

# Survey Questions

## Paediatric concussion management

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Given the attention that concussion had garnered worldwide in recent years, a short, one-time CPSP survey ([www.cpsp.cps.ca/uploads/surveys/concussion-management-survey-questions.pdf](http://www.cpsp.cps.ca/uploads/surveys/concussion-management-survey-questions.pdf)) was developed asking whether respondents had managed children and youth with concussion or mild traumatic brain injury (mTBI). If they had, follow-up questions included which guidelines had been used, how they determined whether patient symptoms had resolved, whether a return-to-play (RTP) protocol was initiated immediately upon symptom resolution or after a period of time, and the duration of recommended steps in the RTP sequence.

Out of 809 respondents (31% of the total surveyed), 503 had managed children or youth with newly diagnosed concussion or mTBI. Collectively, they reported managing approximately 6,900 patients within the last 12 months. Most respondents used at least one of the available concussion/mTBI guidelines (see Table 1).

Guideline	Percentage
Canadian Paediatric Society (2006, 2012)	69%
American Academy of Pediatrics	29%
Concussion in Sport Group (Vienna 2001, Prague 2004, Zurich 2009)	18%
Canadian Academy of Sport and Exercise Medicine	17%
American Academy of Neurology	7%
Other	13%

The respondents most often used multiple criteria to determine whether their patients' symptoms had resolved (Table 2).

Criteria	Percentage
Free from all concussion symptoms, by patient report	92%
Free from all concussion symptoms, by proxy report (parent or other)	76%
Normal physical examination	65%
In school full-time, with usual school performance	53%
Free from continuous daily (unremitting) headache	45%
Free from intermittent headache (present some days, absent others)	43%
Recovered to baseline symptom score; e.g., SCAT2*, CSI†	18%
Normal physical examination after exertion	15%
Recovered to zero or near-zero symptom scores; e.g., SCAT2, CSI	12%
Recovered to normal population symptom scores; e.g., SCAT2, CSI	6%
Neurocognitive testing recovery to baseline values; e.g., Axon Sports, Cogstate Sport, ImPACT Test Canada	3%
Neurocognitive testing within normal population values; e.g., Axon Sports, Cogstate Sport, ImPACT Test Canada	2%

Once a patient was determined to be clear of concussive symptomatology, 85% of respondents who managed patients indicated that they would choose to wait before initiating an RTP sequence: generally, a further seven days (primary mode) or 14 days (secondary mode). When the RTP sequence was initiated, there was significant variation (range: same day–180 days), with a preference for seven days (primary mode) or 14 days (secondary mode).

\* Sport Concussion Assessment Tool 2 (SCAT2)

† Concussion Symptom Inventory (CSI)

Canadian paediatricians frequently encounter patients with concussions.

They use a variety of criteria to determine when their patients become asymptomatic. Then, most respondent chose to wait for a further period of time before initiating RTP. Once initiated, the duration of RTP sequences also varies. More research and education is needed to ensure optimal management of concussions.

### Presentation

Gordon K, Do MT, Thompson W, McFaull S. Concussion management by paediatricians: A national survey of Canadian paediatricians. International Consensus Conference on Concussion in Sport, Zurich, November 2012. (Poster presentation)

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