

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

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.

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Adapted from: Zemek, R., Reed, N., Dawson, J., et al. "Living Guideline for Pediatric Concussion Care." www.pedsconcussion.com (the PedsConcussion protocol was modified with permission from the [Amsterdam International Consensus Statement on Concussion in Sport](#))
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