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

| Stage of healing | Home activity | School activity | Physical activity |
|---|---|---|---|
| **Stage 1**—your child still has many symptoms and problems | – Complete rest in a quiet room<br>– Allow as much sleep as possible<br>– Limit things that require your child to think, focus, reason or remember<br>– Remove any electronics and computers from your child's room<br>– Remove any activity planners and "to-do" lists from your child's room<br>– Give your child plenty of fluids to drink<br>– Give your child plenty of carbohydrates to eat, such as whole grain breads and cereals, pasta and rice | – No school | See Stage 1 in next chart |
| **Stage 2**—your child still has some symptoms and problems | – Quiet room<br>– Allow as much sleep as possible<br>– Allow your child to use TV, video games, texting, tweeting and email for a short time—less than 2 hours a day<br>– Help your child to not stress over missed school work<br>– Continue with fluids and carbohydrates as in Stage 1 | – May return to school for one-half day<br>– Attend core classes only<br>– Attend shortened class time<br>– Rest in nurse's office between classes and as needed<br>– No tests or quizzes<br>– Use preprinted class notes<br>– Short homework assignments—work 20 minutes at a time with rest breaks in between<br>– Talk with school nurse or teacher about a 504 plan to help to make sure special needs are met during his school day | See Stage 2 in next chart |
| **Stage 3**—your child's symptoms and problems have gone away | – Slowly return to watching TV, playing video games and texting<br>– Allow more active family interactions | – Full day of classes<br>– **Gradual** return to class work, including make-up work, tests, quizzes<br>– May take one test or quiz a day with extra time as needed to complete<br>– Tell the teacher or school nurse if any symptoms or problems return | See Stages 2-4 in next chart |
| **Stage 4**—your child seems back to normal | – Normal home and social interactions | – Normal school work and studies | See Stages 5-7 in next chart |

**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.*

*In case of an urgent concern or emergency, call 911 or go to the nearest emergency department right away.*

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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 |
|---|---|---|---|---|
| 1 | – No activity<br>– Complete cognitive and physical rest | – Complete physical rest | – Quiet time with rest<br>– Avoid groups, videos, reading, computers, video games, cell phones, noisy places | – Brain rest and healing<br>– Become free of symptoms |
| 2 | – Light aerobic activity | – 10-15 minutes of walking or stationary bike<br>– Light sweat on the brow<br>– Slight increase in breathing rate | – Walk in park or neighborhood<br>– Avoid group activities | – Increase heart rate to 30-40 percent max |
| 3 | – Moderate aerobic activity<br>– Light resistance training | – 20-30 minutes of jogging or stationary bike<br>– Arm curls, shoulder raises, leg lifts with weights that can be comfortably lifted<br>– One set of 10 repetitions for each activity | – Supervised play<br>– 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 | – Increase heart rate to 40-60 percent max<br>– Add resistance<br>– Use eyes to track objects |
| 4 | – Intense aerobic activity<br>– Moderate resistance training<br>– Sport-specific exercise | – 40-60 minutes of running or stationary bike<br>– Same resistance exercises with weight for three sets of 10 reps<br>– Pre-competition warm-up such as passing a soccer ball, throwing a football or doing ladder drills | – Supervised play<br>– Moderate-risk activities—no head contact activities, such as balance and agility drills<br>– Can sweat and breathe heavy | – Increase heart rate to 60-80 percent max<br>– Increase resistance<br>– Mimic the sport |
| 5 | – Controlled-contact training drills | – 60-90 minutes of time on the field, court or mat for specific drills<br>– Take part in normal practice session<br>– Contact that is normally part of the sport—only use items that "do not hit back" such as a sled in football<br>– Recheck for symptoms or problems often | – Free play<br>– Run and jump as able<br>– Full return to physical education (PE)<br>– Recheck for symptoms or problems often | – Mimic the sport or free play without the risk of head injury |
| 6 | – Full-contact practice | – After OK from the doctor, may take part in normal training activities | – With parent or adult supervision, may take part in normal activities | – Build confidence<br>– Assess skills |
| 7 | – Return to play | – Normal game play | – Normal playtime and activities | – No restrictions |

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 and he should drop back to the previous 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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