

## Concussion guidelines for your child’s return to school, book work and studies

| Stage of healing  | Home activity   | School activity  | Physical activity            |
|---|---|--|------------------------------|
| <b>Stage 1</b> —<br>your child still has many symptoms and problems   | <ul style="list-style-type: none"> <li>– Complete rest in a quiet room</li> <li>– Allow as much sleep as possible</li> <li>– Limit things that require your child to think, focus, reason or remember</li> <li>– Remove any electronics and computers from your child’s room</li> <li>– Remove any activity planners and “to-do” lists from your child’s room</li> <li>– Give your child plenty of fluids to drink</li> <li>– Give your child plenty of carbohydrates to eat, such as whole grain breads and cereals, pasta and rice</li> </ul> | <ul style="list-style-type: none"> <li>– No school</li> </ul>  | See Stage 1 in next chart    |
| <b>Stage 2</b> —<br>your child still has some symptoms and problems   | <ul style="list-style-type: none"> <li>– Quiet room</li> <li>– Allow as much sleep as possible</li> <li>– Allow your child to use TV, video games, texting, tweeting and email for a short time—less than 2 hours a day</li> <li>– Help your child to not stress over missed school work</li> <li>– Continue with fluids and carbohydrates as in Stage 1</li> </ul>   | <ul style="list-style-type: none"> <li>– May return to school for one-half day</li> <li>– Attend core classes only</li> <li>– Attend shortened class time</li> <li>– Rest in nurse’s office between classes and as needed</li> <li>– No tests or quizzes</li> <li>– Use preprinted class notes</li> <li>– Short homework assignments—work 20 minutes at a time with rest breaks in between</li> <li>– Talk with school nurse or teacher about a 504 plan to help to make sure special needs are met during his school day</li> </ul> | See Stage 2 in next chart    |
| <b>Stage 3</b> —<br>your child’s symptoms and problems have gone away | <ul style="list-style-type: none"> <li>– Slowly return to watching TV, playing video games and texting</li> <li>– Allow more active family interactions</li> </ul>  | <ul style="list-style-type: none"> <li>– Full day of classes</li> <li>– <b>Gradual</b> return to class work, including make-up work, tests, quizzes</li> <li>– May take one test or quiz a day with extra time as needed to complete</li> <li>– Tell the teacher or school nurse if any symptoms or problems return</li> </ul>   | See Stages 2-4 in next chart |
| <b>Stage 4</b> —<br>your child seems back to normal                   | <ul style="list-style-type: none"> <li>– Normal home and social interactions</li> </ul>   | <ul style="list-style-type: none"> <li>– Normal school work and studies</li> </ul>   | See Stages 5-7 in next chart |



[choa.org/concussion](http://choa.org/concussion)

*This is general information and is 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.*



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## Concussion guidelines for your child's return to sports, play and activities

| Stage of healing | Activity allowed  | Examples of sports  | Examples of other activities  | Goal  |
|------------------|---|---|---|---|
| <b>1</b>         | <ul style="list-style-type: none"> <li>– No activity</li> <li>– Complete cognitive and physical rest</li> </ul>   | <ul style="list-style-type: none"> <li>– Complete physical rest</li> </ul>  | <ul style="list-style-type: none"> <li>– Quiet time with rest</li> <li>– Avoid groups, videos, reading, computers, video games, cell phones, noisy places</li> </ul>  | <ul style="list-style-type: none"> <li>– Brain rest and healing</li> <li>– Become free of symptoms</li> </ul>   |
| <b>2</b>         | <ul style="list-style-type: none"> <li>– Light aerobic activity</li> </ul>  | <ul style="list-style-type: none"> <li>– 10-15 minutes of walking or stationary bike</li> <li>– Light sweat on the brow</li> <li>– Slight increase in breathing rate</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 30-40 percent max</li> </ul>  |
| <b>3</b>         | <ul style="list-style-type: none"> <li>– Moderate aerobic activity</li> <li>– Light resistance training</li> </ul>                                      | <ul style="list-style-type: none"> <li>– 20-30 minutes of jogging or stationary bike</li> <li>– Arm curls, shoulder raises, leg lifts with weights that can be comfortably lifted</li> <li>– One set of 10 repetitions for each activity</li> </ul>   | <ul style="list-style-type: none"> <li>– Supervised play</li> <li>– Low risk activities such as dribbling a ball, playing catch, changing directions, jumping, side-to-side slides, chasing a ball or catching a ball on the run</li> </ul> | <ul style="list-style-type: none"> <li>– Increase heart rate to 40-60 percent max</li> <li>– Add resistance</li> <li>– Use eyes to track objects</li> </ul> |
| <b>4</b>         | <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>– 40-60 minutes of running or stationary bike</li> <li>– Same resistance exercises with weight for three sets of 10 reps</li> <li>– Pre-competition warm-up such as passing a soccer ball, throwing a football or doing ladder drills</li> </ul>   | <ul style="list-style-type: none"> <li>– Supervised play</li> <li>– Moderate-risk activities—no head contact activities, such as balance and agility drills</li> <li>– Can sweat and breathe heavy</li> </ul>                               | <ul style="list-style-type: none"> <li>– Increase heart rate to 60-80 percent max</li> <li>– Increase resistance</li> <li>– Mimic the sport</li> </ul>      |
| <b>5</b>         | <ul style="list-style-type: none"> <li>– Controlled-contact training drills</li> </ul>  | <ul style="list-style-type: none"> <li>– 60-90 minutes of time on the field, court or mat for specific drills</li> <li>– Take part in normal practice session</li> <li>– Contact that is normally part of the sport—only use items that “do not hit back” such as a sled in football</li> <li>– Recheck for symptoms or problems often</li> </ul> | <ul style="list-style-type: none"> <li>– Free play</li> <li>– Run and jump as able</li> <li>– Full return to physical education (PE)</li> <li>– Recheck for symptoms or problems often</li> </ul>   | <ul style="list-style-type: none"> <li>– Mimic the sport or free play without the risk of head injury</li> </ul>  |
| <b>6</b>         | <ul style="list-style-type: none"> <li>– Full-contact practice</li> </ul>   | <ul style="list-style-type: none"> <li>– After OK from the doctor, may take part in normal training activities</li> </ul>   | <ul style="list-style-type: none"> <li>– With parent or adult supervision, may take part in normal activities</li> </ul>  | <ul style="list-style-type: none"> <li>– Build confidence</li> <li>– Assess skills</li> </ul>   |
| <b>7</b>         | <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 playtime and activities</li> </ul>  | <ul style="list-style-type: none"> <li>– No restrictions</li> </ul>   |

Maximum heart rate is determined by subtracting the athlete's age from 220 and multiplying by the percentage. For example:

- Your target or ideal heart rate for exercise during Stage 2 is usually 30 to 40 percent of your maximum heart rate.
- To find your maximum heart rate, subtract your age from 220.
- If you are 15 years old, subtract 15 from 220 = 205. Next, multiply that number by 30 and 40 percent. This will give you a target heart rate for exercise in Stage 2.
- 205 times 30 percent = 62 beats a minute. 205 times 40 percent = 82 beats a minute.
- This means that your target heart range for exercise in Stage 2 is between 62 and 82 beats a minute.

- Allow 24 hours between each activity stage in the chart. **This means that it will take at least seven days to return to full activity.**
- For your child to move from one stage to the next, he must be able to do an activity at 100 percent without symptoms or problems for 24 hours.
- If any symptoms return, it means his brain is not ready for the next stage.
- Once your child has no symptoms again for 24 hours, he can try the activities in that stage again.

*Concussion Program adapted from the Zurich Concussion Conference November 2008, Br J Sports Med 2009; 43:i76-i84.*

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