

A FACT SHEET FOR High School Parents



CDC HEADS UP
SAFE BRAIN. STRONGER FUTURE.

This sheet has information to help protect your teens from concussion or other serious brain injury.

What Is a Concussion?

A concussion is a type of traumatic brain injury—or TBI—caused by a bump, blow, or jolt to the head or by a hit to the body that causes the head and brain to move quickly back and forth. This fast movement can cause the brain to bounce around or twist in the skull, creating chemical changes in the brain and sometimes stretching and damaging the brain cells.

How Can I Help Keep My Teens Safe?

Sports are a great way for teens to stay healthy and can help them do well in school. To help lower your teens' chances of getting a concussion or other serious brain injury, you should:

- Help create a culture of safety for the team.
 - Work with their coach to teach ways to lower the chances of getting a concussion.
 - Emphasize the importance of reporting concussions and taking time to recover from one.
 - Ensure that they follow their coach's rules for safety and the rules of the sport.
 - Tell your teens that you expect them to practice good sportsmanship at all times.
- When appropriate for the sport or activity, teach your teens that they must wear a helmet to lower the chances of the most serious types of brain or head injury. There is no "concussion-proof" helmet. Even with a helmet, it is important for teens to avoid hits to the head.

Talk with your teens about concussion. Tell them to report their concussion symptoms to you and their coach right away. Some teens think concussions aren't serious or worry that if they report a concussion they will lose their position on the team or look weak. Remind them that *it's better to miss one game than the whole season.*

How Can I Spot a Possible Concussion?

Teens who show or report one or more of the signs and symptoms listed below—or simply say they just "don't feel right" after a bump, blow, or jolt to the head or body—may have a concussion or other serious brain injury.

Signs Observed by Parents

- Appears dazed or stunned
- Forgets an instruction, is confused about an assignment or position, or is unsure of the game, score, or opponent
- Moves clumsily
- Answers questions slowly
- Loses consciousness (even briefly)
- Shows mood, behavior, or personality changes
- Can't recall events *prior to* or *after* a hit or fall

Symptoms Reported by Teens

- Headache or "pressure" in head
- Nausea or vomiting
- Balance problems or dizziness, or double or blurry vision
- Bothered by light or noise
- Feeling sluggish, hazy, foggy, or groggy
- Confusion, or concentration or memory problems
- Just not "feeling right," or "feeling down"

**GOOD TEAMMATES KNOW:
IT'S BETTER TO MISS ONE GAME THAN THE WHOLE SEASON.**



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CONCUSSIONS AFFECT EACH TEEN DIFFERENTLY.

While most teens with a concussion feel better within a couple of weeks, some will have symptoms for months or longer. Talk with your teens' healthcare provider if their concussion symptoms do not go away or if they get worse after they return to their regular activities.



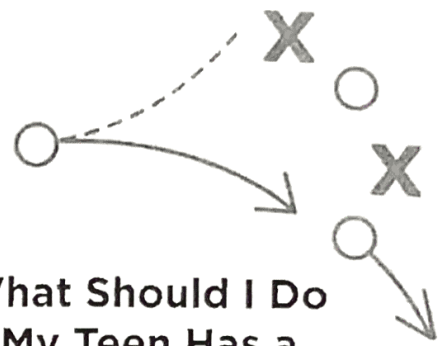
Plan ahead. What do you want your teen to know about concussion?

What Are Some More Serious Danger Signs to Look Out For?

In rare cases, a dangerous collection of blood (hematoma) may form on the brain after a bump, blow, or jolt to the head or body and can squeeze the brain against the skull. Call 9-1-1, or take your teen to the emergency department right away if, after a bump, blow, or jolt to the head or body, he or she has one or more of these danger signs:

- One pupil larger than the other
- Drowsiness or inability to wake up
- A headache that gets worse and does not go away
- Slurred speech, weakness, numbness, or decreased coordination
- Repeated vomiting or nausea, convulsions or seizures (shaking or twitching)
- Unusual behavior, increased confusion, restlessness, or agitation
- Loss of consciousness (passed out/knocked out). Even a brief loss of consciousness should be taken seriously

Teens who continue to play while having concussion symptoms or who return to play too soon—while the brain is still healing—have a greater chance of getting another concussion. A repeat concussion that occurs while the brain is still healing from the first injury can be very serious, and can affect a teen for a lifetime. It can even be fatal.



What Should I Do If My Teen Has a Possible Concussion?

As a parent, if you think your teen may have a concussion, you should:

1. Remove your teen from play.
2. Keep your teen out of play the day of the injury. Your teen should be seen by a healthcare provider and only return to play with permission from a healthcare provider who is experienced in evaluating for concussion.
3. Ask your teen's healthcare provider for written instructions on helping your teen return to school. You can give the instructions to your teen's school nurse and teacher(s) and return-to-play instructions to the coach and/or athletic trainer.

Do not try to judge the severity of the injury yourself. Only a healthcare provider should assess a teen for a possible concussion. You may not know how serious the concussion is at first, and some symptoms may not show up for hours or days. A teen's return to school and sports should be a gradual process that is carefully managed and monitored by a healthcare provider.

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To learn more,
go to cdc.gov/HEADSUP





Graduated Return to Play Protocol

Once the athlete is symptom-free, has completed appropriate neurocognitive testing (if available), and has been cleared by a physician, a gradual return to play program can be initiated. Follow these gradual progressive steps of the training sequence.

There should be approx. 24 hours between each step. If any symptoms return at any time during these activities, stop the work out. Rest until symptom free for 24 hours. Return to the previous asymptomatic step. If symptoms return or worsen, return to health care provider.

Name: _____
Sport: _____
DOB: _____ DOI: _____
Physician: _____
Date of Clearance: _____

Step	Date	Activity	Tolerance/Comments
1. <u>Light</u> General Conditioning Exercises (Goal: Increase HR)		Begin with sport specific warm up. Do 15-20 minute workout: stationary bike, fast paced walking or light jog, rowing or freestyle swimming. Keep MHR <70%	
2. <u>Moderate</u> General Conditioning and Sport Specific Skill Work; Individually (Goal: Add Movement, individual skill work)		Sport specific warm-up. Slowly increase intensity and duration of workout to 20-30 minutes.	
		Begin sport specific skill work within the workout. No spins, dives, or jumps.	
3. <u>Heavy</u> General Conditioning, skill work; individually and with team-mate. NO CONTACT (Goal: Add Movement, team-mate skill work)		Continue with general conditioning up to 30-40 minutes. Increase intensity and duration. Begin interval training.	
		-Continue individual skill work. -Begin skill work with a partner but with no contact. Continue with individual skill work as per Step 2. -Begin beginner level spins, dives, jumps.	
4. <u>Heavy</u> General Conditioning, skill work. No live scrimmages. VERY LIGHT CONTACT. (Goal: Team skill work, light static contact)		-Resume regular conditioning and duration of practice	
		-Increase interval training and skill work as required. -Gradually increase skill level of spins, dives, and jumps. -Review team plays with no contact. - Very light contact and low intensity on dummies.	
5. Full Team Practice with Body Contact		Participate in a full practice . If a full practice is completed with no symptoms, return to competition is appropriate. Discuss with the coach about getting back in the next game.	
6. Full Return to Sport		Full clearance to return to sport at previous level	

Developed in conjunction with Zurich 2008 Guidelines, CDC ACE Care Plan, and the North Carolina High School Athletic Association RTP Guidelines.

SCATS#: _____
 Examiner: _____

STEP 1: ATHLETE BACKGROUND

Name: _____
 DOB: _____
 Parent Name/Phone #: _____
 School/Sport: _____
 Current Grade: _____
 Gender: M / F / Other _____
 Dominant Hand: Left / Neither / Right _____
 How many diagnosed concussion has the athlete had in the past? _____
 When was the most recent concussion? _____
 How long was the recovery time (time to being cleared to play) from the most recent concussion? _____ (days / weeks)

Has the athlete ever been:

Hospitalized for a head injury?

Yes	No
Yes	No
Yes	No
Yes	No
Yes	No

Diagnosed / treated for headache disorder or migraines?

Diagnosed with a learning disability / dyslexia?

Diagnosed with ADD / ADHD?

Diagnosed with depression, anxiety or other psychiatric disorder?

Current medications? If yes, please list:

STEP 2: SYMPTOM EVALUATION

The athlete should be given the symptom form and asked to read this instruction paragraph out loud then complete the symptom scale. For the baseline assessment, the athlete should rate his/her symptoms based on how he/she typically feels and for the post injury assessment the athlete should rate their symptoms at this point in time.

Please Check: Baseline Post-Injury

Please hand the form to the athlete

	none	mild		moderate		severe	
	0	1	2	3	4	5	6
Headache	0	1	2	3	4	5	6
"Pressure in head"	0	1	2	3	4	5	6
Neck Pain	0	1	2	3	4	5	6
Nausea or vomiting	0	1	2	3	4	5	6
Dizziness	0	1	2	3	4	5	6
Blurred vision	0	1	2	3	4	5	6
Balance problems	0	1	2	3	4	5	6
Sensitivity to light	0	1	2	3	4	5	6
Sensitivity to noise	0	1	2	3	4	5	6
Feeling slowed down	0	1	2	3	4	5	6
Feeling like "in a fog"	0	1	2	3	4	5	6
"Don't feel right"	0	1	2	3	4	5	6
Difficulty concentrating	0	1	2	3	4	5	6
Difficulty remembering	0	1	2	3	4	5	6
Fatigue or low energy	0	1	2	3	4	5	6
Confusion	0	1	2	3	4	5	6
Drowsiness	0	1	2	3	4	5	6
More emotional	0	1	2	3	4	5	6
Irritability	0	1	2	3	4	5	6
Sadness	0	1	2	3	4	5	6
Nervous or Anxious	0	1	2	3	4	5	6
Trouble falling asleep (if applicable)	0	1	2	3	4	5	6

Total number of symptoms: _____ of 22

Symptom severity score: _____ of 132

Do your symptoms get worse with physical activity? _____

Do your symptoms get worse with mental activity? _____

If 100% is feeling perfectly normal, what percent of normal do you feel? _____

If not 100%, why? _____

Please hand form back to examiner

STEP 3: COGNITIVE SCREENING

Standardised Assessment of Concussion (SAC)⁴

ORIENTATION

What month is it?	0	1
What is the date today?	0	1
What is the day of the week?	0	1
What year is it?	0	1
What time is it right now? (within 1 hour)	0	1
Orientation score	0/5	

IMMEDIATE MEMORY

List	Random word lists					Score (0/10)		
						Trial 1	Trial 2	Trial 3
G	Finger	Penny	Blanket	Lemon	Insect			
	Candle	Paper	Sugar	Sandwich	Wagon			
H	Baby	Monkey	Perfume	Sunset	Iron			
	Elbow	Apple	Carpet	Saddle	Bubble			
I	Jacket	Arrow	Pepper	Cotton	Movie			
	Dollar	Honey	Mirror	Saddle	Anchor			
Immediate Memory Score						0/30		
Time that last trial was completed								

CONCENTRATION

DIGITS BACKWARDS

I am going to read a string of numbers and when I am done, you repeat them back to me in reverse order of how I read them to you. For example, if I say 7-1-9, you would say 9-1-7.

Digit string			Number of correct (0/10)		
List A	List B	List C			
4-9-3	5-2-6	1-4-2			0
6-2-9	4-1-5	6-5-8			1
3-8-1-4	1-7-9-5	6-8-3-1			0
3-2-7-9	4-9-6-8	3-4-8-1			1
6-2-9-7-1	4-8-5-2-7	4-9-1-5-3			0
1-5-2-8-6	6-1-8-4-3	6-8-2-5-1			1
7-1-8-4-6-2	8-3-1-9-6-4	3-7-6-5-1-9			0
5-3-9-1-4-8	7-2-4-8-5-6	9-2-6-5-1-4			1
Digits Score:			0/10		

SCATS #: _____
 Examiner: _____

MONTHS IN REVERSE ORDER

Now tell me the months of the year in reverse order. Start with the last month and go backward. So you'll say December, November. Go ahead.

Dec - Nov - Oct - Sept - Aug - Jul - Jun - May - Apr - Mar - Feb - Jan

Months Score	0/1
Concentration Total Score (Digits + Months)	0/5

STEP 4: NEUROLOGICAL SCREEN

See the instruction sheet (page 7) for details of test administration and scoring of the tests.

Can the patient read aloud (e.g. symptom checklist) and follow instructions without difficulty?	Y	N
Does the patient have a full range of pain-free PASSIVE cervical spine movement?	Y	N
Without moving their head or neck, can the patient look side-to-side and up-and-down without double vision?	Y	N
Can the patient perform the finger nose coordination test normally?	Y	N
Can the patient perform tandem gait normally?	Y	N

BALANCE EXAMINATION

Modified Balance Error Scoring System (mBESS) testing⁵

Which foot was tested (i.e. which is the non-dominant foot) Left Right

Testing surface (hard floor, field, etc.) _____

Footwear (shoes, barefoot, braces, tape, etc.) _____

Condition	Errors
Double leg stance	0/10
Single leg stance (non-dominant foot)	0/10
Tandem stance (non-dominant foot at the back)	0/10
Total Errors	0/30

STEP 5: DELAYED RECALL:

The delayed recall should be performed after 5 minutes have elapsed since the end of the Immediate Recall section. Score 1 pt. for each correct response.

Do you remember that list of words I read a few times earlier? Tell me as many words from the list as you can remember in any order.

Time Started _____

Please record each word correctly recalled. Total score equals a number of words recalled.

Total number of words recalled accurately: 0/5 or 0/10

CONCUSSION ASSESSMENT AND RETURN TO LEARN FORM

Student Athlete: _____ Date of Concussion: _____
DOB: _____ Sport: _____ School: _____
Initial Assessment Performed By: _____ (MD/DO/PAC/LAT/ARNP/PT)
School Athletic Trainer: _____ Contact Phone: _____

School Nurse (or appropriate member of Concussion Oversight Team)

The above Student Athlete has been evaluated and presented with signs and symptoms of concussion. Illinois State Law² requires Student Athletes exhibiting signs and symptoms of concussion must be removed from sport related activity on that day and may not return to play until cleared by a medical provider trained in the assessment and management of concussions. Student Athletes should not begin graduated return to play protocol until completing to return to learn protocol.

GRADUATED RETURN TO LEARN PROTOCOL¹

The CDC recommends students progressively return to school. Students who return to full cognitive load, can exacerbate the symptoms and disrupt the recovery process^{1,3,4,5}. It is essential for Students to recover academically before returning to play. The following progression should be completed by a school nurse and/or parents before beginning return to play protocol⁴.

Return to Learn Protocol⁴

Stage	Activity	Completed Date/Initials
1.No activity	Complete cognitive rest — no school, no homework, no reading, no texting, no video games, no computer work.	_____
2. Gradual reintroduction of cognitive activity	Relax previous restrictions on activities and add back for short periods of time (5-15 minutes at a time).	_____
3. Homework at home before school work at school	Homework in longer increments (20-30 minutes at a time).	_____
4. School re-entry	Part day of school after tolerating 1-2 cumulative hours of homework at home.	_____
5. Gradual reintegration into school	Increase to full day of school.	_____
6. Resumption of full cognitive workload	Introduce testing, catch up with essential work.	_____

Students should begin at their highest symptom-free step in the progression

All steps should be conducted at a sub-symptom threshold. This is defined as performing activities without symptoms, or with symptoms so long as current symptoms are not increased and no new symptoms occur. If symptoms become aggravated the student should discontinue activity and rest; make adjustments, and try the next day at the same step, or one step lower. Symptoms should be monitored with a school nurse or parent with a tool like the CAM⁴ table on the reverse page. Begin with step one and move through as far as the student can tolerate, and then begin the next day at that step.

These steps have been completed and monitored by

School Nurse or Parent (circle)

Date

Phone Number

To School Athletic Trainer

Athletic Trainer has acknowledged that Student Athlete has completed to Return to Learn Protocol:

Cognitive Activity Monitoring (CAM) Log

Name _____

Parent/ Teacher: _____

DATE TIME							
LOCATION (circle one)	Home	Home	Home	Home	Home	Home	Home
	School	School	School	School	School	School	School
COGNITIVE ACTIVITY:							
DURATION:							
SYMPTOM (PRE/POST)	Rate 0-10	Rate 0-10	Rate 0-10	Rate 0-10	Rate 0-10	Rate 0-10	Rate 0-10
HEADACHE	_/_	_/_	_/_	_/_	_/_	_/_	_/_
FATIGUE	_/_	_/_	_/_	_/_	_/_	_/_	_/_
CONCENTRATION PROBLEMS	_/_	_/_	_/_	_/_	_/_	_/_	_/_
IRRITABILITY	_/_	_/_	_/_	_/_	_/_	_/_	_/_
FOGGINESS	_/_	_/_	_/_	_/_	_/_	_/_	_/_
LIGHT/ NOISE SENSITIVITY	_/_	_/_	_/_	_/_	_/_	_/_	_/_
Other: _____	_/_	_/_	_/_	_/_	_/_	_/_	_/_
PRE-POST DIFFERENCE	_____	_____	_____	_____	_____	_____	_____

(MD/DO/PAC/LAT/ARNP)

Date

Phone Number

Possible Recommendations for Accommodations^{3,6}

Cognitive

- Adjust Coursework
- Exempt/postpone exams
- Provide Written lesson plans
- Remove or reduce daily course activities

Physical

- "Strategic Rest" 15-20' interval rests
- Quiet Room or Environment
- More breaks in class periods
- Early release from class. Quiet hall pass
- Sit out of music, PE, or Computer courses if symptoms provoked

Emotional

- Allow student to give a signal to leave
- Allow student to leave and decompress
- Allow student to see support staff

Sleep

- Allow for rest breaks
- Allow late start or half days
- Alternate mental challenge with mental rest.

If symptoms do not improve, consider a long term plan such as a; 504 Plan, IEP, or an RTI. And follow up with a neuropsychologist.

What if the student gets symptoms while reading or doing homework? Do they start over?

- No; the student does not have to start the progression over, but return to the step that does not aggravate their symptoms.

School work doesn't bother me; do I still have to do the Return to Learn Protocol?

- Yes; you will still need to be symptom free for 24 hours before beginning the graduated return to play. If you are able to do school work then you will progress quickly through the RTL Protocol.

References:

1. *Returning to School After a Concussion, A Fact Sheet for School Professionals.* Centers for Disease Control (CDC), Davies S., Gioia G., Gordan W., McAvoy K., Rossen E.
2. *Youth Sports Concussion Safety Act of 2015, Pub. L. No. 099-0245*
3. *School and the concussed youth: Recommendations for Concussion Education and Management.* Sady Et Al 2011 *J. Phys Med Rehabil Clin Annals* 22:701-719
4. *Importance of Return to Learn in Pediatric and Adolescent Concussion.* Master et Al. 2012 *Pediatric Annals* 41:9
5. *Supporting the Student Athlete's return to classroom after a sport related concussion.* McGrath. 2010 *Journal of Athletic Training* 45(5): 492-498
6. *Return to School After a Concussion.* Rocky Mountain Hospital for Children Center for Concussions. McAvoy K., Kirelik S.,

Take Home Concussion Information

ATI Concussion Care Team: (contact information)

Date: _____

Your athlete has been evaluated for a concussion today. This document is meant to give you basic information about concussions and how to care for them. If you have any further questions, please do not hesitate to call one of the above phone numbers and we would be happy to answer any further questions you might have.

Possible Signs/Symptoms resulting from a concussion: A concussion is a jarring injury of the brain resulting in disturbance of cerebral function. Young children and teens are more likely to get a concussion and take longer to recover than adults. Athletes who experience one or more of the following signs or symptoms after a bump, blow, or jolt to the head or body should be kept out of play and evaluated by a health care professional who is experienced in evaluating concussions.

Headache	Nausea	Dizziness
Balance problems	Vomiting	Fatigue
Trouble falling asleep	Sleeping more than usual	Drowsiness
Sleeping less than usual	Sensitivity to light	Sensitivity to noise
Irritability	Sadness	Nervousness
Feeling more emotional	Numbness/tingling	Feeling slowed down
Feeling mentally foggy	Difficulty concentrating	Difficulty remembering
Visual problems	Loss of appetite	Unequal/dilated pupils
Loss of consciousness	Alterations in breathing pattern	Lethargic
Difficulty with/slurred speech		

The following Signs/Symptoms warrant immediate referral to the ER:

Changes in alertness/consciousness	Convulsions/seizures
Muscle weakness on one or both sides	Any loss of consciousness
Persistent confusion	Repeated Vomiting
Unequal pupils	Unusual eye movements
Clear or bloody discharge from the ears	

What to do next

- Watch your athlete closely. If any of his/her symptoms seem to be getting worse or more keep showing up, they should be taken to the Emergency Room Immediately
- Keep your athlete quiet and relaxed. Minimize physical activity. Minimize stimulation such as TV, computer, phone, video games, etc. When doing homework, have him/her complete it in short time periods with frequent breaks.
- Your athlete needs sleep! Sleep is the best way for the brain to recover. You can check on him/her throughout the night if you would like to, but if they appear to be sleeping peacefully, let them sleep!
- Your athlete's concussion care can be managed through the athletic trainers that are members of the ATI Physical Therapy Concussion Care Team. Your liaison is a qualified member of the team and will be in frequent communication with you regarding the status of your child's progress. They will ensure a safe and timely return to play.
- Many times the needs of the athlete require them to see a physician. If this is the case, be sure to see a physician who has specific training in concussion management. If you need a recommendation please do not hesitate to call us.

Steps for Returning to play

- There are several steps to be taken and all of them are a piece of the puzzle to get your athlete returning to play as soon as SAFELY possible. No one athlete will respond to a concussion the same as another. Due to this, a specific date for returning to play cannot be set. A specific progression and monitoring of your athlete must be taken. Athletes can only progress one step in a day. Sometimes an athlete will be stuck at a step for several days. Please communicate daily with your athletic trainer from the Concussion Care Team. They will give you specific instructions on what to do for each step. Below is a general reference so you will have an idea of what to expect. **Please do NOT try to take an athlete through the return to play progression on your own.**

STEP 1: After it has been determined your athlete has a concussion, the first thing we will do is rest until the athlete is symptom free for a full 24 hours. No physical activity can be resumed until the athlete is symptom free. This includes practice and games for the sport they are in, Physical Education, and exercising on their own. The athlete should not do anything more strenuous than walking until all symptoms have ceased. When the athlete has been symptom free for 24 hours, then he/she can take the Impact post injury test. Their post injury test will be compared to their baseline test, if one is available, or to normative numbers if no baseline has been completed. Based on the results from Impact test, will either continue to rest, or progress to step #2.

STEP 2: Once all symptoms have gone away the athlete can participate in light exertion activities under the supervision of either ATC or parent/coach. If the athlete can finish light exertion activities without experiencing any return of symptoms, they can move onto the next step.

STEP 3: The athlete will participate in activities which exert them a little more and sport-specific activities, again under the supervision of the ATC or parent/coach. If the athlete can complete this without experiencing any return of symptoms, they can move onto the next step.

STEP 4: The athlete will now be able to participate in heavy exertion activities such as running or a non-contact practice with his/her team.

* Illinois legislation states, "a student athlete who has been removed from play may not return to play until the student athlete is evaluated by a licensed health care provider trained in the evaluation and management of concussions and head injuries and the student athlete receives WRITTEN CLEARANCE to return to play from that health care provider."

- The healthcare provider can be a physician or a certified athletic trainer (ATI Physical Therapy Concussion care team). Please bear in mind that the physician should be well versed in the evaluation and management of concussions. Also, if your athlete receives care from a physician, the ATI Physical Therapy concussion care team would like to work in conjunction with that physician to return your athlete to play as soon as safely possible.
- Please note that even with a Doctor's clearance note, it is advised that all athletes still complete the four step return to play protocol, as advised by your concussion care team liaison.

Step 5: Athlete can complete a full practice (including contact activities) with the team

Step 6: Athlete can return to full participation, including games, with no restrictions.

If at any point the athlete's symptoms return, physical activity will stop for that day. Assuming the symptoms are gone the following day, the same step will be attempted again.

If you have any questions please do not hesitate to contact a member of the ATI Physical therapy concussion care team. Our goal is to have your athlete back to participation as soon as safely possible.

Thank you,

ATI Physical Therapy Concussion Care Team

Taylor Anderson LAT, ATC