

## Return to Sport

This tool is a guideline for managing an individual's return to sport following a concussion and does not replace medical advice. Timelines and activities may vary based on direction from a doctor, nurse practitioner, or licensed healthcare professional with relevant training. **Begin Step 1 within 24 hours of injury, with progression through each subsequent step taking a minimum of 24 hours.**

STEP 1:	STEP 2:		STEP 3:	STEP 4:	STEP 5:	STEP 6:
<p><b>Activities of daily living and relative rest*</b></p> <ul style="list-style-type: none"> <li>• Maximum of 24-48 hours</li> <li>• Activities at home such as social interactions and light walking that do not result in more than mild and brief** exacerbation (worsening) of concussion symptoms.</li> </ul> <p><b>Examples:</b></p> <ul style="list-style-type: none"> <li>• Preparing meals</li> <li>• Housework</li> <li>• Light walking</li> </ul> <ul style="list-style-type: none"> <li>• Minimize screen time for first 24-48 hours following concussion.</li> </ul>	<p><b>2A: Light effort aerobic exercise</b></p> <ul style="list-style-type: none"> <li>• Up to approximately 55% of maximum heart rate (predicted according to age - i.e. 220-age).</li> <li>• In a safe and controlled environment, engage in light aerobic exercise.</li> </ul> <p><b>Examples:</b></p> <ul style="list-style-type: none"> <li>• Stationary cycling</li> <li>• Walking at slow to medium pace</li> <li>• Light resistance training that does not result in more than mild and brief** exacerbation (worsening) of concussion symptoms.</li> </ul>	<p><b>2B: Moderate effort aerobic exercise</b></p> <ul style="list-style-type: none"> <li>• Up to approximately 70% of maximum heart rate (predicted according to age - i.e. 220-age).</li> <li>• Take a break and modify activities as needed with the aim of gradually increasing tolerance and the intensity of aerobic activities.</li> </ul>	<p><b>Individual sport-specific activities (that do not have a risk of inadvertent head impact)</b></p> <ul style="list-style-type: none"> <li>• Addition of individual sport-specific activities that are supervised by a teacher/coach/parent.</li> </ul> <p><b>Examples:</b></p> <ul style="list-style-type: none"> <li>• Skating drills (hockey)</li> <li>• Running drills (soccer)</li> <li>• Change of direction drills</li> <li>• Individual gym class activities</li> </ul> <p><b>It is important to get medical clearance before returning to training that involves any risk of inadvertent head impact.</b></p>	<p><b>Non-contact training drills and activities</b></p> <ul style="list-style-type: none"> <li>• Progress to exercises at high intensity, including more challenging drills and activities.</li> </ul> <p><b>Examples:</b></p> <ul style="list-style-type: none"> <li>• Passing drills</li> <li>• Multi-player training</li> <li>• Supervised non-contact gym class activities</li> <li>• Practices without body contact</li> </ul>	<p><b>Return to all non-competitive activities</b></p> <ul style="list-style-type: none"> <li>• Return to all non-competitive activities, all gym class activities, and full-contact practices</li> <li>• Participate in higher-risk activities including normal training activities, all school gym-class activities, and full-contact sports practices and scrimmages. Avoid competitive gameplay.</li> </ul>	<p><b>Return to sport</b></p> <p>Back to normal, unrestricted competitive game play, school gym class, and physical activities.</p>
	<p><b>Increase heart rate</b></p>		<p><b>Increase intensity of aerobic activities and introduce low-risk sport-specific movements and changing of directions</b></p>	<p><b>Resume usual intensity of exercise, coordination, and activity-related cognitive skills</b></p>	<p><b>Return to activities that have a risk of falling or body contact, restore game-play confidence, and have coaches assess functional skills.</b></p>	<p><b>Note: Returning to full contact, competitive play or high-risk activities before you have recovered increases the risk of delayed recovery and for sustaining another more severe concussion or serious injury.</b></p>
<p><b>Activities of daily living, as tolerated</b></p>						
<p>After a maximum of 24-48 hours after injury, <b>BEGIN STEP 2</b></p>	<p>If can tolerate moderate aerobic exercise, <b>BEGIN STEP 3</b></p>		<p>If medically cleared and have fully returned to school, <b>BEGIN STEP 4</b></p>	<p>If can tolerate usual intensity of activities, <b>BEGIN STEP 5</b></p>	<p>If can tolerate non-competitive, high-risk activities, <b>BEGIN STEP 6</b></p>	

If more than mild exacerbation (worsening) of symptoms (i.e., more than 2 points on a 0-10 scale\*\*\*) occurs during Steps 1-3, stop the activity, and attempt to exercise the next day. Individuals experiencing concussion symptoms during Steps 4-6 should return to Step 3 to establish full resolution of symptoms with exertion before engaging in at-risk activities. Written determination of medical clearance should be provided before unrestricted Return to Sport as directed by local laws and/or sporting regulations.

\*Relative rest: activities of daily living including walking and other light physical and cognitive activities are permitted as tolerated.

\*\*Mild exacerbation (worsening) of symptoms: No more than a 2-point increase when compared with the pre-activity value on a 0-10-point symptom severity scale.\*\*\*"Brief" exacerbation of symptoms: Worsening of symptoms for up to 1 hour.

\*\*\*0-10 point symptom severity scale: Please see the [Visual Analog Scale](#) for an example of a 0-10 symptom severity scale.

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Adapted from: Zemek, R., Reed, N., Dawson, J., et al. "Living Guideline for Pediatric Concussion Care." [www.pedsconcussion.com](http://www.pedsconcussion.com) (the PedsConcussion protocol was modified with permission from the [Amsterdam International Consensus Statement on Concussion in Sport](#)) © BCIRPU. All rights reserved | Version 12: Updated September 2023



CONCUSSION AWARENESS TRAINING TOOL

**BC INJURY** research and prevention unit  
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Medical determination of readiness to return to at-risk activities should occur prior to returning to any activities that pose risk of contact, collision, or fall.