SEWARD HIGH SCHOOL
CONCUSSION INFORMATION

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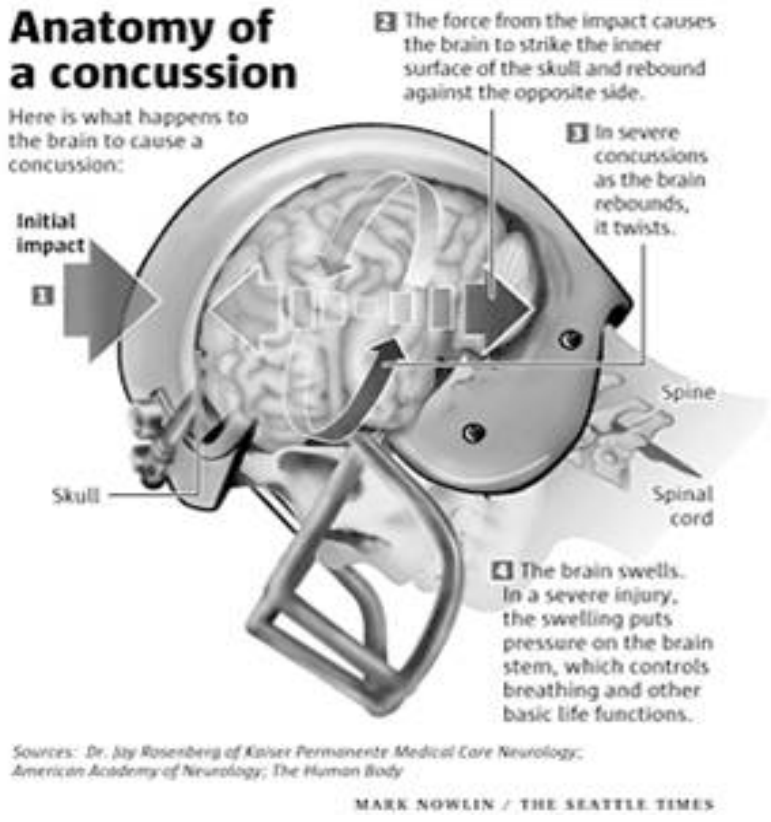

Seward School Board of Education Policy
6036 - Concussion Awareness

The Nebraska Unicameral has found that concussions are one of the "most commonly reported injuries in children and adolescents who participate in sports and recreational activities and that the risk of catastrophic injury or death is significant when a concussion or brain injury is not properly evaluated and managed."

The School District will:

a. Require all coaches and trainers to complete one of the following on-line courses on how to recognize the symptoms of a concussion or brain injury and how to seek proper medical treatment for a concussion or brain injury
   - Heads UP Concussions in Youth Sports
   - Concussion in Sports—What You Need to Know
   - Sports Safety International
   - ConcussionWise
   - ACTiveTMAthletic Concussion Training for Coaches; and

b. On an annual basis provide concussion and brain injury information to students and their parents or guardians prior to such students initiating practice or competition. This information will include:
   1 The signs and symptoms of a concussion;
   2 The risks posed by sustaining a concussion; and
   3 The actions a student should take in response to sustaining a concussion, including the notification of his or her coaches.

A student who participates on a school athletic team must be removed from a practice or game when he/she is reasonably suspected of having sustained a concussion or brain injury in such practice or game after observation by a coach or a licensed health care professional who is professionally affiliated with or contracted by the school. The student will not be permitted to participate in any school supervised team athletic activities involving physical exertion, including practices or games, until the student:

a. has been evaluated by a licensed health care professional;
b. has received written and signed clearance to resume participation in athletic activities from the licensed health care professional;
c. has submitted the written and signed clearance to resume participation in athletic activities to the school accompanied by written permission to resume participation from the student's parent or guardian; and
d. has competed the steps outlined in the concussion procedures outlined in the Seward High School and Middle School handbooks.

If a student is reasonably suspected after observation of having sustained a concussion or brain injury and is removed from an athletic activity, the parent or guardian of the student will be notified by the school of:

a. the date and approximate time of the injury suffered by the student,
b. the signs and symptoms of a concussion or brain injury that were observed, and
c. any actions taken to treat the student.

The school district will not provide for the presence of a licensed health care professional at any practice or game.

School officials shall deem the signature of an individual who represents that he/she is a licensed health care professional on a written clearance to resume participation that is provided to the school to be conclusive and reliable evidence that the individual who signed the clearance is a licensed health care professional. The school will not take any additional or independent steps to verify the individual's qualifications.

Adopted on: _____
Revised on: _____
Reviewed on: _____

HEADS UP CONCUSSION IN HIGH SCHOOL SPORTS

A FACT SHEET FOR **PARENTS**

What is a concussion?

A concussion is a type of traumatic brain injury. Concussions are caused by a bump or blow to the head. Even a "ding," "getting your bell rung," or what seems to be a mild bump or blow to the head can be serious.

You can't see a concussion. Signs and symptoms of concussion can show up right after the injury or may not appear or be noticed until days or weeks after the injury. If your child reports any symptoms of concussion, or if you notice the symptoms yourself, seek medical attention right away.

What are the signs and symptoms of a concussion?

If your child has experienced a bump or blow to the head during a game or practice, look for any of the following signs of a concussion:

SYMPTOMS REPORTED BY ATHLETE	SIGNS OBSERVED BY PARENTS/GUARDIANS
• 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"	• 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

How can you help your child prevent a concussion or other serious brain injury?

- Ensure that they follow their coach's rules for safety and the rules of the sport.
- Encourage them to practice good sportsmanship at all times.
- Make sure they wear the right protective equipment for their activity. Protective equipment should fit properly and be well maintained.
- Wearing a helmet is a must to reduce the risk of a serious brain injury or skull fracture.
  - However, helmets are not designed to prevent concussions. There is no "concussion-proof" helmet. So, even with a helmet, it is important for kids and teens to avoid hits to the head.

What should you do if you think your child has a concussion?

SEEK MEDICAL ATTENTION RIGHT AWAY. A health care professional will be able to decide how serious the concussion is and when it is safe for your child to return to regular activities, including sports.

KEEP YOUR CHILD OUT OF PLAY. Concussions take time to heal. Don't let your child return to play the day of the injury and until a health care professional says it's OK. Children who return to play too soon—while the brain is still healing—risk a greater chance of having a repeat concussion. Repeat or later concussions can be very serious. They can cause permanent brain damage, affecting your child for a lifetime.

TELL YOUR CHILD'S COACH ABOUT ANY PREVIOUS CONCUSSION. Coaches should know if your child had a previous concussion. Your child's coach may not know about a concussion your child received in another sport or activity unless you tell the coach.

If you think your teen has a concussion:
Don't assess it yourself. Take him/her out of play. Seek the advice of a health care professional.

It's better to miss one game than the whole season.

For more information, visit **www.cdc.gov/Concussion**.

HEADS UP CONCUSSION IN HIGH SCHOOL SPORTS

A FACT SHEET FOR **ATHLETES**

Concussion facts:

- A concussion is a brain injury that affects how your brain works.
- A concussion is caused by a bump, blow, or jolt to the head or body.
- A concussion can happen even if you haven't been knocked out.
- If you think you have a concussion, you should not return to play on the day of the injury and not until a health care professional says you are OK to return to play.

What are the symptoms of a concussion?

Concussion symptoms differ with each person and with each injury, and they may not be noticeable for hours or days. Common symptoms include:

- Headache
- Confusion
- Difficulty remembering or paying attention
- Balance problems or dizziness
- Feeling sluggish, hazy, foggy, or groggy
- Feeling irritable, more emotional, or "down"
- Nausea or vomiting
- Bothered by light or noise
- Double or blurry vision
- Slowed reaction time
- Sleep problems
- Loss of consciousness

During recovery, exercising or activities that involve a lot of concentration (such as studying, working on the computer, or playing video games) may cause concussion symptoms to reappear or get worse.

What should I do if I think I have a concussion?

DON'T HIDE IT. REPORT IT. Ignoring your symptoms and trying to "tough it out" often makes symptoms worse. Tell your coach, parent, and athletic trainer if you think you or one of your teammates may have a concussion. Don't let anyone pressure you into continuing to practice or play with a concussion.

GET CHECKED OUT. Only a health care professional can tell if you have a concussion and when it's OK to return to play. Sports have injury timeouts and player substitutions so that you can get checked out and the team can perform at its best. The sooner you get checked out, the sooner you may be able to safely return to play.

TAKE CARE OF YOUR BRAIN. A concussion can affect your ability to do schoolwork and other activities. Most athletes with a concussion get better and return to sports, but it is important to rest and give your brain time to heal. A repeat concussion that occurs while your brain is still healing can cause long-term problems that may change your life forever.

How can I help prevent a concussion?

Every sport is different, but there are steps you can take to protect yourself.

- Follow your coach's rules for safety and the rules of the sport.
- Practice good sportsmanship at all times.

If you think you have a concussion:
Don't hide it. Report it. Take time to recover.

It's better to miss one game than the whole season.

For more information, visit **www.cdc.gov/Concussion**.

CONCUSSION

A FACT SHEET FOR COACHES

THE FACTS

- A concussion is a brain injury.
- All concussions are serious.
- Concussions can occur without loss of consciousness or other obvious signs.
- Concussions can occur from blows to the body as well as to the head.
- Concussions can occur in *any* sport.
- Recognition and proper response to concussions when they first occur can help prevent further injury or even death.
- Athletes may not report their symptoms for fear of losing playing time.
- Athletes can still get a concussion even if they are wearing a helmet.
- Data from the NCAA Injury Surveillance System suggests that concussions represent 5 to 18 percent of all reported injuries, depending on the sport.

WHAT IS A CONCUSSION?

A concussion is a brain injury that may be caused by a blow to the head, face, neck or elsewhere on the body with an "impulsive" force transmitted to the head. Concussions can also result from hitting a hard surface such as the ground, ice or floor, from players colliding with each other or being hit by a piece of equipment such as a bat, lacrosse stick or field hockey ball.

RECOGNIZING A POSSIBLE CONCUSSION

To help recognize a concussion, watch for the following two events among your student-athletes during both games and practices:

1. A forceful blow to the head or body that results in rapid movement of the head;

-AND-

2. **Any change** in the student-athlete's behavior, thinking or physical functioning (see signs and symptoms).

SIGNS AND SYMPTOMS

Signs Observed By Coaching Staff

- Appears dazed or stunned.
- Is confused about assignment or position.
- Forgets plays.
- Is unsure of game, score or opponent.
- Moves clumsily.
- Answers questions slowly.
- Loses consciousness (even briefly).
- Shows behavior or personality changes.
- Can't recall events before hit or fall.
- Can't recall events after hit or fall.

Symptoms Reported By Student-Athlete

- 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.
- Does not "feel right."

PREVENTION AND PREPARATION

As a coach, you play a key role in preventing concussions and responding to them properly when they occur. Here are some steps you can take to ensure the best outcome for your student-athletes:

- Educate student-athletes and coaching staff about concussion. Explain your concerns about concussion and your expectations of safe play to student-athletes, athletics staff and assistant coaches. Create an environment that supports reporting, access to proper evaluation and conservative return-to-play.
  - Review and practice your emergency action plan for your facility.
  - Know when you will have sideline medical care and when you will not, both at home and away.
  - Emphasize that protective equipment should fit properly, be well maintained, and be worn consistently and correctly.
  - Review the Concussion Fact Sheet for Student-Athletes with your team to help them recognize the signs of a concussion.
  - Review with your athletics staff the NCAA Sports Medicine Handbook guideline: Concussion or Mild Traumatic Brain Injury (mTBI) in the Athlete.
- Insist that safety comes first.
  - Teach student-athletes safe-play techniques and encourage them to follow the rules of play.
  - Encourage student-athletes to practice good sportsmanship at all times.
  - Encourage student-athletes to immediately report symptoms of concussion.
- Prevent long-term problems. A repeat concussion that occurs before the brain recovers from the previous one (hours, days or weeks) can slow recovery or increase the likelihood of having long-term problems. In rare cases, repeat concussions can result in brain swelling, permanent brain damage and even death.

IF YOU THINK YOUR STUDENT-ATHLETE HAS SUSTAINED A CONCUSSION:

Take him/her out of play immediately and allow adequate time for evaluation by a health care professional experienced in evaluating for concussion.

An athlete who exhibits signs, symptoms or behaviors consistent with a concussion, either at rest or during exertion, should be **removed immediately from practice or competition** and should not return to play until cleared by an appropriate health care professional. Sports have injury timeouts and player substitutions so that student-athletes can get checked out.

IF A CONCUSSION IS SUSPECTED:

1. **Remove the student-athlete from play.** Look for the signs and symptoms of concussion if your student-athlete has experienced a blow to the head. Do not allow the student-athlete to just "shake it off." Each individual athlete will respond to concussions differently.

2. **Ensure that the student-athlete is evaluated right away by an appropriate health care professional.** Do not try to judge the severity of the injury yourself. Immediately refer the student-athlete to the appropriate athletics medical staff, such as a certified athletic trainer, team physician or health care professional experienced in concussion evaluation and management.

3. **Allow the student-athlete to return to play only with permission from a health care professional with experience in evaluating for concussion.** Allow athletics medical staff to rely on their clinical skills and protocols in evaluating the athlete to establish the appropriate time to return to play. A return-to-play progression should occur in an individualized, step-wise fashion with gradual increments in physical exertion and risk of contact.

4. **Develop a game plan.** Student-athletes should not return to play until all symptoms have resolved, both at rest and during exertion. Many times, that means they will be out for the remainder of that day. In fact, as concussion management continues to evolve with new science, the care is becoming more conservative and return-to-play time frames are getting longer. Coaches should have a game plan that accounts for this change.

IT'S BETTER THEY MISS ONE GAME THAN THE WHOLE SEASON. WHEN IN DOUBT, SIT THEM OUT.

For more information and resources, visit www.NCAA.org/health-safety and www.CDC.gov/Concussion.

Approved Concussion Training Courses

The following training has been approved by the Chief Medical Officer of the State of Nebraska: (the courses listed below are free and available on-line)

CDC – Centers for Disease Control – www.cdc.gov
Heads UP Concussions in Youth Sports

NFHS—National Federation of High Schools --- www.nfhs.org
Concussion in Sports—What You Need to Know

Sports Safety International – www.sportssafetyinternational.com
ConcussionWise (Courses for Coaches, Athletes, and Parents are free.)
--- www.concussionwise.com

ACTive Athletic Concussion Training --- http://brain101.orcasinc.com

Other Resources

CDC Resources Center
http://www.cdc.gov/concussion/sports/index.html

A variety of resources including downloadable fact sheets, posters and social media resources:

Heads Up: Concussion in Youth Sports

Heads Up: Concussion in High School Sports

Heads Up: Concussion Information for School Staff

Heads Up: Concussion Information for the Healthcare Professional

Brain Injury Association of Nebraska -- **www.biane.org**

Neurocognitive Concussion Testing
& The ImPACT Test

At the forefront of concussion management is the implementation of neurocognitive testing in athletic programs. Such evaluation can help to objectively evaluate the concussed athlete's post-injury condition and track recovery for safe return to play, thus preventing the cumulative effects of concussion or returning an athlete to play too soon who has not fully recovered.

Neurocognitive testing can be in the form of a pencil-and-paper test (SAC, SCAT2) or a computerized test (ImPACT, ANAM, Headminder, CogSport). Pencil-and-paper tests remain an effective tool for coaches to use on the sideline to assess athletes with potential head injury. But pencil-and-paper tests lack sufficient sensitivity over an extended period of time for medical and healthcare professionals to base critical management and return to play decisions. After 2-3 days post-injury, pencil-and-paper tests are ineffective and may not reveal the presence of a concussion injury (false-negative). While concussion recovery often necessitates 1-3 weeks, some require more time where computerized neurocognitive testing is much more sensitive to brain function for many weeks and months post-injury.

Computerized applications have been available in recent years to individual schools and teams at an annual cost of $500-$800, making it cost-prohibitive for many schools. Recently, ImPACT Testing Services, Inc. fashioned a testing program model for healthcare networks having met specific medical criteria with access to specific resources. Such testing is now more cost-effective for schools, where many schools have their testing funded through local/area resources. As a result, the Nebraska Sports Concussion Network & Testing Program (**NSCN**) was developed and will assist schools to implement, and where possible, fund a concussion testing program using the ImPACT Test.

ImPACT Test

ImPACT (Immediate Post-Concussion Assessment and Cognitive Testing) is an on-line, user-friendly computer-based testing program specifically designed for the management of sports-related concussion. ImPACT is a research-based software tool developed at the University of Pittsburgh Medical Center that evaluates multiple aspects of neurocognitive function, including memory, attention, brain processing speed, reaction time, and post-concussion symptoms.

Current ImPACT clients include all NFL & NHL teams, MLB, including all umpires, and numerous NCAA Division I Football Programs, including the University of Nebraska-Lincoln. Other athletic programs in Nebraska currently implementing the program include: Doane College, Concordia Univ., Peru State College, UNK, UNO, in addition to nearly 100 other high schools in Nebraska since 2010. **Seward HS began their ImPACT testing program in the fall of 2010.**

Baseline Testing

Baseline Testin*g* refers to neurocognitive testing under normal conditions before injury, often conducted in the pre-season. The baseline test gives us a snapshot of how one's brain functions in normal, everyday circumstances. Baseline testing is conducted on-site at schools by trained school staff with assistance from athletic trainers trained in ImPACT testing. Using a school's computer lab and internet to log onto an on-line testing website, multiple users (~10-20) can be tested at the same

time. It takes ~25 minutes to complete the baseline test. The testing application formulates "baseline data" which are stored on a secure server at ImPACT Testing Services, Inc. which can be retrieved anytime at a later date if an athlete sustains a concussion.

Post-Injury Testing

In the event an athlete sustains a concussion, the athlete is tested again post-injury. *Post-injury testing composite scores* are then compared to the baseline scores acquired earlier before a concussion injury affected brain function. Therefore, baseline testing only becomes of value when post-testing is utilized after a concussion injury. We estimate 10% of athletes on average in collision and contact sports (15%- 20% of football players) will risk concussion injury necessitating post-injury testing.

Post-Injury Testing is conducted by medical or appropriate healthcare professionals having specialized training and credentialing by ImPACT to interpret and evaluate post-testing composite scores for deficiencies or abnormalities. These trained professionals will objectively base their management and return to play decisions on post-test comparisons, depending on when post-test scores return to baseline, among other clinical considerations. Hence, better, safer, and more consistent decisions can then be made about an injured athlete returning to play. Subjectivity is much less apparent, and an athlete can potentially be allowed back sooner, rather than their return to play being delayed by uncertainty or overly conservative measures.

Post-Injury Testing may be conducted as early as 24-72 hrs. post-injury, but is often conducted once a concussed athlete is symptom-free (asymptomatic), depending on the clinician managing the athlete's condition. When post-concussion testing is opted for on-line, another form of the test is selected having a different word and design list, as well as other randomized stimuli. This feature is incorporated into ImPACT to help reduce the practice or learning effects often associated with neuropsychological measures. Given this issue, multiple forms are utilized for each post-injury testing session. On occasion, multiple post-injury tests (serial testing) may be conducted to monitor an athlete's recovery over time.

If post-injury testing scores have not recovered in sufficient time (usually within 3-4 weeks), the athlete may be referred to a neuro-specialist with advanced, formal training in treating head injuries, i.e. Neurosurgeon or Neuropsychologist.

Testing Cycle

Baseline testing will be available to 7th through 12th grade athletes participating in collision and contact sports having the highest incidence of concussions [football, volleyball, basketball, wrestling, soccer, track-jumpers, baseball, and softball].

During a school's 1st year of testing, baseline testing will be conducted on everyone within the identified groups. Thereafter, an athlete's baseline testing is then conducted on a 2-year cycle, with testing of incoming 9th graders, and those entering 11th grade performed each year. Any newcomers to an athletic program, or those having sustained a concussion the previous year, will be tested each year as well.

SEWARD HIGH SCHOOL CONCUSSION PROCEDURES

Upon initial concussion diagnosis by either a physician or athletic trainer:

1. An initial injury IMPACT test is administered within 24-48 hours.

2. If there are concussion symptoms present at this time or if the athlete does not meet/exceed their baseline IMPACT test score, the test will not be administered again until the athlete is 100% symptom free.

3. If at this time, the athlete is not concussion symptom free and does not meet/exceed their baseline IMPACT test score, he/she is tested at 1 week intervals until they are either symptom free or meet/exceed their baseline IMPACT test score.

4. When the athlete is symptom free and meets or exceeds their baseline score on the IMPACT test, they are started on the four-day **RETURN TO PLAY PROGRESSIVE EXERCISE PLAN**:

5. If concussion symptoms return at any time during the progressive exercise plan, the athlete must stop until he/she is symptom free for 48 hours.

6. If the athlete completes the four-day progressive exercise plan symptom-free, they are cleared to return to play with no restrictions.

LINCOLN ORTHOPAEDIC CENTER
RETURN TO PLAY PROGRESSIVE EXERCISE PLAN

No athletes should return to contact competitive sports until they are symptom free, both at rest and with exercise and have normal neuro-cognitive testing.

When they have no headaches *or other concussion symptoms* and neuro-cognitive testing is normal (eg IMPACT) athletes can begin the concussion graduated return-to-play exercise program that was recommended at the Prague Concussion Conference:

Day 1: Walking for 20-30 minutes at a rate of 2-1/2 miles per hour, target heart rate approximately 40% maximum

Day 2: Jogging for 20-30 minutes target heart rate 40-60% maximum

Day 3: Running for 20-30 minutes and agility drills target heart rate 60-80% maximum

Day 4: Performing sports specific practice drills target heart rate 80-90% maximum

Day 5: Maximal exertion - Return to contact sports **if no symptoms with exertion/exercise program**

If headaches or other symptoms occur, during any step, the activity needs to be stopped. The athlete should then wait 24 hours and start at the previous level again.