

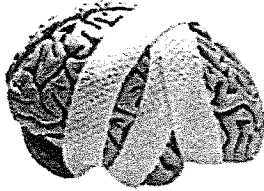
BRIDGING THE GAP

From
CONCUSSION
To the
CLASSROOM

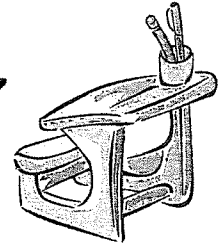
February 2014

NEBRASKA DEPARTMENT ^{OF} EDUCATION

*Return
to
Learn*



BRIDGING THE GAP FROM CONCUSSION TO THE CLASSROOM: RETURN TO LEARN



On April 8, 2011, the Nebraska Legislature passed the Concussion Awareness Act on a vote of 43- 0. The Concussion Awareness Act became effective in Nebraska on July 1, 2012. The goal of the Act is to provide a consistent means to identify and manage concussions and help ensure the safety of those involved in youth sports.

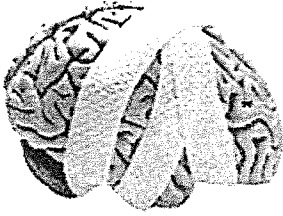
The Concussion Awareness Act contains the three tenets of model legislation as described by the Brain Injury Association and the National Football League.

1. Education: Coaches, Parents and Student Athletes
2. Removal from Play – If a concussion is reasonably suspected
3. Clearance by a Licensed Health Care Professional

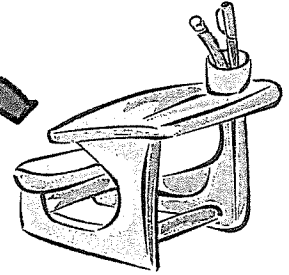
While Nebraska law requires a specified Return to Play protocol, equally important in the academic setting is a Return to Activity policy. “Bridging the Gap from Concussion to the Classroom: Return to Learn” was developed to provide guidance to assist Nebraska school districts in developing a concussion management policy, including the provision of appropriate classroom adjustments for concussed students facing learning challenges.

Just as effective concussion management requires communication and collaboration, this document has been developed, reviewed and edited collaboratively by a Concussion Task Force comprised of Nebraska Brain injury School Support Teams (BIRSST) and the following individuals representing several disciplines:

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BRIDGING THE GAP FROM CONCUSSION TO THE CLASSROOM: RETURN TO LEARN



What is a Brain Injury?

Acquired Brain Injury (ABI)

- An acquired brain injury is an injury to the brain, which is not hereditary, congenital or degenerative that has occurred after birth. (Includes anoxia, aneurysms, infections to the brain and stroke.)

Traumatic Brain Injury (TBI)

- A TBI is caused by a bump, blow or jolt to the head or a penetrating head injury that disrupts the normal function of the brain. Not all blows or jolts to the head result in a TBI. The severity of a TBI may range from "mild," i.e., a brief change in mental status or consciousness to "severe," i.e., an extended period of unconsciousness or amnesia after the injury. The majority of TBIs that occur each year are concussions or other forms of mild TBI.

Concussions

- A concussion is a type of **traumatic brain injury**, or TBI, caused by a bump, blow, or jolt to the head. A concussion is **any head trauma that causes an altered mental state that may or may not involve a loss of consciousness. Only 10 percent of concussions involve a loss of consciousness!**
- Concussions can also occur following a fall or a blow to the body that causes the head and brain to move back and forth quickly.
- This sudden movement can cause the brain to bounce around in the skull, stretching and damaging the brain cells and creating chemical changes in the brain.
- Health care professionals may describe a concussion as a "mild" brain injury because concussions are usually not life-threatening. Even so, their effects can be serious. (Centers for Disease Control & Prevention)



**A CONCUSSION
IS
A BRAIN INJURY!**

Incidence of Youth Concussions in Nebraska

Figure 1. Concussion rates among persons aged 5-19 years, by month – Nebraska 2008-2012

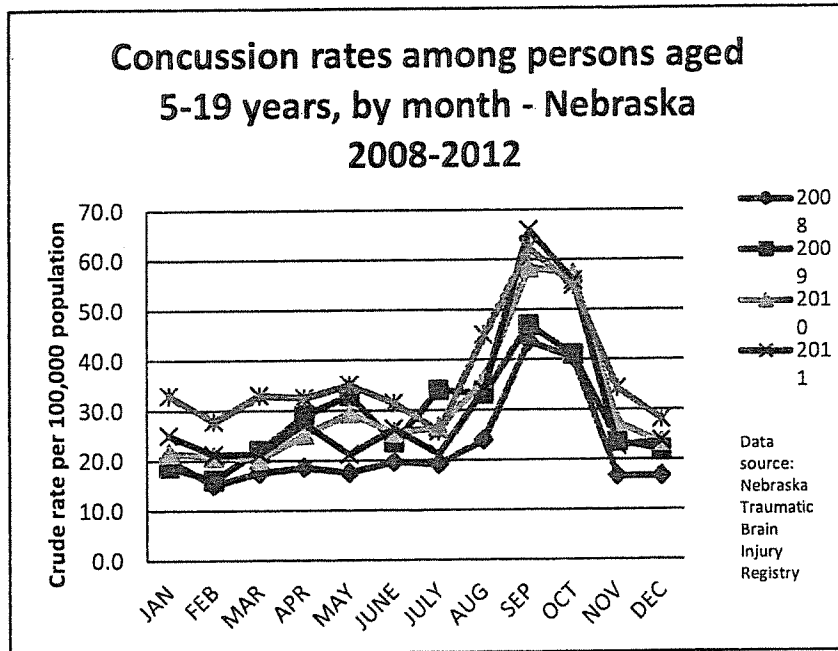
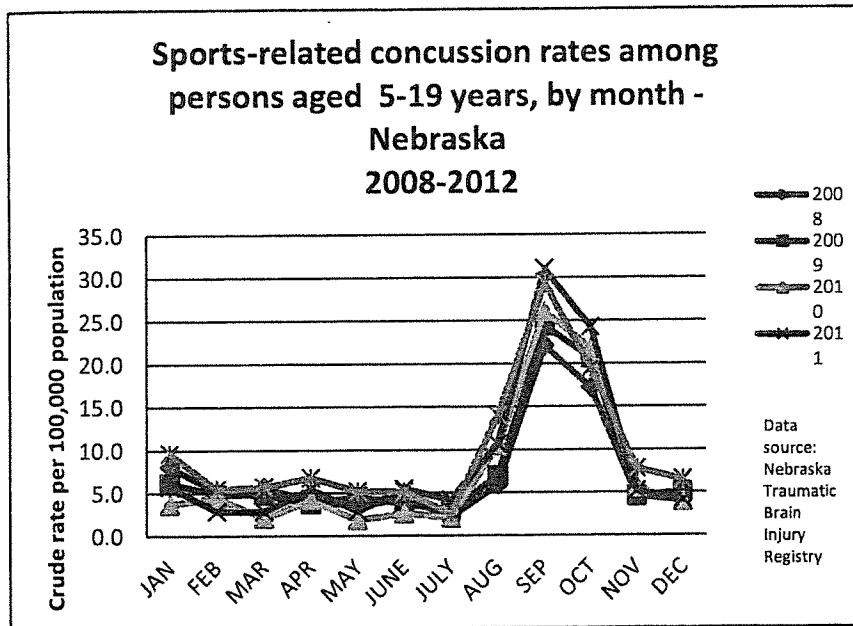


Figure 2. Sports-related concussion rates among persons aged 5-19 years, by month – Nebraska 2008-2012



Nebraska Department of Health and Human Services, 2013

Both figures above show a peak in concussion rates among school-aged Nebraskans in September and October. This trend has been consistent over the past 5 years. Figure 1 also shows that higher rates of concussions were diagnosed in 2012. These graphs represent persons treated in the office of a physician or psychologist or admitted to or treated at a hospital or a rehabilitation center located within a hospital in Nebraska.

Why are Concussions Such a Big Deal?

- **A CONCUSSION IS A BRAIN INJURY!**
- A concussion can occur from an impact to the head. The most common cause of a concussion is a whiplash type injury, a rapid acceleration of the head.
- Most concussions (90%) occur without loss of consciousness!
- A “ding,” “getting your bell rung,” or what seems to be a mild bump, blow or jolt to the head can be serious and can change the way the brain normally works! (Center for Disease Control 2013).
- Because of changes in the neurophysiology of the brain, symptoms may continue to develop over the next few hours following an injury.
- After a concussion, among other effects, connections within the brain become stressed, resulting in the breaking of some connections between different brain areas and limiting the ability of the brain to process information efficiently and quickly. (Molfese 2013)
- These changes can lead to a set of symptoms affecting the student’s cognitive, physical, emotional and sleep functions, which may result in reduced ability to do tasks at home, at school, or work.
- During this time, returning to play or full-time academics before symptoms have cleared can result in **prolonged recovery time or risk of further injury.**
- Ignoring the symptoms and trying to “tough it out” often makes symptoms worse!
- “Second Impact Syndrome” may occur when a brain already injured takes another blow or hit before the brain recovers from the first –usually within a short period of time (hours, days, or weeks). A repeat concussion can slow recovery or increase the likelihood of having long-term problems. In rare cases, repeat concussions can result in edema (brain swelling), permanent brain damage and even death. (Center for Disease Control 2013)
- As the chemistry of the brain returns to normal, the symptoms begin to subside and for most people, they resolve within 1 to 6 weeks.
- **During the recovery period, it is very important that individuals are monitored for full resolution of symptoms and referred if further evaluation or treatment is needed.** (Terryberry-Spohr 2013)



Symptoms of TBI/Concussion

School professionals can best support a student's return to school by understanding the effects of concussion and providing the needed academic adjustments and supports. Knowledge of concussion symptoms can help the student and the school team identify the specific needs of the student, monitor changes and provide appropriate accommodations to facilitate the student's recovery and minimize the pressure to return to activities too soon. (CDC 2013)

Symptoms of TBI/Concussion that may affect school performance fall into four categories:

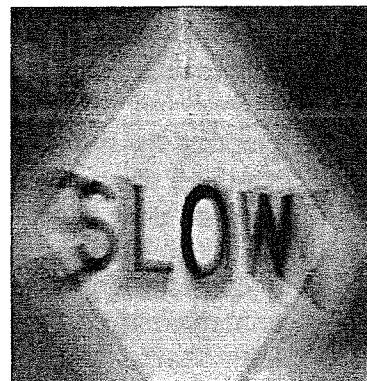
- Thinking/Cognitive/Remembering
- Sleep
- Physical Symptoms
- Emotional/Mood Symptoms



Thinking/Cognitive Red Flags

Look for increased difficulty with:

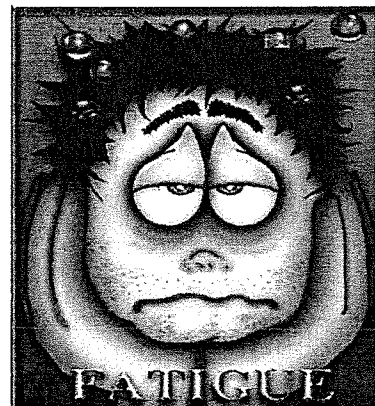
- Thinking clearly
- Concentrating, Staying on task
- Remembering new information
- Slowed response or processing of information (Feeling slowed down)
- Reduced academic performance



Sleep Red Flags

Sleep symptoms tend to last longer than other symptoms. Look for increased:

- Drowsiness
- Sleeps more than usual
- Sleeps less than usual
- Difficulty falling asleep
- Fatigue – tired, having no energy





Physical Red Flags

Look for increased difficulty with:

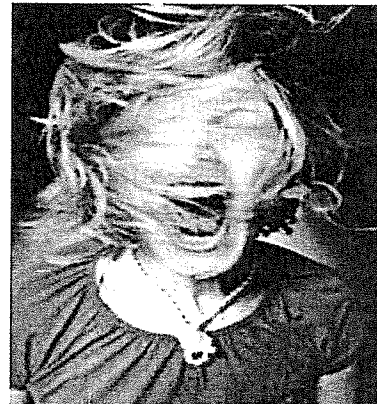
- Headaches
- Fuzzy or Blurred Vision (visual problems)
- Balance problems
- Dizziness
- Nausea, vomiting
- Sensitivity to light
- Sensitivity to noise
- Disorientation



Social Emotional Red Flags

Look for increased difficulty with:

- Irritability
- Sadness
- More emotional
- Changes in mood
- Nervousness
- Anxiety



Return to Activity = Return to Learn + Return to Play

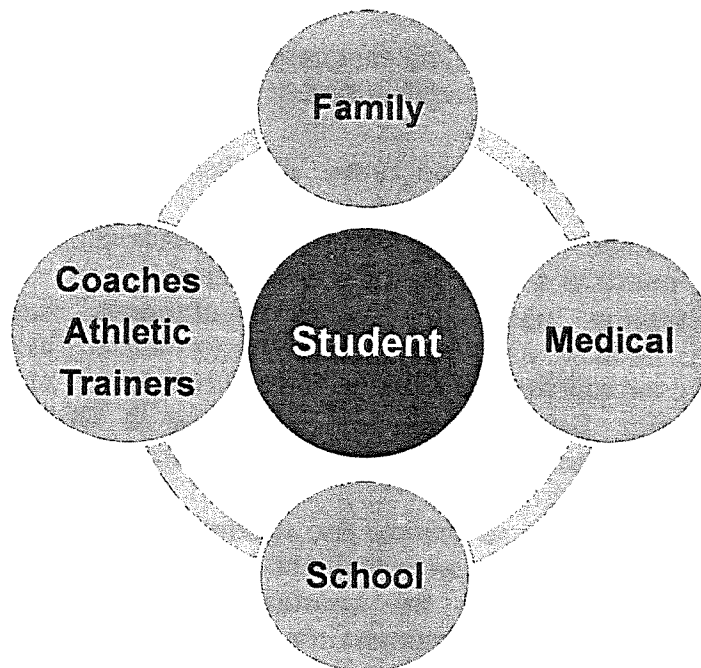


- The Center for Disease Control estimates that 1.7 million traumatic brain injuries occur annually and that 75% of those injuries are mild TBIs (concussions). Concussions occur from sports, falls, playground and bicycle accidents as well as motor vehicle accidents.
- Attention has been given to sports-related concussions because concussion laws have been passed in nearly every state and procedures for Return to Play are familiar to parents, schools and medical personnel.
- Equally important is Return to Learning in the classroom!
- After a concussion, the child or adolescent does not appear to be ill or physically injured. In fact, they may “look” just fine. Nonetheless, a concussion can have direct effects on learning and evidence suggests that using a concussed brain to learn may worsen concussion symptoms and may prolong recovery. (Halstead, McAvoy, et al 2013)
- As the brain is recovering, reducing demands on the brain and avoiding overexertion of the brain at home and at school through a reduction in physical and cognitive activity is beneficial to the recovery of the student
- **Every student and every concussion is different!** No two concussions are the same! The amount of time needed between the injury and the commencement of return to learn activities will vary not only between students, but also between concussions (should a student suffer more than one).
- A Return to Activity plan is composed of two parts:
 - Return to Academics – a gradual return to school and academic requirements implemented by the teaching staff
 - Return to Play – a gradual return to sports implemented by the athletic staff.
- Both the return to academics, and when appropriate, the return to play progression should be allowed to progress over time and as symptoms subside.
- **Please refer to the Return to Academics Progression and Return to Play Progression suggestions at the end of this document. *****

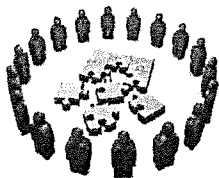
Concussion Management: Recommended Best Practice for Nebraska Schools

- Once a concussion has been diagnosed by a healthcare professional, managing the concussion is best accomplished by creating a support system for the student/athlete. **Communication and collaboration** among parents, school personnel, coaches and athletic trainers, and healthcare providers in overseeing both the return to academics and return to play progressions is essential for the recovery process. Teamwork is required to adjust the treatment and management of the concussion. **Best practice indicates that the student should return to school with a RELEASE OF INFORMATION SIGNED BY THE PARENTS that allows for two-way communication between school personnel and the healthcare provider.** (McAvoy, 2012)

A collaborative approach with the student as the CENTER OF FOCUS!



- Each school district creates a **Concussion Management policy** that incorporates:
 - Knowledge about concussion as a mild traumatic brain injury
 - Training for all coaches, athletes, parents, and school staff about concussion management
 - A **Concussion Management Team** with a designated contact person.



The Concussion Management Team

Members may include:

Health Care Professional*
Parent(s)*
School Administrator or designee*
Athletic Director
Athletic Trainer
Coach
School Nurse
Teacher(s)

Speech Language pathologist
School Psychologist
School Counselor
Occupational Therapist
Physical Therapist
Student Athlete

Essential members*

Concussion Management Team (CMT) Responsibilities:

- The CMT ensures that every student who suffers a concussion is monitored for a safe return to activity. The CMT designs the Return to Activity Plan with input from the healthcare provider.
- **CMT** contact person is notified of concussion (by parents or athletic trainers, coaches); CMT contact person notifies parent if concussion occurs during school activity;
- CMT contact person notifies school nurse, athletic trainer/coach and teachers as appropriate;
- **Assess** and document the physical, cognitive, behavioral, emotional and sleep **symptoms** and **needs** of a concussed student/athlete;
- Design an **individual plan** for schedule **adjustments**, supports, academic adjustments (i.e., reduced assignments) and physical activity, including PE, dance, active recess, as appropriate and share with school personnel, student and parents;
- **Teachers, Parents, Coaches, Medical providers & Student** communicate, monitor the effectiveness of the plan and document symptoms and academic progress;
- CMT (SAT) meets regularly to **review the student's symptoms and progress**, make adjustments and notifies school staff and health care professional of updates;
- **Adjustments continue until the student no longer needs academic adjustments as a result of the concussion;**
- CMT offers resources on concussions to parents;
- Contact **Brain Injury Regional School Support Team (BIRSST)** for assistance or resources;
- Follow a **gradual Return-to-Activity** for academics and athletics;
- **After symptoms subside and CMT certifies there are no academic concerns or adjustments needed and family and coaches agree student is symptom-free without medication, then**
- Written clearance from a medical provider is given if student/athlete is "back to baseline" on neurocognitive measures and
- Written permission for Return to Activity from parents is obtained;
- Student/athlete returns to academic activities without adjustments and begins Return to Play Protocol; **a successful Return to Learn is necessary before approval for Return to Play. (McAvoy, 2012).**
- Document concussion in student's education file;
- If symptoms last more than 3 – 4 weeks, follow-up assessment and academic adjustments may need to be strengthened or remain in place longer;
- If problems persist, academic accommodations and student supports may be provided through an (Response to Intervention (Rtl) Plan, a Health Plan or a 504 Plan;
- The majority of concussed students will not require an IEP; however, a small percentage of students may require a special education referral.
- Parents and medical professions seek medical explanation and treatment for slowed recovery and schools continue to provide appropriate supports.

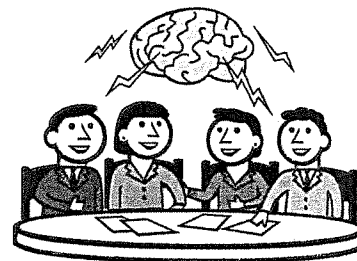
- Keep in mind that progression is individual for each student!

Return to Learn BEFORE Return to Play!

If a student athlete continues to receive academic adjustments due to the presence of any symptoms, they should be considered symptomatic and not be allowed to resume physical activity. McAvoy, Returning to Learn: Going Back to School Following a Concussion. Communique on line, April 2011.

Brain Injury Regional School Support Teams (BIRSST)

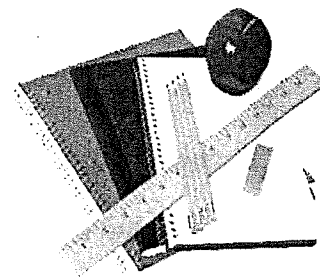
- Nebraska has five regional BIRSST teams
 - Refer to attached map for **BIRSST team locations and contacts**
- BIRSST teams can assist school districts in:
 - Identifying strategies to support student success
 - Providing information on brain injury and resources
 - Providing training and consultation for Concussion Management Team



Tips for Teachers


Symptoms of concussion often create learning difficulties for students. Immediately after diagnosis of a concussion, an individualized plan for learning adjustments should be initiated with a gradual, monitored return to full academics as symptoms clear. Typical classroom adjustments and accommodations include:

- Reduce course workload
- Decrease homework
- Allow breaks during the day, i.e. rest in quiet area
- Allow additional time to complete assignments
- Provide instructor's notes, outline or study guide for student
- Avoid over-stimulation (noise and light)
- Avoid testing or completion of major projects during recovery time when possible



Refer to **Tips for Teachers** in Appendices for additional adjustments or accommodations.

Tips for Parents

- Parents play a key role in maximizing the child's recovery from a concussion.
 - Parents take student to ER or contact the child's healthcare provider immediately after the concussion.
 - After the diagnosis of a concussion by the healthcare professional, parents monitor symptoms and activities at home.
 - Parents enforce rest, both physical and cognitive, and ensure that the child receives sufficient sleep and engages in quiet, restful activities immediately after a concussion.
 - Parents take student to follow-up appointments with the healthcare provider.
 - For the first few days, the student/athlete may have symptoms that interfere with concentration and may need to stay home from school to rest for a day or two and refrain from:
 - Watching TV
 - Playing video games
 - Texting
 - Working/playing on computer
 - Driving
 - Use of Cell phone
 - Blowing on a musical instrument
 - Piano lessons
- 
- Light mental activities can resume as long as symptoms do not worsen. When the student/athlete can tolerate 30-45 minutes of light mental activity, a gradual return to school can commence.
 - Parents monitor and track symptoms at home and communicate regularly with the school Concussion Management Team (CMT) Coordinator and/or health care provider.
 - Parents sign Permission for two-way Release Information between the medical provider and the school district.
 - Parents may request information from the school CMT on concussions.
 - Parents are aware of academic adjustments in the school setting.
 - Deliver medical clearance from the healthcare provider to the CMT when appropriate.

References

1. Centers for Disease Control and Prevention - *Returning to School After a Concussion: A Fact Sheet for School Professionals*.
http://www.cdc.gov/concussion/pdf/TBI_Returning_to_School-a.pdf
2. Giza C., Kutcher J., *et al.* Summary of evidence-based guideline update: Evaluation and management of concussion in sports. *Neurology*, 2013: 10.1212/WNL.0b013e31828d57dd.
3. Halstead, M., McAvoy, K., *et al.* *Returning to Learning Following a Concussion*. *Pediatrics*: originally published online October 27, 2013.
<http://pediatrics.aappublications.org/content/early/2013/10/23/peds.2013-2867>
4. McGrath, N. (2010). Supporting the Student-Athlete's Return to the Classroom after a Sport Related Concussion. *Journal of Athletic Training*, 45(5), 492-498.
5. McAvoy, K. (2013). *REAP the benefits of good concussion management*. Centennial, CO: Rocky Mountain Sports Medicine Institute Center.
6. McAvoy, K. (2012). Return to Learning: Going Back to School Following a Concussion. *NASP Communique* online. March/April.
7. McCrory P., Meeuwisse W., Aubry M., *et al.* Consensus Statement on Concussion in Sport: the 4th International Conference on Concussion in Sport. *Br J Sports Med*. 2013; 47: 250-258
8. Orcas (2011). *Brain Injury 101: Concussion Management. Policy and Resource Handbook*. Retrieved from <http://brain101orcasinc.com>
9. The Center on Brain Injury Research and Training. *Max's Law: Concussion Management Implementation Guide*. Retrieved from <http://www.cbirt.org>

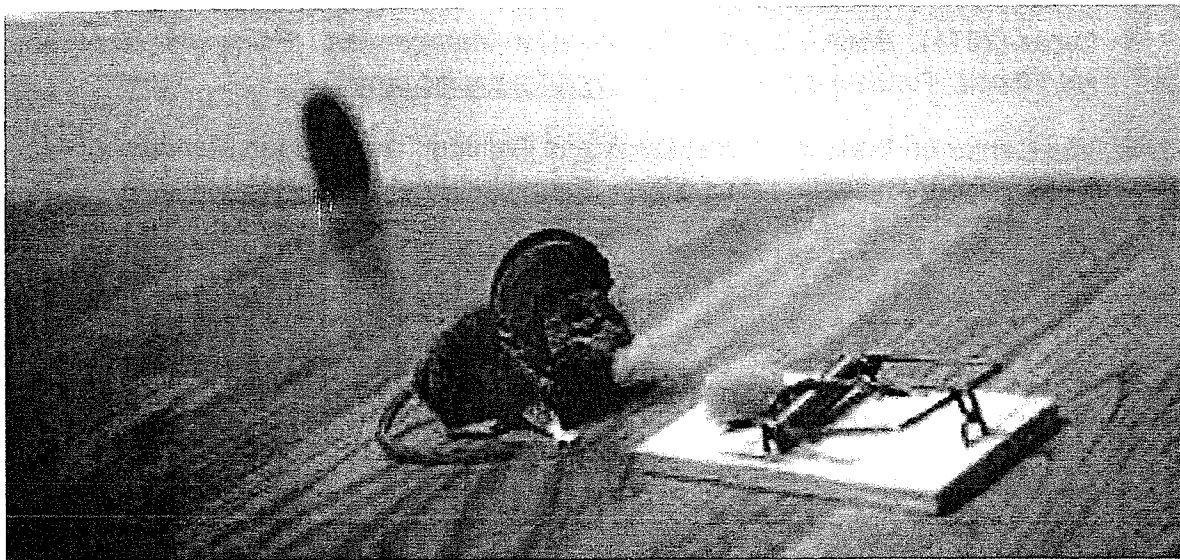
WHAT CAN YOU DO TO CHANGE THE CULTURE OF CONCUSSION IN NEBRASKA?

- ✓ Educate
- ✓ Communicate
- ✓ Collaborate



- Parents
- Students
- Schools
- Physicians

Wear your helmet!



BRIDGING THE GAP
From CONCUSSION To The CLASSROOM

APPENDICES

Nebraska Concussion Awareness Act – Quick Facts

Concussion Resources

Return to Academics Progression

Return to Play Progression

Post-Concussion Symptom Checklist

Tips for Teachers

**NE Concussion Management Recommended Best
Practice**

Information from Teachers for CMT

BIRSST Team Map and Team Contacts

Nebraska Concussion Awareness Act – Quick Facts

Return to Play

- **Goal: To provide a consistent means to identify and manage concussions and help ensure the safety of those involved in youth sports.**
- Legislation passed by Nebraska Legislature - Final Reading on April 8, 2011 (43-0)
- Effective July 1, 2012
- The Concussion Awareness Act contains the three tenets of model legislation as described by the Brain Injury Association and the National Football League.
 1. Education: Coaches, Parents and Student Athletes
 2. Removal from Play – If a concussion is reasonably suspected
 3. Clearance by a Licensed Health Care Professional
- Concussion Awareness Act applies to:
 - ✓ Approved or accredited public, private, denominational or parochial schools (does not include higher education/college and university) Section 4.
 - ✓ Athletes 19 years of age or younger that participate in organized sports (“any city, village, business or nonprofit that organizes sports, charges a fee or is sponsored by a business or nonprofit organization.”) Section 5
- Education provided for:
 - ✓ Coaches. Training approved by the Chief Medical officer must be made available to all coaches.
 - ✓ Parents and student athletes. Concussion and brain injury information must be provided:
 - On an annual basis and
 - Prior to the start of practice or competition.
- Removal from Play
 - ✓ Any student athlete or athlete shall be removed from play when they are reasonably suspected of having a concussion by a coach or licensed health care professional.
 - ✓ If an athlete is removed from activity due to reasonable suspicion of suffering a concussion:
 - Parents or Guardians must be notified of the date and approximate time of the injury and the signs and symptoms that were observed, as well as any actions taken to treat.
- Return to Play
 - ✓ A student-athlete or athlete may be allowed to return to play when:
 - They have been evaluated by a licensed health care professional
 - They have received written clearance from the licensed health care professional;
 - They have submitted the written and signed clearance to resume participation in athletic activities accompanied by written permission to resume participation from the student’s parent or guardian.
- For more information, please refer to:
 - ✓ Nebraska Department of Health and Human Services
<http://dhhs.ne.gov/publichealth/concussion/Pages/Home.aspx>

CONCUSSION RESOURCES

1. **Nebraska Department of Education**

<http://www.education.ne.gov/sped/birsst.html>

- Bridging the Gap from Concussion to Classroom: Return to Learn

2. **Nebraska Department of Health and Human Services**

<http://dhhs.ne.gov/publichealth/concussion/Pages/Home.aspx>

- Concussion Awareness Act – Training for Coaches, Parents, Students

3. **Concussion ABCs posted by the Centers for Disease Control and Prevention**

<http://www.cdc.gov/concussion/HeadsUp/schools.html>

- Heads Up to Schools, Know Your Concussion ABC's
- A Fact Sheet for Teachers, Counselors, and School Professionals
- A Fact Sheet for School Nurses
- Parent/Athlete Concussion Information Sheet
- Returning to School After a Concussion: A Fact Sheet for School Professionals

4. **The Center on Brain Injury Research and Training, University of Oregon**

<http://www.cbirt.org>

- **The Center on Brain Injury Research and Training. *Max's Law: Concussion Management Implementation Guide.*** Retrieved from <http://www.cbirt.org>
- <http://cbirt.org/tbi-education/school-reentry/returning-school-after-tbi/>
- <http://cbirt.org/tbi-education/school-reentry/supports-consider-during-school-reentry/>
- <http://cbirt.org/news/concussion-frequently-asked-questions-parents/>

5. **School-wide Concussion Management cartoon video: "What's a Concussion, Anyway? (15 minute cartoon video)** <http://brain101.orcasinc.com/>

- Concussion Management Program and information for coaches, schools, parents and students
- Return to Academics Progression, Return to Play Progression and Sample Return to Activity Documentation

6. REAP Guidelines

<http://www.rockymountainhospitalforchildren.com/sports-medicine/concussion-management/reap-guidelines.htm>

- McAvoy, K. (2013) REAP the benefits of good concussion management. Centennial, CO: Rocky Mountain Sports Medicine Institute Center for Concussion.

7. The BrainSTEPS Program – Pennsylvania www.brainsteps.net

- [Concussion Webinar](#)
- [Concussion Return to School Protocol](#)
- [Protocol Flow Chart](#)
- [Why every school should have a Concussion Management Team](#)
- [Teacher's Desk Reference: Concussion](#)

8. Colorado Department of Education

http://www.cde.state.co.us/sites/default/files/documents/cdesped/download/pdf/tbi_concussionguidelines.pdf

- [Concussion Management Guidelines 2012](#)

9. Brain Injury Association of Nebraska www.biane.org

10. Halstead, M., McAvoy, K., et al. *Returning to Learning Following a Concussion. Pediatrics*: originally published online October 27, 2013.
<http://pediatrics.aappublications.org/content/early/2013/10/23/peds.2013-2867>

11. Nebraska Brain Injury Advisory Council www.braininjury.ne.gov

12. brainline.org - <http://www.brainline.org/content/2010/06/general-information-for-parents-educators-on-tbi.html>

13. Information for Parents

http://www.brainline.org/landing_pages/categories/concussion.html
<http://cbirt.org/news/concussion-frequently-asked-questions-parents/>

RETURN TO ACADEMICS PROGRESSION

Progression is individual. All concussions are different. Students may start at any of these steps, depending on symptoms, and may remain at a step longer if needed. If symptoms worsen, the CMT should reassess. If symptoms quickly improve, a student may also skip a step or two. Be flexible!

| Steps | Progression | Description |
|-------|---|--|
| 1 | HOME – Cognitive and physical rest | <ul style="list-style-type: none"> ➤ Stay at home ➤ No driving ➤ Limited mental exertion – computer, texting, video games, homework |
| 2 | HOME – Light Mental Activity | <ul style="list-style-type: none"> ➤ Stay at home ➤ No driving ➤ Up to 30 minutes mental exertion ➤ No prolonged concentration |

Progress to Step 3 when student handles up to 30 minutes of sustained mental exertion without worsening of symptoms.

| | | |
|---|---|---|
| 3 | SCHOOL – Part Time Maximum adjustments Shortened day/schedule Built-in breaks | <ul style="list-style-type: none"> ➤ Provide quiet place for scheduled mental rest ➤ Lunch in quiet environment ➤ No significant classroom or standardized testing ➤ Modify rather than postpone academics ➤ Provide extra time, help, and adjustment of assignments |
|---|---|---|

Progress to Step 4 when student handles 30-40 minutes of sustained mental exertion without worsening of symptoms.

| | | |
|---|--|---|
| 4 | SCHOOL – Part Time Maximum adjustments Shortened day/schedule | <ul style="list-style-type: none"> ➤ No standardized testing ➤ Modified classroom testing ➤ Moderate decrease of extra time, help, and modification of assignments |
|---|--|---|

Progress to Step 5 when student handles 60 minutes of mental exertion without worsening of symptoms.

| | | |
|---|--|---|
| 5 | SCHOOL – Part Time Minimal adjustments | <ul style="list-style-type: none"> ➤ No standardized testing; routine tests are OK ➤ Continued decrease of extra time, help, and adjustment of assignments ➤ May require more support in academically challenging subjects |
|---|--|---|

Progress to Step 6 when student handles all class periods in succession without worsening of symptoms AND receives medical clearance for full return to academics and athletics.

| | | |
|---|---|--|
| 6 | SCHOOL – Full Time Full academics No adjustments | <ul style="list-style-type: none"> ➤ Attends all classes ➤ Full homework and testing |
|---|---|--|

When symptoms continue beyond 3-4 weeks, prolonged in-school supports are required. Request a 504 meeting to plan and coordinate student supports.

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RETURN TO PLAY PROGRESSION

Return to play is a medical decision. The CMT will be familiar with state concussion laws and understand which healthcare providers may clear a student. **To begin the Return to Play Plan, the student must be free of all symptoms (see Signs and Symptoms of Concussion), have no academic adjustments in place, and be cleared by a healthcare provider.** The student may spend 1-2 days at each step before advancing to the next. If post-concussion symptoms occur at any step, stop activity and have the CMT reassess.

| Rehabilitation Stage | Functional exercise at each stage of rehabilitation | Objective of each stage |
|--------------------------------|--|---|
| 1. No activity | Symptom limited physical and cognitive rest. | Recovery |
| 2. Light aerobic exercise | Walking, swimming or stationary cycling keeping intensity <70% maximum permitted heart rate. No resistance training. | Increase HR |
| 3. Sport-specific exercise | Skating drills in ice hockey, running drills in soccer. No head impact activities. | Add movement |
| 4. Non-contact training drills | Progression to more complex training drills, e.g., passing drills in football and ice hockey. May start progressive resistance training. | Exercise, coordination and cognitive load |
| 5. Full-contact Practice | Following medical clearance. Participate in normal training activities. | Restore confidence and assess functional skills by coaching staff |
| 6. Return to play | Normal game play | |

Recommendations from 2012 Zurich Consensus Statement on Concussion – McRory, P., Meeuwisse, WH, Aubry, M, et. al., *Br. J Sports Med* 2013; 47:250-258.

Post-Concussion Symptom Checklist

Name: _____

Date: _____

Please indicate how much each symptom has bothered you over the past 2 days.

| | | Symptoms | None | Mild | | Moderate | | Severe | |
|--------------------------------|--------------------------|----------|------|------|---|----------|---|--------|--|
| PHYSICAL | Headache | 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
| | Nausea | 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
| | Vomiting | 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
| | Balance Problem | 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
| | Dizziness | 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
| | Blurry or double vision | 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 | |
| | Balance Problems | 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
| | Pain other than headache | 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
| THINKING/ COGNITIVE | Feeling "in a fog" | 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
| | Feeling Slowed Down | 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 | |
| SLEEP ISSUES | Trouble Falling Asleep | 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
| | Fatigue or low energy | 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
| | Drowsiness | 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
| EMOTIONAL | Feeling 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 | |
| | Nervousness | 0 | 1 | 2 | 3 | 4 | 5 | 6 | |

Do symptoms worsen with physical activity? Yes _____ No _____ Not Applicable _____
 Do symptoms worsen with thinking/cognitive activity? Yes _____ No _____ Not Applicable _____

Activity Level: Over the past two days, compared to what I would typically do, my level of activity has been _____% of what it would normally be.

TIPS FOR TEACHERS

Concussion Symptoms, Possible School Problems & Adjustments/Accommodations

| Concussion Symptoms | Implications at school | Potential Adjustments in School Setting |
|--|--|--|
| PHYSICAL SYMPTOMS <ul style="list-style-type: none"> • Headache (most common symptom reported in concussions) | <ul style="list-style-type: none"> • Poor concentration - may vary throughout day; • Can be triggered by fluorescent lighting, loud noises and focusing on tasks | <ul style="list-style-type: none"> • Frequent breaks • Reduce exposure to aggravators, i.e., turn off fluorescent lights • Rest as needed in nurse's office or quiet area |
| <ul style="list-style-type: none"> • Dizziness/ Lightheadedness | <ul style="list-style-type: none"> • Standing quickly or walking in crowded environment may present a challenge • Often provoked by visual stimulus (rapid movements, videos, etc.) | <ul style="list-style-type: none"> • Allow student to put head down if symptoms worsen • Early dismissal from class and extra time to get from class to class to avoid crowded hallways |
| <ul style="list-style-type: none"> • Visual Symptoms <ul style="list-style-type: none"> ○ Light sensitivity ○ Double vision ○ Blurry vision | <ul style="list-style-type: none"> • Trouble seeing slide presentations, movies, smart boards, computers, handheld computers (tablets) • Difficulty reading & copying • Difficulty paying attention to visual tasks | <ul style="list-style-type: none"> • Reduce brightness on the screens • Student may wear hat or sunglasses in school • Audiotapes instead of books • Seat student close to center of classroom activities (preferential seating if blurry vision) • Turn off fluorescent lights • Cover one eye with patch/ tape or one lens if glasses are worn (double vision) |
| <ul style="list-style-type: none"> • Noise Sensitivity | <ul style="list-style-type: none"> • Troubles with various noises in several school settings: Lunchroom, shop classes, music classes (band, choir), physical education classes, hallways • Organized sports practice | <ul style="list-style-type: none"> • Allow student to eat lunch in quiet area with classmate • Limit or avoid band, choir or shop classes • Avoid noisy gyms and organized sports practices and games • Consider use of earplugs • Early dismissal from class to avoid crowded, noisy hallways |
| THINKING/COGNITIVE SYMPTOMS <ul style="list-style-type: none"> • Difficulty concentrating or remembering | <ul style="list-style-type: none"> • Challenges learning new tasks and comprehending new material (slowed processing speed) • Difficulty recalling and applying previously learned material • Lack of focus in the classroom • Difficulties with test taking, including standardized tests | <ul style="list-style-type: none"> • Avoid testing or completion of major projects during recovery time when possible • Provide extra time to complete non-standardized tests in a quiet environment • Postpone standardized testing when possible • Consider one test per day during exam periods • Assess knowledge using multiple-choice instead of open-ended questions |

| Concussion Symptoms | Implications at school | Potential Adjustments in School Setting |
|--------------------------------------|---|---|
| THINKING/COGNITIVE SYMPTOMS (cont'd) | | <ul style="list-style-type: none"> • Consider use of preprinted notes, note taker, scribe or reader for oral testing • Consider tape recorder for note taking • Reduce the cognitive load & focus on the most important concepts for student to know – quality vs. quantity • Consider decreasing homework and reducing make-up work • Provide both oral and written instructions; clarify instructions |
| SLEEP ISSUES | <ul style="list-style-type: none"> • Excessive fatigue can hamper memory for new or past learning or ability to attend and focus • Insufficient sleep can lead to tardiness or excessive absences • Difficulty getting to sleep or frequent waking at night may lead to sleeping in class • Excessive napping due to fatigue may lead to further disruptions of the sleep cycle | <ul style="list-style-type: none"> • Allow for late start or shortened school day to catch up on sleep • Allow rest breaks during day if needed |
| EMOTIONAL/MOOD SYMPTOMS | <ul style="list-style-type: none"> • Sadness, Irritability, changes in mood, nervousness, anxiety may affect social relationships with adults and peers • Student may feel scared, angry or depressed as a result of the concussion. | <ul style="list-style-type: none"> • Develop an emotional support plan for the student. This may include an adult with whom the student can talk if feeling overwhelmed • Mental fatigue may result in emotional meltdowns • Allow "signal" for student to remove himself/herself from classroom to de-escalate • Provide reassurance that what they are feeling is typical in the course of recovery – i.e., concern about getting behind in school work and/or grades • Share difficulties and progress with parents, CMT contact person, medical personnel, athletic coaches/ trainers as appropriate |

Sources: Halstead, M., McAvoy, K., et al. *Returning to Learning Following a Concussion.*

Pediatrics: originally published online October 27, 2013.

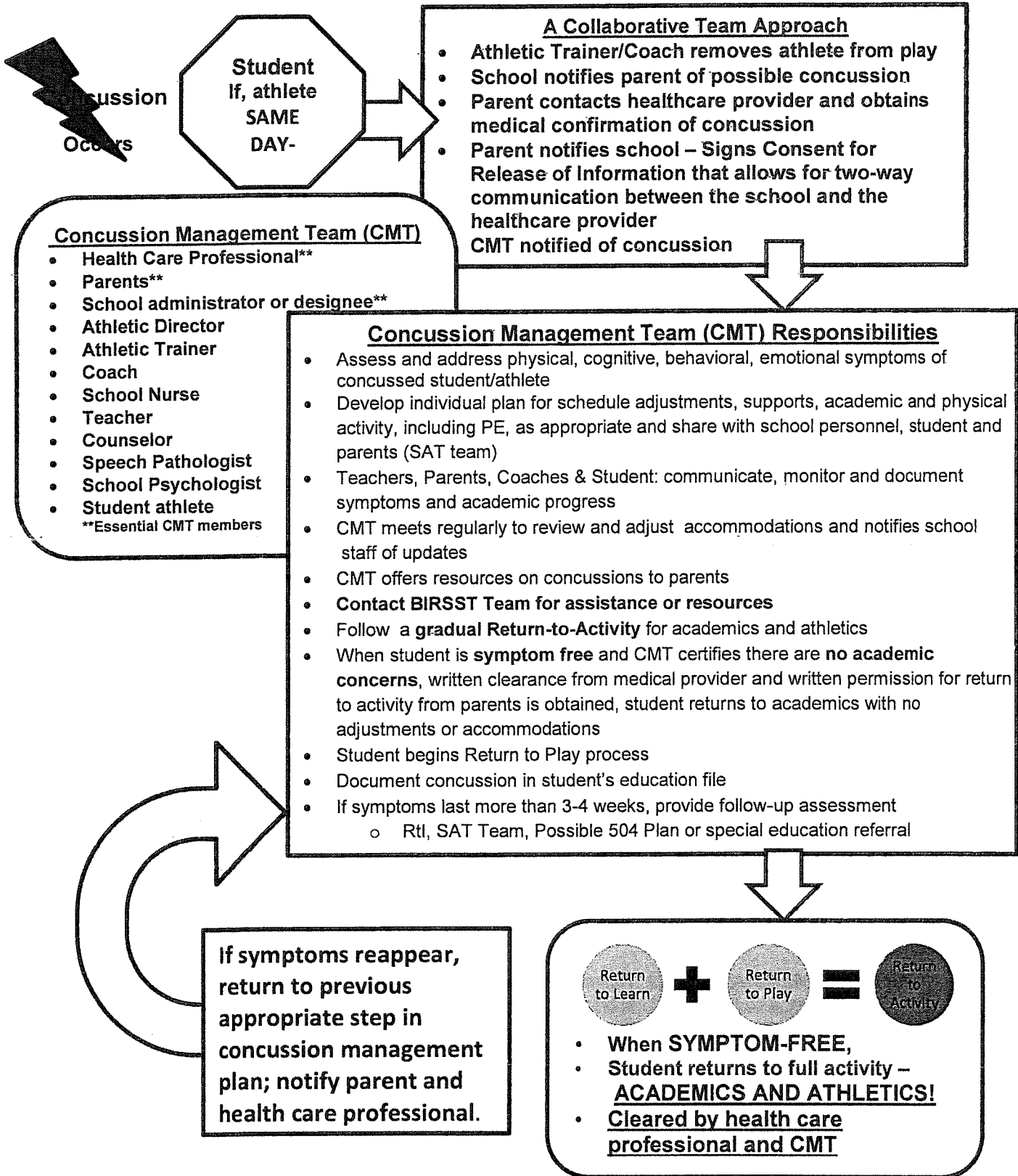
<http://pediatrics.aappublications.org/content/early/2013/10/23/peds.2013-2867>

Oregon Concussion Awareness and Management Program (OCAMP)

http://media.cbirt.org/uploads/files/sports_concussion_management_guide.pdf

NE Concussion Management Recommended Best Practices

(Adapted from CDC, OCAMP Advisory group June 2010 and Oregon Concussion Awareness and Management Program)



Information from Teachers for CMT

Date: Student Name:

Date of Concussion:

To Teachers: The above named student has been diagnosed with a concussion. Please indicate if you are seeing physical, cognitive, emotional or sleep/energy symptoms in your classroom related to this concussion, or if you have concerns about this student's progress, please state them below. Thank you for your valuable feedback.

| Class: Teacher: | What academic adjustments, if any, is the student still receiving in your classroom? | Has the student reported or have you noticed any concussion symptoms in the last two days? (Headaches, dizziness, difficulty concentrating, remembering, more irritable, fatigued than usual?) If YES, please explain. | Is this student performing at their pre-concussion learning level? Yes or No? if NO, please explain. |
|--------------------|--|--|--|
| | | | |

BIRSST - Brain Injury School Support Team Contacts 2013-2014

| | | |
|--|--|---|
| <p style="text-align: center;">Central Region</p> | <p>Kristine Einspahr ESU #10 76 Plaza Boulevard Kearney, NE 68848</p> | <p>(308) 237-5927 X 314 keinspahr@esu10.org</p> |
| <p style="text-align: center;">Metro Region</p> | <p>Greg Gaden ESU #3 6949 S. 10th Omaha, NE 68128</p> <p>Andrea McDonald ESU #2, #3 and #19</p> <p>Lou Bauer ESU #2</p> | <p>(402) 597-4934 (402) 610-4240 (cell) ggaden@esu3.org</p> <p>(402) 350-5622 andrea.mcdonald30@gmail.com</p> <p>(402) 721-7710 X 209 lbauer@esu2.org</p> |
| <p style="text-align: center;">Northeast Region</p> | <p>Cathy Schroeder ESU #1 211 Tenth Street Wakefield, NE 68756</p> | <p>(402) 287-2061 (712) 490-6571 cschroeder@esu1.org</p> |
| <p style="text-align: center;">Southeast Region</p> | <p>Cindy Brunken Lincoln Public Schools 5905 O Street Lincoln, NE, 68510</p> | <p>(402) 436-1902 cbrunk@lps.org</p> |
| <p style="text-align: center;">Western Region</p> | <p>Steve Helgeland ESU #13 4215 Avenue I Scottsbluff, NE 69361</p> | <p>(308) 635-3696 shelgeland@esu13.org</p> |

BIRSST Region Map – 2013-2014

