

# Research Matters

## Clinical recovery from concussion – return to school and sport: a systematic review and meta-analysis

### ABOUT THIS STUDY

Putukian et al conducted a systematic review and meta-analysis to understand the recovery, return to school/learn (RTL) and return to sport (RTS) after sport-related concussion (SRC). The research analyzed data from 278 studies up to March 2022.

### KEY FINDINGS

- Recovery Timeframes:
  - Average days until symptom-free: 14.0 days.
  - Average days until RTL: 8.3 days
  - 93% of athletes had a full RTL by 10 days without needing new academic support.
  - Average days until RTS: 19.8 days.
- Recovery Strategies:
  - The Fifth International Consensus Statement on Concussion in Sport recommended a brief period of relative rest for 24-48 hours post-injury. After this, activities of daily living and low-intensity aerobic exercise were deemed beneficial, even if the athlete still showed some symptoms.
  - Aerobic exercise was suggested as an early component of the treatment process.
  - A gradual RTL strategy was recommended to help students reintegrate into the classroom.
- Factors Influencing Recovery:
  - Initial symptom burden was the strongest predictor, across all or most studies, of longer days until RTS.
  - Continuing to play and delayed access to healthcare providers (HCPs) led to longer recovery times. Early removal from play, post-injury, and the time taken to be evaluated by a HCP, are crucial.
  - Various measures have been introduced to quantify clinical recovery, but many haven't been thoroughly studied or validated.
  - Premorbid (before injury) and postmorbid (after injury) factors, such as depression / anxiety and migraine history, might change recovery time frames.
- Sex and Age Differences:
  - While some data suggests that females or younger age groups might take longer to recover, the varied study designs and outcomes indicate that both sex and age groups have comparable recovery patterns.

## STUDY IMPLICATIONS

- Educator Awareness:
  - Educators should be aware of the recommended recovery strategies such as the brief period of relative rest and the introduction of low-intensity aerobic exercise.
  - Understanding that recovery timeframes can vary widely among students recovering from SRC is crucial. Some might recover within weeks, while others might take a month or more.
- Individualized Approach:
  - Every student’s recovery from SRC is unique. Factors like initial symptoms, mental health conditions, and access to healthcare can influence their recovery time.
  - It’s essential to tailor support based on individual needs and not make assumptions based on sex or age.
  - Schools should be equipped with measures to quantify and track a student’s recovery, ensuring they receive the specific support they need.
- Collaboration with Healthcare Providers:
  - The study emphasizes the importance of early evaluation by HCPs. Schools should have protocols in place to ensure students receive timely medical attention post-injury.
  - Schools should continue to collaborate closely with HCPs to ensure students receive the necessary support during their recovery, and can lead to more successful reintegration into schools and sports.
  - Early intervention and not allowing students to continue playing sports immediately after a concussion, can lead to faster recovery.
- Further Research Needed:
  - While this study provides valuable insights, there’s a need for more research to understand the nuances of recovery, especially concerning sex and age differences.

## REFERENCE

Putukian, M., Purcell, L., Schneider, K. J., Black, A. M., Burma, J. S., Chandran, A., ... & Broglio, S. (2023). Clinical recovery from concussion—return to school and sport: a systematic review and meta-analysis. *British Journal of Sports Medicine*, 57(12), 798-809. <http://dx.doi.org/10.1136/bjsports-2022-106682>