain a traumatic brain injury annually. While the majority of TBIs are concussions or other mild forms, traumatic brain injuries contribute to a substantial number of deaths and cases of permanent disability.

Currently, there are no drugs available to treat TBI: a variety of single drugs have failed clinical trials, suggesting a possible role for drug combinations. Testing this hypothesis in an [animal model](#), researchers at SUNY Downstate Medical Center tested five drugs in various combinations. Their observations, published recently in the journal [PLoS One](#), suggest a potentially valuable role for minocycline plus N-acetylcysteine to treat TBI. The Congressionally Directed Medical Research Programs recently cited this work, funded by the Psychological Health and [Traumatic Brain Injury](#) Research Program, as an outstanding example of research.

Peter J. Bergold, PhD, associate professor of physiology and pharmacology at SUNY Downstate, and the article's corresponding author, said, "There is great need for drugs to treat TBI. Perhaps the fastest way to get treatments to the clinic is to combine drugs already known to be both safe and effective. The combination of minocycline and

N-acetylcysteine showed a large, synergistic improvement of cognition and memory after experimental traumatic brain injury. We are continuing these studies to get this combination in a clinical trial."

**More information:** The PLoS One article is available for free at [www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0012490](http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0012490)

Provided by SUNY Downstate Medical Center

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