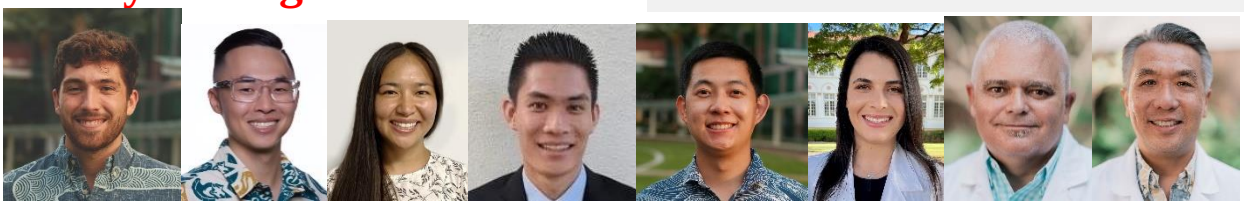
Exercise and Recovery Following Mild to Moderate Traumatic Brain Injury in the Community Setting



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Introduction The recommendations on return to exercise post-traumatic brain injury (TBI) remain debatable. As recent as 10 years ago, the conventional recovery modality for a mild TBI was to reduce neurostimulating activity and encourage rest until the symptoms subsided. However, emerging literature has challenged this notion, stating that returning to exercise early in the course of mild TBI recovery may be beneficial to the recovery timeline. This study surveys Hawaii's diverse population to identify trends in exercise and recovery for TBI patients to shape recommendations on return to exercise.

Methods A single-center retrospective chart review of the patients with mild-to-moderate TBI was selected from a patient database at an outpatient neurology clinic between January 2020 and January 2022. The variables collected include demographics, the etiology of injury, and symptoms at diagnosis. Self-generated phone surveys were completed to evaluate exercise patterns post-TBI.

Results The patients who recovered within two years displayed similar exercise patterns to the patients who took more than two years to recover. Exercise frequency, intensity, and duration did not differ significantly ($p=0.75$, $p=0.51$, and $p=0.80$, respectively; $n=100$). Hiking and walking were more common in the long recovery (LR) group ($p=0.02$), likely reflecting advanced age compared to the short recovery (SR) group (50 versus 39 years, $p<0.01$). Additionally, no correlation exists between exercise intensity and worsening symptoms ($p=0.920$), suggesting that the patients exhibit exercise patterns suitable for sub-symptomatic recovery.

Conclusion Return to exercise does not appear to be a predictor for mild-to-moderate TBI recovery. The patients appear to self-regulate an exercise regimen that will not exacerbate their symptoms or recovery time; thus, it may be suitable to recommend return to exercise as tolerated. These, and other findings in the literature, suggest that patients should be encouraged to return to exercise shortly after a mild TBI so long as the exercise does not exacerbate their symptoms.

Weldon EJ, Nakamura RW, Van T, Goo C, Lee AY, Jahansooz JR, Carrazana E, Liow KK. Exercise and Recovery Following Mild-to-Moderate Traumatic Brain Injury in the Community Setting. Cureus. 2024 Feb;16(2):e53459. doi: 10.7759/cureus.53459. eCollection 2024 Feb. PubMed PMID: 38435185; PubMed Central PMCID: PMC10909398. Other Recent BRITL Publications