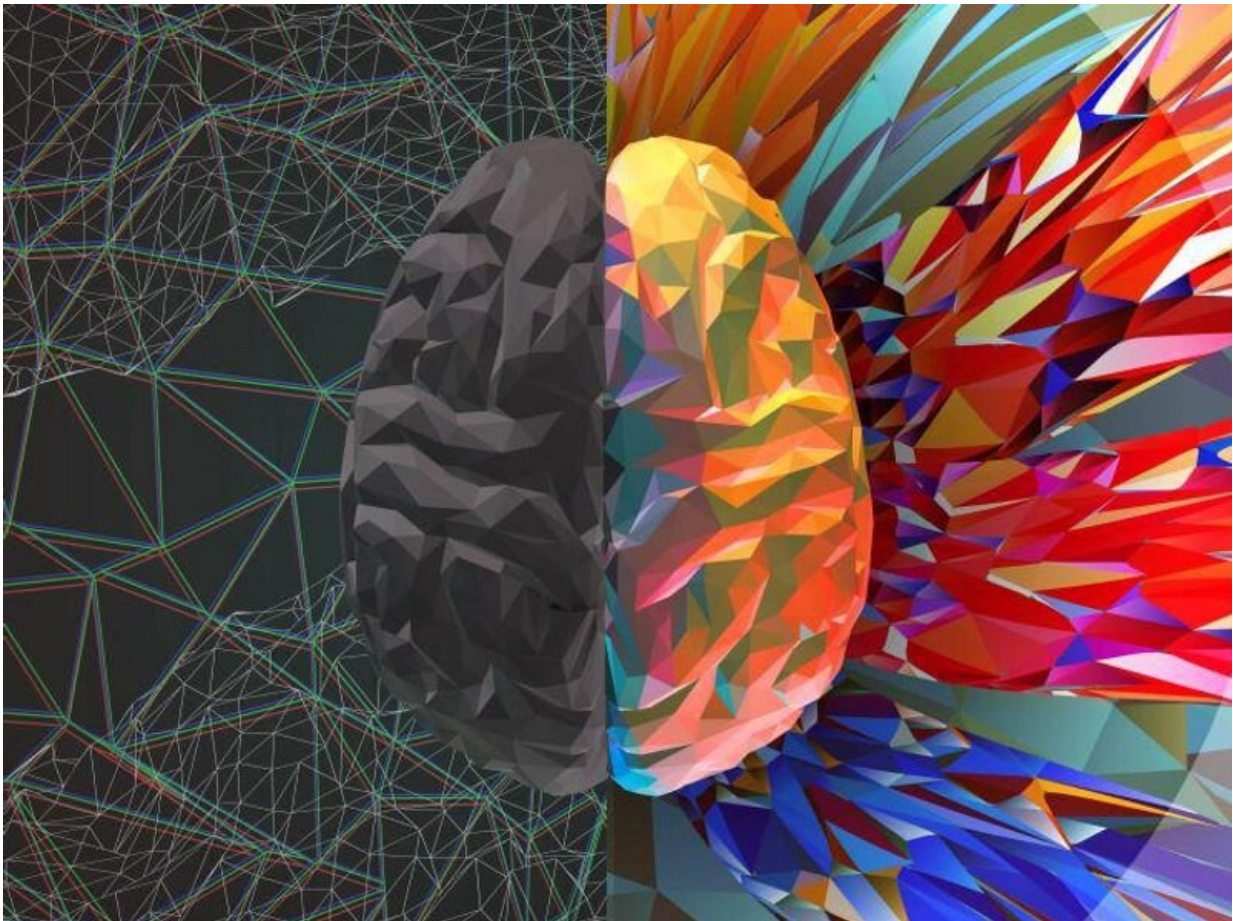


# Outcomes of TBI change over seven years of follow-up

June 23 2023, by Elana Gotkine

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The outcomes of traumatic brain injury (TBI) change over seven years

after injury, according to a study published online June 21 in *Neurology*.

Benjamin L. Brett, Ph.D., from the Medical College of Wisconsin in Milwaukee, and colleagues examined the prevalence of functional, cognitive, and psychiatric change outcomes from one to seven years post-TBI. Data were included from 1,264 patients: 917 with mild TBI (mTBI), 193 with moderate-to-severe TBI (msTBI), and 154 orthopedic trauma controls (OTC). The primary outcome measures were the Glasgow Outcome Scale-Extended (GOSE), Brief Symptom Inventory-18 (BSI), and Self-reported Perceptions of Function Interview.

The researchers found that regardless of TBI severity, functional outcome showed the highest rates of decline (29 and 23 percent for mTBI and msTBI, respectively). When examining all outcomes combined, 21, 26, and 16 percent of those with mTBI, msTBI, and OTC, respectively, experienced decline.

In the mTBI group, age and preinjury employment status were associated with [functional decline](#) (relative risk [RR], 1.16 per 10 years; RR, 1.81 for retired/disabled/not working versus full time/part time).

Improvement in [functional recovery](#) at two to seven years postinjury was associated with a higher BSI score and GOSE score of 5 to 7 versus 8 (RRs, 1.11 per 5 points and 2.64, respectively).

A greater likelihood of improved psychiatric symptoms in mTBI was seen in association with higher BSI scores and identifying as Black (RRs, 2.28 and 1.21, respectively). For those with msTBI, a greater likelihood of cognitive improvement was seen in association with higher educational attainment (RR, 2.61 per four years).

"Our results dispute the notion that TBI is a one-time event with a stagnant outcome after a short period of recovery," Brett said in a

statement.

One author disclosed ties to the biopharmaceutical industry.

**More information:** Benjamin L Brett et al, Long-term Multi-domain Patterns of Change Following Traumatic Brain Injury: A TRACK-TBI LONG Study, *Neurology* (2023). [DOI: 10.1212/WNL.0000000000207501](https://doi.org/10.1212/WNL.0000000000207501)

Robynne Braun, It's Been a TRACK-TBI LONG Time Coming, but Well Worth the Wait, *Neurology* (2023). [DOI: 10.1212/WNL.0000000000207682](https://doi.org/10.1212/WNL.0000000000207682)

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