

Appendix A

CONCUSSION
MANAGEMENT

RETURN TO ACTIVITY
GUIDELINES FOR
CHILDREN AND
YOUTH



A CONCUSSION
is a brain injury
and must be
taken seriously

RECOMMENDATIONS FOR RETURN TO
CONTACT SPORT AFTER MULTIPLE CONCUSSIONS

- **NO SAME DAY RETURN TO PLAY!**
- If positive neuroimaging findings → Take at least 3 months off from contact sport.
- If 2 concussions in 3 months → Take 6 months off from the time of most recent injury.
- If 3 or more concussions in 1 year → Take 1 year off from the time of the most recent injury.
- Discuss retirement from contact sports after 3 concussions, considering non-contact alternatives, especially if symptoms are prolonged and affecting performance.

BUT CONTINUE TO EXERCISE!

CONCUSSION FACTS

The **biggest** risk is going back to play before the brain heals and getting another concussion!

Management Tips

- Drink water regularly
- Get substantial rest (8-10 hours of sleep)
- Do not skip meals
- Wear sunglasses or noise cancelling headphones if sensitive to light or noise

Higher risk of prolonged recovery with:

- Multiple concussions
- History of learning or behaviour problems
- History of migraines
- Symptoms of amnesia, foginess or dizziness

Time in Each Stage/How long will it take for me to get through each stage?

Average time in each stage is based on research from McMaster’s Back to Play Study.

RETURN TO ACTIVITY

Stage 1: 1-2 days
Stage 2:..... 7-10 days
Stage 3:..... 7 days
Stage 4:..... 7 days
Stage 5:..... 3 days
Fully back to game play in 4-5 weeks

RETURN TO SCHOOL

Stage 1: 1-2 days
Stage 2:..... 3-5 days
Stage 3:..... 7 -14 days
Stage 4:..... 7 days
Fully back to school in 2-4 weeks

Note: Different people recover at different rates depending on many factors, including severity of injury and previous health history. These timelines are meant to help set expectations and to be used as a guide. If you are worried about the pace of your recovery, contact a physician or brain injury specialist.



RETURN TO ACTIVITY GUIDELINES

STAGES 1-3 of the Return to Activity (RTA) and Return to School (RTS) guidelines should progress together, however youth should return full-time to school activities before progressing to STAGE 4, and 5 of the RTA guidelines

STAGE 1	Short Phase of Physical and Cognitive Rest with Symptom Guided Activity 24-48 hours	GOAL: Complete home and leisure activities as tolerated, without an increase in the number or severity of symptoms. No physical activities of any intensity for longer than 5 minutes, as long as these activities do not increase symptoms.
		WHICH SYMPTOM GROUP ARE YOU IN? A B or C
		<div><div>A SYMPTOM FREE WITHIN 48 HOURS AFTER INJURY Take at least 24 hours for each stage as you complete the rest of the guidelines.</div><div>B SYMPTOM FREE/SYMPTOMS DECREASE WITHIN 1-4 WEEKS AFTER INJURY Take at least 2 days for each stage as you complete the rest of the guidelines.</div><div>C SYMPTOMATIC FOR MORE THAN 4 WEEKS Take at least 1 week for each stage as you complete the rest of the guidelines.</div></div>
STAGE 2	Light Exercise (No Contact)	Begin no later than 2 weeks post injury if symptoms are decreasing. GOAL: In addition to activities accomplished in Stage 1, complete 15-30 minutes of light physical activity twice daily without worsening symptoms for a total of ~ 1 hour per day. LIGHT ACTIVITIES: Walking, stationary cycling, swimming, stretching. NO resistance training or weight lifting.
STAGE 3	Individual Sport-Specific Activity (No Contact)	GOAL: Able to complete activity requirements for Stages 1 and 2, with two additional 30-minute sessions of moderate physical activity daily without worsening symptoms for a total of ~ 2 hours per day. MODERATE ACTIVITIES: Skating, light jogging, throwing.
STAGE 4	Sport Specific Practice with Team (No Contact)	GOAL: Able to complete activity requirements for Stages 1-3, with two additional 30-minute sessions of moderate/vigorous physical activity for no more than 3 hours per day. By the end of the stage, progress to full team practice with NO CONTACT. Increase skill level and difficulty as tolerated without worsening symptoms. MODERATE/VIGOROUS ACTIVITIES: Begin resistance training and general sport-specific conditioning skills with one other teammate. Throwing/passing a ball, sport-specific drills, and other non-contact activities.
STAGE 5	Sport-Specific Practice with Team (Contact)	GOAL: Able to complete activity requirements for Stages 1-4, participate in full practice and training activities as tolerated without worsening or causing symptoms. VIGOROUS ACTIVITIES: Running, cycling, jumping jacks. If symptom free, you are ready to return to competition!
STAGE 6	Return to Full Activity, Sport or Game Play (Contact)	Congratulations you have completed the Guidelines!

STOP

If symptoms increase or return at any STAGE, reduce activity by returning to the previous stage for 24 hours.

IMPORTANT NOTES

- ANXIETY** can be high after a brain injury. Many youth worry about school failure and need reassurance that accommodations will be temporary.
- DEPRESSION** is common during recovery from brain injury, especially when the child is unable to be active. Depression may make symptoms worse or prolong recovery.
- Note:** Different people recover at different rates depending on many factors, including severity of injury and previous health history. These timelines are meant to help set expectations and to be used as a guide. If you are worried about the pace of your recovery, contact a physician or brain injury specialist.
Reference: Berlin Consensus Statement on Concussion (2017)
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CONCUSSION

A concussion also known as a mild traumatic brain injury, changes the way the brain functions. A concussion can be caused by a direct or indirect hit, blow, or force to the head or body.

SYMPTOMS OF CONCUSSION

- Headache
- Dizziness, nausea or vomiting
- Sleep disturbance or drowsiness
- Poor balance or coordination
- Visual problems
- Sensitivity to light or noise
- Mentally foggy
- Difficulty concentrating/ remembering
- Emotional changes (anxiety, irritability, sadness)

RED FLAG SYMPTOMS

- If any of the following symptoms develop, go to the emergency department to seek further medical treatment immediately.
- Increased drowsiness or cannot be awakened
 - Headaches or neck pain worsen
 - Persistent vomiting
 - Unequal pupil size
 - Seizures
 - Confusion or short-term memory loss
 - Blurred/double vision, slurred speech, or loss of motor function
 - Change in behaviour (irritability, agitation, or aggression)