

# Concussion Identification & Treatment

School Health Learning Collaborative

Natalie Ronshaugen, MD

Becky Doctor, ATC

# Disclosures

Consultant/ Speakers bureaus	Volunteer Consultant Nebraska School Activities Association Sports Medicine Advisory Committee Safe Kids Lincoln Lancaster County Youth Sports Injury Prevention Coalition
Research funding	No Disclosures
Stock ownership Corporate boards- employment	No Disclosures
Off-label uses	No Disclosures

# Objectives

- Discuss the definition of concussion.
- Screen patients for concussion.
- Identify immediate actions once a concussion is suspected.
- Recognize legal responsibilities and best practices for return to school after concussion.
- Know what to expect for students with prolonged symptoms.

*No two concussions are exactly the same.*



Dailybruin.com



Sports.vice.com



<https://www.danella.com>

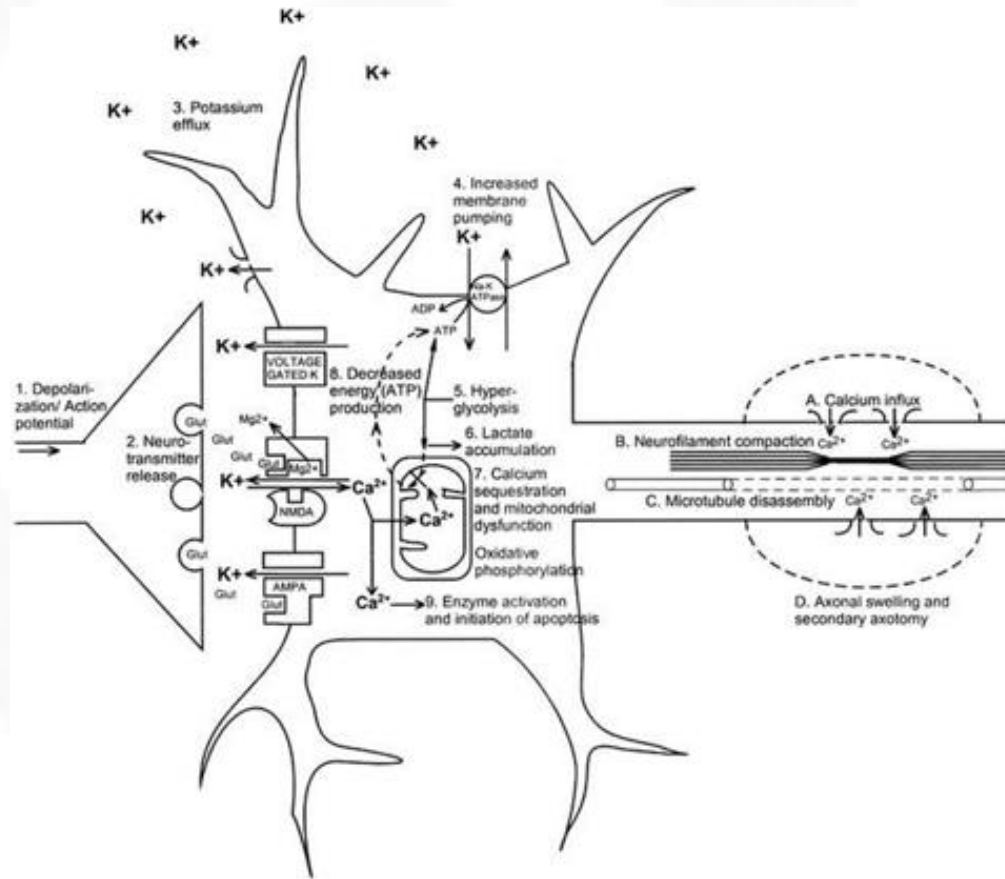


Brainline.org

# Definition

- Trauma +/- LOC
- Rapid onset
- Resolves spontaneously
  - Several hours to weeks





## Observed by Coaching Staff or Parents

Appears dazed or stunned

Confused about assignment/ position

Forgets sports plays

Is unsure of game, score or opponent

Moves clumsily

Answers questions slowly

Loses consciousness (even briefly)

Shows behavior/ personality changes

Can't recall events prior or after the hit

Center for Disease Control and Prevention



# Sideline Concussion Assessment Tool 5 (SCAT 5)

### STEP 2: SYMPTOM EVALUATION

The athlete should be given the symptom form and asked to read the instruction through our 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				
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?								Y N
Do your symptoms get worse with mental activity?								Y N
If 100% is feeling perfectly normal, what percent of normal do you feel?								
If not 100%, why?								

**Please hand form back to examiner**

### Cognitive assessment

#### Standardized Assessment of Concussion (SAC)<sup>4</sup>

**Orientation** (1 point for each correct answer)

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** of 5

**Immediate memory**

List	Trial 1	Trial 2	Trial 3	Alternative word list					
elbow	0	1	0	1	0	1	candle	baby	finger
apple	0	1	0	1	0	1	paper	monkey	penny
carpet	0	1	0	1	0	1	sugar	perfume	blanket
saddle	0	1	0	1	0	1	sandwich	sunset	lemon
bubble	0	1	0	1	0	1	wagon	iron	insect
<b>Total</b>									

**Immediate memory score total** of 15

**Concentration: Digits Backward**

List	Trial 1	Alternative digit list			
4-9-3	0	1	6-2-9	5-2-6	4-1-5
3-8-1-4	0	1	3-2-7-9	1-7-9-5	4-9-6-8
6-2-9-7-1	0	1	1-5-2-8-6	3-8-5-2-7	6-1-8-4-3
7-1-8-4-6-2	0	1	5-3-9-1-4-8	8-3-1-9-6-4	7-2-4-8-5-6
<b>Total of 4</b>					

**Concentration: Month in Reverse Order** (1 pt. for entire sequence correct)

Dec-Nov-Oct-Sept-Aug-Jul-Jun-May-Apr-Mar-Feb-Jan	0	1
--	---	---

**Concentration score** of 5



# CHILD Sideline Concussion Assessment Tool 5 (SCAT 5)

Best for 8-12yo

(Use discretion on  $\leq$  8yo)

2

### Child Report<sup>3</sup>

	Not at all/ Never	A little/ Rarely	Somewhat/ Sometimes	A lot/ Often
I have headaches	0	1	2	3
I feel dizzy	0	1	2	3
I feel like the room is spinning	0	1	2	3
I feel like I'm going to faint	0	1	2	3
Things are blurry when I look at them	0	1	2	3
I see double	0	1	2	3
I feel sick to my stomach	0	1	2	3
My neck hurts	0	1	2	3
I get tired a lot	0	1	2	3
I get tired easily	0	1	2	3
I have trouble paying attention	0	1	2	3
I get distracted easily	0	1	2	3
I have a hard time concentrating	0	1	2	3
I have problems remembering what people tell me	0	1	2	3
I have problems following directions	0	1	2	3
I daydream too much	0	1	2	3
I get confused	0	1	2	3
I forget things	0	1	2	3
I have problems finishing things	0	1	2	3
I have trouble figuring things out	0	1	2	3
It's hard for me to learn new things	0	1	2	3
Total number of symptoms:				of 21
Symptom severity score:				of 63
Do the symptoms get worse with physical activity?				Y N
Do the symptoms get worse with trying to think?				Y N

**Overall rating for child to answer:**

Very bad      Very good

On a scale of 0 to 10 (where 10 is normal), how do you feel now?

If not 10, in what way do you feel different?

Date:

### Parent Report

#### The child:

	Not at all/ Never	A little/ Rarely	Somewhat/ Sometimes	A lot/ Often
has headaches	0	1	2	3
feels dizzy	0	1	2	3
has a feeling that the room is spinning	0	1	2	3
feels faint	0	1	2	3
has blurred vision	0	1	2	3
has double vision	0	1	2	3
experiences nausea	0	1	2	3
has a sore neck	0	1	2	3
gets tired a lot	0	1	2	3
gets tired easily	0	1	2	3
has trouble sustaining attention	0	1	2	3
is easily distracted	0	1	2	3
has difficulty concentrating	0	1	2	3
has problems remembering what he/she is told	0	1	2	3
has difficulty following directions	0	1	2	3
tends to daydream	0	1	2	3
gets confused	0	1	2	3
is forgetful	0	1	2	3
has difficulty completing tasks	0	1	2	3
has poor problem solving skills	0	1	2	3
has problems learning	0	1	2	3
Total number of symptoms:				of 21
Symptom severity score:				of 63
Do the symptoms get worse with physical activity?				Y N
Do the symptoms get worse with mental activity?				Y N

**Overall rating for parent/teacher/coach/carer to answer**

On a scale of 0 to 100% (where 100% is normal), how would you rate the child now?

If not 100%, in what way does the child seem different?

## STEP 1: RED FLAGS

### SCAT Red Flags

#### RED FLAGS:

- Neck pain or tenderness
- Double vision
- Weakness or tingling/ burning in arms or legs
- Severe or increasing headache
- Seizure or convulsion
- Loss of consciousness
- Deteriorating conscious state
- Vomiting
- Increasingly restless, agitated or combative

# CONCUSSION SIGNS AND SYMPTOMS Checklist



Student's Name: \_\_\_\_\_ Student's Grade: \_\_\_\_\_ Date/Time of Injury: \_\_\_\_\_

Where and How Injury Occurred: *(Be sure to include cause and force of the hit or blow to the head.)* \_\_\_\_\_

Description of Injury: *(Be sure to include information about any loss of consciousness and for how long, memory loss, or seizures following the injury, or previous concussions, if any. See the section on Danger Signs on the back of this form.)* \_\_\_\_\_

### DIRECTIONS:

Use this checklist to monitor students who come to your office with a head injury. Students should be monitored for a minimum of 30 minutes. Check for signs or symptoms when the student first arrives at your office, 15 minutes later, and at the end of 30 minutes.

Students who experience one or more of the signs or symptoms of concussion after a bump, blow, or jolt to the head should be referred to a healthcare professional with experience in evaluating for

### OBSERVED SIGNS

	0 MINUTES	15 MINUTES	30 MINUTES	<input type="checkbox"/> MINUTES JUST PRIOR TO LEAVING
Appears dazed or stunned				
Is confused about events				
Repeats questions				
Answers questions slowly				
Can't recall events <i>prior</i> to the hit, bump, or fall				
Can't recall events <i>after</i> the hit, bump, or fall				
Loses consciousness (even briefly)				
Shows behavior or personality changes				
Forgets class schedule or assignments				

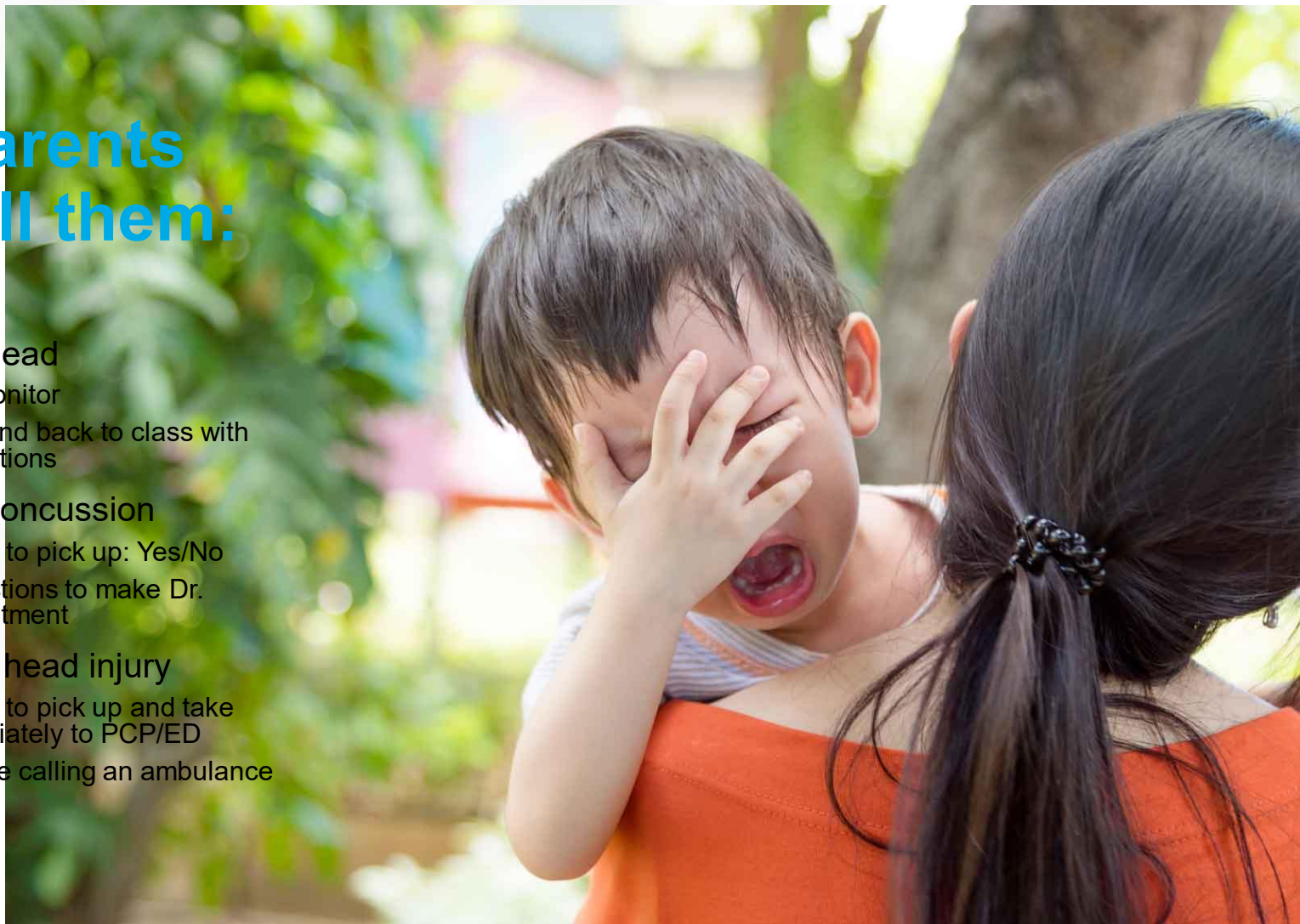
### PHYSICAL SYMPTOMS

Headache or "pressure" in head				
Nausea or vomiting				

[www.cdc.gov/niosh/publications/dfs/schools/TBI\\_schools\\_checklist\\_508-a.pdf](http://www.cdc.gov/niosh/publications/dfs/schools/TBI_schools_checklist_508-a.pdf)

## Call parents and tell them:

- Bump on head
  - Will monitor
  - Will send back to class with instructions
- Probable concussion
  - Parent to pick up: Yes/No
  - Instructions to make Dr. appointment
- Significant head injury
  - Parent to pick up and take immediately to PCP/ED
  - You are calling an ambulance







## Danger signs:

Be alert for symptoms that worsen over time. The student should be seen in an emergency department right away if she or he has one or more of these danger signs:

- One pupil (the black part in the middle of the eye) larger than the other
- Drowsiness or cannot be awakened
- A headache that gets worse and does not go away
- Weakness, numbness, or decreased coordination
- Repeated vomiting or nausea
- Slurred speech
- Convulsions or seizures
- Difficulty recognizing people or places
- Increasing confusion, restlessness, or agitation
- Unusual behavior
- Loss of consciousness (even a brief loss of consciousness should be taken seriously)

# Things to tell parents:

- See a medical provider
  - Physician
  - APP (PA/NP)
  - Athletic Trainer
- Concussions resolve
- Tylenol can help
- Come back to school
- When to go to the Emergency Room

A young man in a red shirt is being examined by a man in a green hoodie. The young man has a visible injury on his nose. The background is a green wall.

**Don't forget the distracting injury**

<https://passport.world.rugby/>

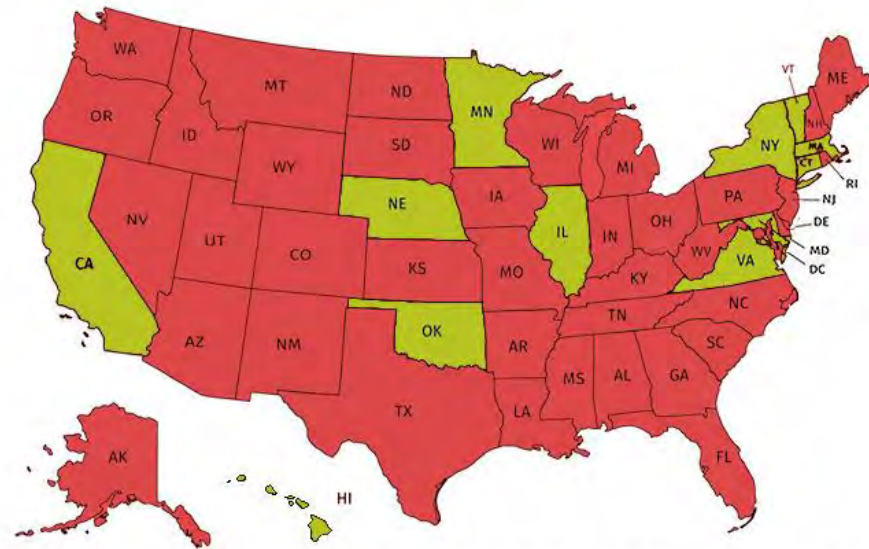




## It's the LAW.

- All 50 states have concussion legislation.
- NE is only 1 of 12 states with Return to learn legislation.

### Return to Learn



- Concussion laws include language regarding return-to-learn policy, either in original or amended legislation.
- Concussion laws do not include language regarding return-to-learn policy, either in original or amended legislation.

As of June 2017, 12 states had concussion laws that included language regarding return-to-learn policy.

# **LB 260 Concussion Awareness Act Brief**

- Passed in 2012, Focused on 3 aspects:
  - Education
  - Removal from Play
  - Return to play
- Amended in 2014 to add Return to Learn Verbiage
  - Prioritized Students First\*\*
  - Formal/Informal accommodations
  - K-12 + Collegiate

# Ideal World

- Injury occurs
- School is notified
- Academic team is notified
  - (FERPA/HIPAA Compliant)
  - Secretary
  - Athletic Trainer
  - School Nurse
  - Attendance Office
  - School Counselor
  - Administrator
- Academic accommodations implemented
- Individualized based on students' needs





Academic accommodations tailored to student needs:

- Injury
- Illness
- Learning disability
- Behavior
- Special circumstances

**You are already doing this**





Initial rest for only 1-2 days with a gradual return to school showed less symptoms than 5 days of rest at home

-Thomas et al., 2015

As soon as symptoms are “tolerable, intermittent and amenable to rest”

-Halstead et. al., 2013

# GO BACK TO SCHOOL

# Academic Accommodations

## INFORMAL

- Altered school day
- Shorten assignments to pertinent information only
- Provide printed notes
- Allow open note/book tests
- Provide alternative testing strategies
- Postpone standardized tests
- Consider summer school, repeat courses if necessary
- Utilize counseling center/tutor academic supports

## FORMAL

- 504 Plan
- SAT
- IEP
- SPED Services
- Health Care Plan
- Repeat grade in school (RARE)





## Physical activity

DON'T DO THIS!

## A Preliminary Study of Subsymptom Threshold Exercise Training for Refractory Post-Concussion Syndrome

*John J. Leddy, MD,\*† Karl Kozlowski, PhD,‡ James P. Donnelly, PhD,§  
David R. Fendergast, EdD,¶ Leonard H. Epstein, PhD,<sup>1</sup> and Barry Willer, PhD\*\**

**The Role of Subsymptom Threshold Exercise Training in Reducing Post-Concussion Syndrome in Adolescents with Sport-Related Concussion who Adhere to Aerobic Exercise Prescriptions Recover Faster** > [Med Sci Sports Exerc.](#) 2022 Apr 28. doi: 10.1249/MSS.0000000000002952. Online ahead of print.

DAVID R. HOWELL<sup>1,2,3</sup>,  
and WILLIAM P. MEEHAN<sup>4</sup>

<sup>1</sup>Sports Medicine Center, Children's Hospital Boston, Harvard Medical School, Boston, MA; <sup>2</sup>Sports Medicine Center, Children's Hospital Boston, Harvard Medical School, Boston, MA; <sup>3</sup>Sports Medicine Center, Children's Hospital Boston, Harvard Medical School, Boston, MA; <sup>4</sup>Sports Medicine Center, Children's Hospital Boston, Harvard Medical School, Boston, MA; <sup>5</sup>Sports Medicine Center, Children's Hospital Boston, Harvard Medical School, Boston, MA; <sup>6</sup>Sports Medicine Center, Children's Hospital Boston, Harvard Medical School, Boston, MA; <sup>7</sup>Sports Medicine Center, Children's Hospital Boston, Harvard Medical School, Boston, MA; and

Haley M Chizuk, Barry S Willer<sup>1</sup>, Adam Cunningham<sup>2</sup>, Itai Bezherano<sup>2</sup>, Eileen Storey<sup>3</sup>, Christina Master, Rebekah Mannix<sup>4</sup>, Doug J Wiebe<sup>5</sup>, Matthew F Grady, William P Meehan, John J Leddy<sup>2</sup>, Mohammad N Haider<sup>2</sup>

Affiliations + expand

PMID: 35482774 DOI: 10.1249/MSS.0000000000002952

# Exercise

Encourage light aerobic exercise that does not increase symptoms starting 24-48hrs after injury.





- Symptom-limited light physical activity
- Avoid blows to head while recovering
- Controlled environment
- Follow school policy

What about PE Class  
and Recess?

# Return to Play Progression

Stage	Objective	Activity	Goal of each step
1	Symptom Limited Activity	Daily activities that do not provoke symptoms	Gradual re-introduction of daily activities
2	Light Aerobic Exercise	Walking or stationary cycling at slow to medium pace. No resistance training (Wt. Lifting)	Increase heart rate in a controlled environment
3	Moderate Aerobic Exercise	Running or agility drills; NO HEAD IMPACT ACTIVITIES	Add functional movement
4	Non-Contact Training Drills	Increase intensity of activities; passing drills, re-introduce resistance training	Exercise, coordination, and increased thinking during activity
5	Full-Contact Practice	Following Medical Clearance; participate in full activities	Restore confidence and assess functional skills
6	Return to Sport	Normal game play	





## Average Length of Concussion

- 2-3 weeks adults
- 3-4 weeks adolescents
- 4-6 weeks younger kids





## Association with Prolonged Symptoms



Continuing to play contact sports after concussion

- 8.8x more like to have symptoms >21 days
- 2<sup>nd</sup> impact within 24 hours of the 1st
- Pre-morbid conditions
  - Migraine headaches
  - ADHD
  - Depression or Anxiety



# Concussion Rehabilitation

- Athletic Training
- Physical Therapy
- Occupational Therapy
- Optometry
- Speech Therapy
- Neuropsychology
- Counseling

# Symptom Specific Treatment Plan

## Physical symptoms of a concussion:

- Dizziness
- Problems with balance
- Nausea and/or vomiting
- Balance problems
- Sensitivity to noise
- Sensitivity to light
- Blurred vision
- Headache
- Low energy level
- Unequal pupils
- Seeing flashing lights

## Mental symptoms of a concussion:

- Difficulty remembering
- Confusion
- Inability to concentrate
- Inability to think clearly
- Mental foginess
- Inability to remember new information
- Trouble paying attention
- Loss of focus

## Sleep symptoms of a concussion:

- Sleeping more than usual
- Unable to fall asleep
- Sleeping less than usual

## Emotional symptoms of a concussion:

- Easily angered or upset
- Feeling nervous or anxious
- Feelings of sadness
- Crying more than usual
- Lack of interest in usual activities
- Depression



# Exercise

- 24-48 hours after injury
- Symptom Limited
- Non-contact



# Prolonged Symptoms

- Headaches
  - Tylenol and ibuprofen ok
  - Consider longer lasting/preventative med
    - Amitriptyline
      - May cause sedation
- Neck strain
  - Rehab exercises (AT or PT)
  - Heat or ice
  - NSAIDs

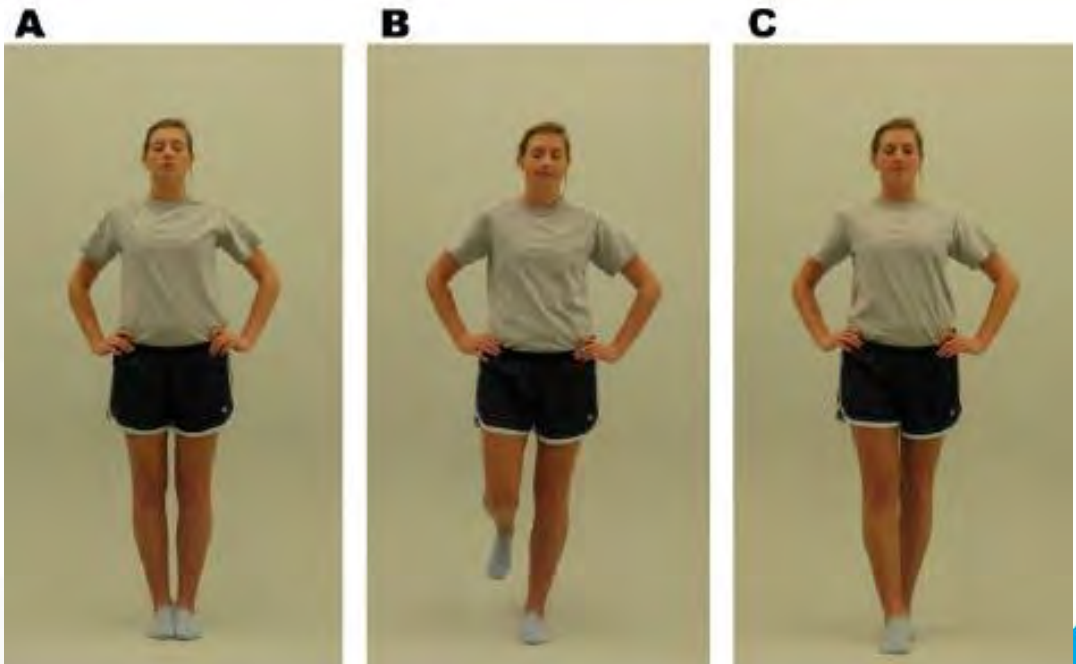




## Common Ocular Symptoms & Causes

- Difficulty reading
  - Difficulty transitioning from far to near
  - Double vision
  - Light sensitivity
- 
- Convergence insufficiency
  - Accommodative dysfunction
  - Strabismus
  - Slow pupillary reaction

# BALANCE





- Speech Therapy
- Accommodations in school

### Mental symptoms of a concussion:

- Difficulty remembering
- Confusion
- Inability to concentrate
- Inability to think clearly
- Mental foginess
- Inability to remember new information
- Trouble paying attention
- Loss of focus

## Sleep Hygiene

Limit naps  
Set an alarm  
Go to school  
Keep phone separate  
from sleep areas

## Medication

OTC--melatonin  
Rx--Amitriptyline

## Sleep symptoms of a concussion:

- Sleeping more than usual
- Unable to fall asleep
- Sleeping less than usual

## Emotional symptoms of a concussion:

- Easily angered or upset
- Feeling nervous or anxious
- Feelings of sadness
- Crying more than usual
- Lack of interest in usual activities
- Depression



Reassurance



Counseling



Ensure safety



CDC.gov/HEADSUP

**\*\*Spanish forms Available**

**CONCUSSION  
SIGNS AND SYMPTOMS  
Checklist**



Student's Name: \_\_\_\_\_ Student's Grade: \_\_\_\_\_ Date/Time of Injury: \_\_\_\_\_

Where and How Injury Occurred: *(Be sure to include cause and force of the hit or blow to the head.)* \_\_\_\_\_

Description of Injury: *(Be sure to include information about any loss of consciousness and for how long, memory loss, or seizures following the injury, or previous concussions, if any. See the section on Danger Signs on the back of this form.)* \_\_\_\_\_

	0 MINUTES	15 MINUTES	30 MINUTES	<input type="checkbox"/> MINUTES JUST PRIOR TO LEAVING
<b>OBSERVED SIGNS</b>				
Appears dazed or stunned				
Is confused about events				
Repeats questions				
Answers questions slowly				
Can't recall events <i>prior</i> to the hit, bump, or fall				
Can't recall events <i>after</i> the hit, bump, or fall				
Loses consciousness (even briefly)				
Shows behavior or personality changes				
Forgets class schedule or assignments				
<b>PHYSICAL SYMPTOMS</b>				
Headache or "pressure" in head				
Nausea or vomiting				
Balance problems or dizziness				
Fatigue or feeling tired				
Blurry or double vision				
Sensitivity to light				

**DIRECTIONS:**

Use this checklist to monitor students who come to your office with a head injury. Students should be monitored for a minimum of 30 minutes. Check for signs or symptoms when the student first arrives at your office, 15 minutes later, and at the end of 30 minutes.

Students who experience one or more of the signs or symptoms of concussion after a bump, blow, or jolt to the head should be referred to a healthcare professional with experience in evaluating for concussion. For those instances when a parent is coming to take the student to a healthcare professional, observe the student for any new or worsening symptoms right before



**DIRECTIONS:**

Use this checklist to monitor students who come to your office with a head injury. Students should be monitored for a minimum of 30 minutes. Check for signs or symptoms when the student first arrives at your office, 15 minutes later, and at the end of 30 minutes.

Students who experience one or more of the signs or symptoms of concussion after a bump, blow, or jolt to the head should be referred to a healthcare professional with experience in evaluating for concussion. For those instances when a parent is coming to take the student to a healthcare professional, observe the student for any new or worsening symptoms right before the student leaves. Send a copy of this checklist with the student for the healthcare professional to review.

To download this checklist in Spanish, please visit [cdc.gov/HEADSUP](http://cdc.gov/HEADSUP). Para obtener una copia electrónica de esta lista de síntomas en español, por favor visite [cdc.gov/HEADSUP](http://cdc.gov/HEADSUP).

OBSERVED SIGNS	0 MINUTES	15 MINUTES	30 MINUTES	<input type="checkbox"/> MINUTES JUST PRIOR TO LEAVING
Appears dazed or stunned				
Is confused about events				
Repeats questions				
Answers questions slowly				
Can't recall events <i>prior</i> to the hit, bump, or fall				
Can't recall events <i>after</i> the hit, bump, or fall				
Loses consciousness (even briefly)				
Shows behavior or personality changes				
Forgets class schedule or assignments				
<b>PHYSICAL SYMPTOMS</b>				
Headache or "pressure" in head				
Nausea or vomiting				
Balance problems or dizziness				
Fatigue or feeling tired				
Blurry or double vision				
Sensitivity to light				
Sensitivity to noise				
Numbness or tingling				
Does not "feel right"				
<b>COGNITIVE SYMPTOMS</b>				
Difficulty thinking clearly				
Difficulty concentrating				
Difficulty remembering				
Feeling more slowed down than usual				
Feeling sluggish, hazy, foggy, or groggy				
<b>EMOTIONAL SYMPTOMS</b>				
Irritable				
Sad				
More emotional than usual				
Nervous				

**Danger signs:**

Be alert for symptoms that worsen over time. The student should be seen in an emergency department right away if she or he has one or more of these danger signs:

- One pupil (the black part in the middle of the eye) larger than the other
- Drowsiness or cannot be awakened
- A headache that gets worse and does not go away
- Weakness, numbness, or decreased coordination
- Repeated vomiting or nausea
- Slurred speech
- Convulsions or seizures
- Difficulty recognizing people or places
- Increasing confusion, restlessness, or agitation
- Unusual behavior
- Loss of consciousness (even a brief loss of consciousness should be taken seriously)

**Additional information about this checklist:**

This checklist is also useful if a student appears to have sustained a head injury outside of school or on a previous school day. In such cases, be sure to ask the student about possible sleep symptoms. Drowsiness, sleeping more or less than usual, or difficulty falling asleep may indicate a concussion.

To maintain confidentiality and ensure privacy, this checklist is intended for use only by appropriate school professionals, healthcare professionals, and the student's parent(s) or guardian(s).

**Resolution of injury:**

- Student returned to class
- Student sent home
- Student referred to healthcare professional with experience in evaluating for concussion

SIGNATURE OF SCHOOL PROFESSIONAL COMPLETING THIS FORM: \_\_\_\_\_

TITLE: \_\_\_\_\_

COMMENTS: \_\_\_\_\_



**CDC HEADS UP**  
SAFE BRAIN. STRONGER FUTURE.

## A FACT SHEET FOR Teachers, Counselors, and School Professionals

Teachers and school counselors may be the first to notice changes in their students. The signs and symptoms can take time to appear and can become evident during concentration and learning activities in the classroom.

**Send a student to the school nurse or another professional designated to address health issues if you notice or suspect that a student has:**

1. Had any kind of forceful blow to the head or to the body that resulted in rapid movement of the head  
**-and-**
2. Any change in his or her behavior, thinking, or physical functioning. (See the signs and symptoms of concussion.)

## What do I need to know about my students returning to school after a concussion?

Supporting a student recovering from a concussion requires a collaborative approach among school professionals, healthcare providers, and parents, as she or he may need accommodations during recovery. If symptoms persist, a 504 meeting may be called. Section 504 Plans are implemented when students have a disability (temporary or permanent) that affects their performance in any manner. Services and accommodations for students may include speech-language therapy, environmental adaptations, curriculum modifications, and behavioral strategies.

Students may need to limit activities while they are recovering from a concussion. Exercising or activities that involve a lot of concentration, such as studying, working on the computer, or playing video games, may cause concussion symptoms (such as headache or tiredness) to reappear or get worse.

When students return to school after a concussion, school professionals should watch for:

- Increased problems paying attention or concentrating,
- Increased problems remembering or learning new information,
- Longer time needed to complete tasks or assignments,
- Difficulty organizing tasks,
- Inappropriate or impulsive behavior during class,
- Greater irritability, and
- Less ability to cope with stress or being more emotional than usual.

Students who return to school after a concussion may need to:

- Take rest breaks as needed;
- Spend fewer hours at school;
- Be given more time to take tests or complete assignments;
- Receive help with schoolwork; and/or
- Reduce time spent on the computer, reading, or writing.

It is normal for students to feel frustrated, sad, and even angry because they cannot return to recreation or sports right away, or cannot keep up with their schoolwork. As the student's symptoms decrease, the extra help or support can be removed gradually.

A student may feel isolated from peers and social networks. Talk with the student about these issues and offer support and encouragement.

# NE Dept. of Education Website

# FREE resource



### What is TACT™?

TACT™ is an online educational resource that helps teachers provide *differentiated instruction* to students with concussions in the classroom **when they need it.**

You will receive 1 email per week, for 4 weeks with recommendations for environmental and academic content adjustments. Get Schooled on Concussions Tip Sheets are included with each email as attachments for you to save, print, and share!

Recommendations are clinical, research-based and best practice approaches to concussion RTL management.



**TACT**  
Teacher Acute Concussion Tool

**Have a student with a concussion, or want to learn more about TACT? Login here:**

[getschooledonconcussions.com/nebraska](https://getschooledonconcussions.com/nebraska)  
Password: TACTnebraska2020

2020-21 subscription for Nebraska educators made possible by



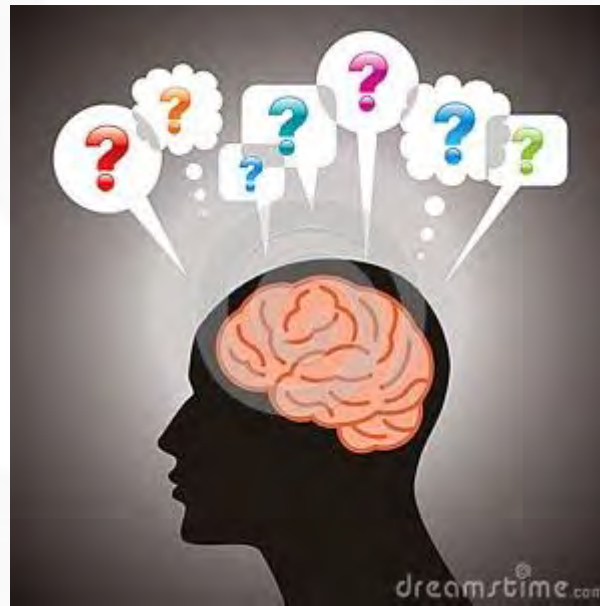
In Cooperation with



This program is supported by the Cooperative Agreement# Number: U713204638, funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.



# QUESTIONS/COMMENTS??



SCAT5





# CDC Fact Sheet for Nurses



# Resources

1. McCrory, P., et al., *Consensus statement on concussion in sport-the 5(th) international conference on concussion in sport held in Berlin, October 2016*. Br J Sports Med, 2017. **51**(11): p. 838-847.
2. Harmon, K.G., et al., *American Medical Society for Sports Medicine position statement on concussion in sport*. British Journal of Sports Medicine, 2019. **53**(4): p. 213-225.
3. Chizuk, H.M., et al., *Adolescents with Sport-Related Concussion who Adhere to Aerobic Exercise Prescriptions Recover Faster*. Med Sci Sports Exerc, 2022.
4. Leddy, J.J., et al., *A preliminary study of subsymptom threshold exercise training for refractory post-concussion syndrome*. Clin J Sport Med, 2010. **20**(1): p. 21-7.
5. Howell, D.R., et al., *The Role of Aerobic Exercise in Reducing Persistent Sport-related Concussion Symptoms*. Med Sci Sports Exerc, 2019. **51**(4): p. 647-652.
6. McAvoy, K., B. Eagan-Johnson, and M. Halstead, *Return to learn: Transitioning to school and through ascending levels of academic support for students following a concussion*. NeuroRehabilitation, 2018. **42**(3): p. 325-330.
7. Society of Health and Physical Educators; Concussion State Legislation and Policy; <https://www.shapeamerica.org/standards/guidelines/Concussion/state-policy.aspx>. Updated 8.10.2022
8. Nebraska legislative bill 260. <https://nebraskalegislature.gov/FloorDocs/102/PDF/Slip/LB260.pdf> July 1, 2012.
9. Nebraska Department of Education website. Brain Injury Regional School Support Teams. [https://www.education.ne.gov/wp-content/uploads/2020/08/GetSchooled\\_FullPage-745x1024.jpg](https://www.education.ne.gov/wp-content/uploads/2020/08/GetSchooled_FullPage-745x1024.jpg)