

# Returning to play and sports after a concussion

Stage	Activity allowed	Examples of sports activities	Examples of other activities	Goal
1	<ul style="list-style-type: none"> <li>Rest</li> </ul>	<ul style="list-style-type: none"> <li>Rest other than everyday walking</li> <li>No sports, strength training or high intensity activity</li> </ul>	<ul style="list-style-type: none"> <li>Relax</li> <li>Avoid activities that make symptoms worse</li> </ul>	<ul style="list-style-type: none"> <li>Promote recovery shortly after injury</li> </ul>
2	<ul style="list-style-type: none"> <li>Light aerobic activity</li> </ul>	<ul style="list-style-type: none"> <li>10 to 15 minutes of walking or stationary bike</li> <li>Activity may cause light sweat but should still be able to easily speak full sentences</li> </ul>	<ul style="list-style-type: none"> <li>Walk in park or neighborhood</li> <li>Avoid group activities</li> </ul>	<ul style="list-style-type: none"> <li>Increase heart rate to 30 to 40 percent max</li> <li>Watch if symptoms return</li> </ul>
3	<ul style="list-style-type: none"> <li>Moderate aerobic activity</li> <li>Light resistance training</li> </ul>	<ul style="list-style-type: none"> <li>20 to 30 minutes of jogging or stationary bike</li> <li>Activity should cause sweat but should still be able to speak full sentences</li> <li>Body weight strength training (push-ups, pull-ups or sit-ups)</li> </ul>	<ul style="list-style-type: none"> <li>Supervised play</li> <li>Easy drills (dribbling, shooting, passing, bumping, setting or playing catch)</li> </ul>	<ul style="list-style-type: none"> <li>Increase heart rate to 40 to 60 percent max</li> <li>Add resistance</li> <li>Use eyes to track objects</li> <li>Watch if symptoms return</li> </ul>
4	<ul style="list-style-type: none"> <li>Intense aerobic activity</li> <li>Moderate resistance training</li> <li>Sport-specific exercise</li> </ul>	<ul style="list-style-type: none"> <li>40 to 60 minutes workout with running, sprinting and non-contact sports drills</li> <li>Some activity should be intense enough to make speaking harder</li> <li>Normal weight training (up to 3 sets of 10 reps)</li> </ul>	<ul style="list-style-type: none"> <li>Supervised play</li> <li>Sprints, agility drills and resistance training</li> <li>Pre-game warm up drills</li> <li>No head or body contact</li> </ul>	<ul style="list-style-type: none"> <li>Increase heart rate to 60 to 80 percent max</li> <li>Increase resistance</li> <li>Mimic the sport without risk of head injury</li> <li>Watch if symptoms return</li> </ul>
5	<ul style="list-style-type: none"> <li>Limited contact training drills</li> </ul>	<ul style="list-style-type: none"> <li>60 to 90 minutes on the field, court or mat for non-contact sports drills</li> <li>Limited contact that is part of the sport but only use items that “do not hit back” such as a sled in football</li> <li>Normal weight training (up to 3 sets of 10 reps)</li> </ul>	<ul style="list-style-type: none"> <li>Supervised play</li> <li>Limited contact practice</li> <li>Athlete may contact other players or objects but should not be tackled by others</li> </ul>	<ul style="list-style-type: none"> <li>Mimic the sport without the risk of head injury</li> <li>Watch if symptoms return</li> </ul>
6	<ul style="list-style-type: none"> <li>Full practice (after cleared by a provider)</li> </ul>	<ul style="list-style-type: none"> <li>Normal training</li> </ul>	<ul style="list-style-type: none"> <li>Free play</li> <li>Return to PE</li> <li>Full contact practice</li> </ul>	<ul style="list-style-type: none"> <li>Build confidence</li> <li>Assess skills</li> <li>Watch if symptoms return</li> </ul>
7	<ul style="list-style-type: none"> <li>Return to play</li> </ul>	<ul style="list-style-type: none"> <li>Normal game play</li> </ul>	<ul style="list-style-type: none"> <li>Normal play and activities</li> </ul>	<ul style="list-style-type: none"> <li>No limits</li> </ul>

*In case of an urgent concern or emergency, call 911 or go to the nearest emergency department right away. This is general information and not specific medical advice. Always consult with a doctor or healthcare provider if you have any questions or concerns about the health of a child.*

## What is target heart rate?

- **Heart rate is the number of times the heart beats in 1 minute.**
- Target heart rate is the goal. It is a range of percentages. Different ages have different ranges.
  - The lower percent is the minimum (min).
  - The higher percent is the maximum (max).
  - The goal is to keep the heart rate close to the max during exercise or activity.

## How do I know a child's target heart rate?

To know a child's target heart rate:

- Subtract their age from 220. Multiply that number by the lower percent for their age. The answer is their min heart rate.
- Subtract their age from 220 again. Multiply that number by the higher percent for their age. The answer is their max heart rate.

Let's use the range in Stage 2 for practice:

- The target heart rate is 30 to 40 percent (30 – 40%).
- Change the percent to a number with decimals. For example, 30% is 0.3 and 40% is 0.4
- Let's say the child is 15 years old.
- Then do the math.
- **In this example** - the target heart rate for exercise in Stage 2 is between 62 and 82 beats a minute.

### Do this math:

$$220 - 15 = 205$$

$$205 \times 0.3 = 61.5$$

- Round up to 62
- 62 is the min heart rate

$$205 \times 0.4 = 82$$

- 82 is the max heart rate

## How do I know if a child can move to the next stage?

- Allow 24 hours between each stage in the chart on page 1. **This means it will take several days to return to normal game play.**
- To complete a stage, the child must be able to do that stage's activity without symptoms during and after the activity.
- If symptoms return, it means their brain was not ready for that stage. The child should rest until all symptoms are gone for 24 hours and then may resume at an earlier stage.
- The child may not move to Stage 6 without written clearance from a medical provider.
- The child should return to their provider if they have trouble completing these stages without symptoms.

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