# A 12 Month Pilot Study to Establish Baseline Measures For Concussion and Providing Evidence for Return to Work/Play Decisions, currently in development with the Workers' Compensation Board, PEI.

**Abstract:** The current protocol for recovery following a concussion is physical and cognitive rest until asymptomatic (Aubry et al., 2002; McCrory et al., 2005, 2009, 2013). While this approach is effective for most cases, there are a few individuals whereby rest alone has not proven to be effective and as such the individual develops post-concussion syndrome (PCS) (Makdissi et al. 2013). Aerobic exercise training may help concussion-related physiological dysfunction because exercise increases parasympathetic activity, reduces sympathetic activation, and improves cerebral blood flow (Leddy et al., 2010). The objective of this study is to measure the recovery of participants suffering from persistent symptoms using heart rate controlled exercise as part of their recovery. It is hypothesized that exercise would improve test scores along with self-reported symptom scores, and heart rate levels will be increased over the 24 weeks of exercise sessions, with the participants remaining asymptomatic during exercise.