

Return to physical activity following a concussion

Swimming

Refer below for criteria to move to the next step.

Stage	Activity	Swimming-specific exercise	Objective of the stage
1	<ul style="list-style-type: none"> Complete physical and cognitive rest 	<ul style="list-style-type: none"> No activity 	<ul style="list-style-type: none"> Recovery and elimination of concussion symptoms
2	<ul style="list-style-type: none"> Light aerobic activity 	<ul style="list-style-type: none"> 20 minutes of activity once a day: (either, not both) <ul style="list-style-type: none"> Water-based: <ul style="list-style-type: none"> Kicking with a kickboard 55 to 65 percent of age appropriate max heart rate Land-based: <ul style="list-style-type: none"> Use bike or elliptical, 55 to 65 percent of age appropriate max heart rate Avoid treadmill May use fins as needed 	<ul style="list-style-type: none"> Monitor for symptoms
3	<ul style="list-style-type: none"> Moderate aerobic activity Light resistance training 	<ul style="list-style-type: none"> 30 minutes in water once a day: <ul style="list-style-type: none"> Add limited head movement 65 to 70 percent of age appropriate max heart rate All four strokes Open turns only May use appropriate equipment within stage activity parameters 	<ul style="list-style-type: none"> Increase aerobic activity Monitor for symptoms
4	<ul style="list-style-type: none"> Noncontact training 	<ul style="list-style-type: none"> 30 minutes in water once a day: <ul style="list-style-type: none"> More complex interval training All four strokes Add coordination and cognitive load 70 to 80 percent of age appropriate max heart rate Open turns only Dryland activity once a day: <ul style="list-style-type: none"> Add 15 minutes of simple dryland activity (circuit of sit-ups, push-ups, squats, pull-ups, bounding, medicine ball throws, etc.) May use appropriate equipment within stage activity parameters 	<ul style="list-style-type: none"> Increase aerobic training Introduce different head positions Monitor for symptoms
5	<ul style="list-style-type: none"> Limited practice 	<ul style="list-style-type: none"> 60 minutes in water once a day: <ul style="list-style-type: none"> Continue interval training All four strokes Increase coordination and cognitive load 70 to 80 percent of age appropriate max heart rate Dryland activity once a day: <ul style="list-style-type: none"> Add 15 minutes of simple dryland activity (circuit of sit-ups, push-ups, squats, pull-ups, bounding, medicine ball throws, etc.) Add in starts off block at this stage May use appropriate equipment within stage activity parameters 	<ul style="list-style-type: none"> Maximize aerobic training Maximize acceleration/deceleration forces Monitor for symptoms
6	<ul style="list-style-type: none"> Full practice (after medical clearance) 	<ul style="list-style-type: none"> Normal training activities Introduce flip turns May use appropriate equipment within stage activity parameters 	<ul style="list-style-type: none"> Monitor for symptoms Introduce rotational head movements
7	<ul style="list-style-type: none"> Return to competition 	<ul style="list-style-type: none"> Unrestricted workouts or competition in meets 	<ul style="list-style-type: none"> Assess frequently throughout practice and/or competition

May begin Stage 2 when symptoms are markedly diminished and can tolerate a partial school day

May begin Stage 3 when a full school day is tolerated

May progress to the next stage every 24 hours as long as symptoms do not worsen

It is recommended that you seek further medical attention if you fail more than three attempts to pass a stage.



choa.org/concussion



404-785-KIDS (5437)

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. This protocol was created using materials developed by the U.S.A. Swimming Sports Medicine Task Force.

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



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