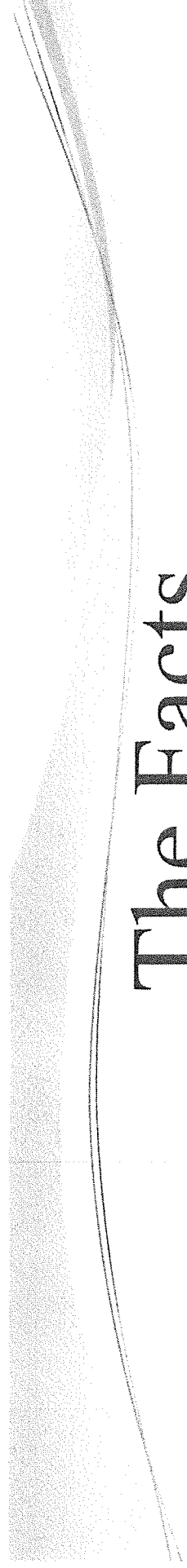


Parent/Athlete Concussion Management

Presented by: Central MN Concussion Collaborative Group



The Facts

- A concussion is a mild traumatic **BRAIN INJURY**.
- All concussions need to be taken **SERIOUSLY**.
- Concussion can occur **WITHOUT** loss of consciousness and **WITHOUT** a direct blow to the head.
- Concussion can occur **IN ANY SPORT**.
- A normal CT scan does **NOT** mean a person does not have a brain injury. Instead, it means no structural damage was noted.



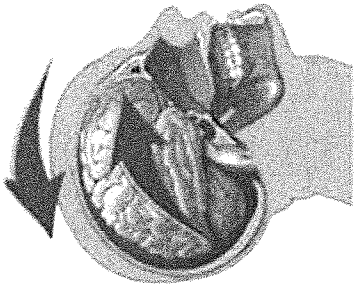
Did you know...

- Center for Disease Control (CDC) estimates **1.6-3.8 million** sports related concussions each year.
- MN Department of Health (MDH) estimates **5,577 concussions** in MN annually.
- MDH 2014 study of 36 high schools in the metro area reported **773 concussions** between Aug. 01, 2013 – May 27, 2014. Average rate of **6 concussions per 100 athletes**.
- Reported concussions in MN in 2013:
 - **307 = football**
 - **95 = soccer**

Risk Factors

- Athletes with history of concussion (Guskiewicz, *JAMA*, 2003)
 - *1 injury = 1.5x risk for repeat concussion
 - *2 injuries = 2.8x risk for repeat concussion
 - *3+ injuries = 3.5x risk for repeat concussion
- Longer recovery (Lau, *Am J Spts Med*, 2011; Gessel, *J Athl Train*, 2007; Covassin, *Neurosurgery*, 2001)
 - On-field dizziness
 - Nausea and vomiting lasting longer than 3 days
 - Athletes with learning disabilities
 - Female athletes (also higher incidence of head injury)

What is a concussion?



- Type of **traumatic brain injury (TBI)**
- Caused by a **bump, blow, or jolt** to the head that can change the way your brain normally works.
- A **blow to the body** that causes the head to move rapidly back and forth-causing **the brain to bounce around** or twist within the skull.
- Stretching and tearing of brain cells **damages the cells** and creates **chemical changes** in the brain.

● **Stretching and tearing of brain cells damages the cells and creates chemical changes in the brain.**

Signs and Symptoms

SIGNS AND SYMPTOMS OBSERVED

- Appears dazed or stunned
- Is confused about assignment or position
- Forgets an instruction
- Is unsure of 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 hit or fall
- Can't recall events after hit or fall

SIGNS AND SYMPTOMS REPORTED

- Headache or "pressure" in head
- Nausea or vomiting
- Balance problems or dizziness
- Double or blurry vision
- Sensitivity to light
- Sensitivity to noise
- Feeling sluggish, hazy, foggy, or groggy
- Concentration or memory problems
- Confusion
- Just "not feeling right" or "feeling down"



Signs and Symptoms

- Symptoms **differ** with each person and injury.
- Symptoms may **NOT** be noticeable for hours, days or weeks.
- Symptoms can vary from **mild to severe**.
- Subtle symptoms/changes should **NOT** be dismissed.
- Physical and/or brain activity may cause symptoms to **reappear or get worse**.


What to do if a concussion is suspected?

- Stop activity immediately!
- Don't hide it. **Report it!** Immediately tell a coach, a parent or friend.
- **Don't tough it out!** It makes symptoms worse, recovery longer and puts you at risk for another brain injury.
- Take care of your brain. **Brain rest** is key to reducing symptoms.
- Follow up with your care provider to implement the Concussion Care Plan to guide return to learn and play.



Benefits of Concussion Care Plan

- Based on an internationally accepted standard of care
- Allows for adequate **brain rest** and healing after concussion/TBI
- Provides a **standard protocol** for coaching staff to assist with immediate removal from play and initiation of concussion management
- Ensures follow-up with a medical provider and provides a **standard protocol** to guide Return to Learn and Play
- **Relieves pressure** on coaching staff to return an athlete to play prematurely



How does the Concussion Care Plan work?

- Step 1:** If concussion is suspected or reported, the athlete is immediately removed from play
- Step 2:** Sideline concussion screen preformed
- Step 3:** Parents/guardians are informed immediately whether at practice or home/away games
- Step 4:** Coaching staff will contact the school's Athletic Director and Guidance Counselor

How does the Concussion Care Plan work? (continued)

Step 5: Athlete will be seen by an evaluating provider who will initiate the Concussion Care Plan and provide the signed form to the parent/athlete

- The evaluating provider will determine:
 - The patient did not sustain a concussion and may resume regular activity.

OR

- The patient did sustain a concussion at the time of injury - initiate **Return to Learn** and/or **Return to Play** at the level determined by the provider.

How does the

Concussion Care Plan work? (continued)

Step 6: Parent/athlete will return signed form to Guidance Counselor/Athletic Director who will guide Return to Learn/Play at the level indicated by provider

Return to Learn:

- Step 1 - Complete Cognitive and Physical Rest
- Step 2 – Light Mental Activity
- Step 3 – Part Time School-with accommodations
- Step 4 – Full Time School-with accommodations
- Step 5 – Full Time School-limited to no accommodations

RETURN TO LEARN MUST BE COMPLETED PRIOR TO INITIATING RETURN TO PLAY

Return to Play:

- Step 1 – Physical Rest
- Step 2 – Light Aerobic Activity
- Step 3 – Sports Specific Exercise
- Step 4 – Non Contact Drills
- Step 5 – Full Practice – No restrictions
- Step 6 – Return to Play – No Restrictions



How does the
Concussion Care Plan work? (continued)

Step 7: Nearing the end of the Return to Play protocol, the patient will return to the provider to get the form signed for final clearance to return to regular activity.

- The patient did sustain a concussion at the time of injury. The patient has successfully completed all the **Return to Learn** and **Return to Play** steps as listed and may resume regular activity without restriction.

Step 8: Patient/athlete will return the signed form to Athletic Director and Coach to return to full participation with the team.



IMPORTANT TO REMEMBER . . .

- When activity is **stopped** and **brain rest** is started **immediately**, most will notice a **decrease in symptoms** within hours to a few days.
- **Repeated brain injuries** or **limited brain rest** may result in **longer length of recovery**.
- A **repeat concussion** while the brain is healing can cause **long-term problems** that may change a person's life forever.

Tips for Recovery

- **Brain rest** is key to helping a person recover from a concussion/brain injury. This may require not attending school for a period of time.
- While resting, limit screens. **Do not** do computer work, play video games, watch TV, or text.
- **Stay away** from loud noises, bright lights, and crowds.
- **Do not** drive a car, ride bike, or engage in physical activity until your doctor gives you permission.
- Take medications as directed by your doctor. Tylenol is the preferred medication.



Clinic Contact Information

- Health Partners Central MN Clinics: (320) 253-5220
- Sartell Pediatrics: (320) 281-3339
- St. Cloud Medical Group:
 - *Northwest Campus: (320) 202-8949
 - *South Campus: (320) 251-8181
- Williams Integracare Clinic: (320) 251-2600
- CentraCare Health
 - *Family Medicine Clinic: (320) 229-4917
 - *W&C Pediatric/Adolescent Clinic: (320) 654-3610
 - *Pediatric Walk-in Clinic (Mon-Fri)
 - *Northway Family Medicine Clinic: (320) 251-1775



**For Questions about the Concussion
Collaborative or Concussion Care Plan . . .**

Contact any of the following:

Tracy Arduser, Physical Therapist: (320) 229-4976

April Doten, Occupational Therapist: (320) 229-4922

Karla Fleming, Speech Language Pathologist: (320) 229-4922

Tom Jensen, Physical Therapist/ATC: (320) 259-4100