Parent/Guardian and Student-Athlete
Concussion Education Program

2020-2021
INTRODUCTION

- Virginia’s Student-Athlete Protection Act (Code of Virginia 22.1-271.5) requires completion of a concussion education program by parents/guardians and students before the student can participate in school-sponsored athletics.

- Program overview
  - Concussion management
  - Infectious disease prevention
  - Sudden cardiac arrest
  - Environmental conditions (lightning, heat and cold)
  - Steroids and supplements
  - Mental health (depression, suicide)
CONCUSSION RECOGNITION
WHAT IS A CONCUSSION?

“Sport related concussion is a traumatic brain injury induced by biomechanical forces.” (Berlin 5th Consensus Statement on Concussion in Sport, 2016)

- May be caused by a direct blow to the head, face, neck or elsewhere on the body
- Concussion is not usually associated with structural damage to the brain; Routine imaging (CT scans, MRIs, x-rays) likely normal
- Typically features rapid onset of symptoms that may evolve over minutes, hours or days
- Concussion may or may not involve a loss of consciousness (LOC)
- Concussion results in a wide range of symptoms lasting a few minutes, days, weeks, months or longer in some cases
RECOGNIZING A CONCUSSION

- Early recognition of symptoms is essential to safe, effective concussion management
- If a concussion is suspected, the student should stop activity and report the injury to an athletic trainer or another adult immediately
- Symptoms may occur immediately following the trauma to the head/body, develop hours or even days later, and change over time
- Visits to the hospital are necessary when signs and symptoms worsen in the hours following the injury
  - A negative or “normal” CT scan or MRI does NOT mean you do not have a concussion
**COMMON CONCUSSION SIGNS AND SYMPTOMS**

<table>
<thead>
<tr>
<th>Physical</th>
<th>Cognitive</th>
<th>Behavioral/Emotional</th>
<th>Sleep</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Headache</td>
<td>□ Confusion</td>
<td>□ More emotional</td>
<td>□ Drowsiness</td>
</tr>
<tr>
<td>□ Nausea/vomiting</td>
<td>□ Feeling “foggy”</td>
<td>□ Irritability</td>
<td>□ Sleeps too much</td>
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<tr>
<td>□ Dizziness</td>
<td>□ Feeling slowed down</td>
<td>□ Depression/Anxiety</td>
<td>□ Sleeping too little</td>
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<tr>
<td>□ Balance problems</td>
<td>□ Difficulty concentrating</td>
<td>□ Anger/easily frustrated</td>
<td>□ Trouble falling asleep</td>
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<tr>
<td>□ Vision/hearing problems</td>
<td>□ Difficulty with communication, reading/writing</td>
<td>□ Nervousness</td>
<td></td>
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<tr>
<td>□ Fatigue</td>
<td>□ Difficulty with problem solving and planning</td>
<td>□ Apathetic</td>
<td></td>
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<tr>
<td>□ Sensitivity to light/noise</td>
<td>□ Memory loss</td>
<td>□ Impulsivity</td>
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Concussions may also increase symptoms of conditions an athlete already has, such as depression, anxiety, ADD/ADHD.
WHEN TO RUSH TO THE HOSPITAL

These are signs of a MEDICAL EMERGENCY!

- Headaches that worsen
- Repeated vomiting
- Seizures
- Neck pain
- Very drowsy
- Significant irritability
- Unusual behavior changes
- Slurred speech
- Weakness/numbness in arms/legs

If symptoms get worse following the injury
CALL 911 or GO TO THE HOSPITAL
• Suspect a concussion if a student:
  – BEHAVES DIFFERENTLY following trauma to the head or body
  – EXPERIENCES SYMPTOMS (headache, light sensitivity, etc.)
  – HAS TROUBLE CONCENTRATING OR SLEEPING

• Remove from activity and report the injury to the athletic trainer or another adult

WHEN IN DOUBT, SIT IT OUT
CONCUSSION MANAGEMENT: OVERVIEW
<table>
<thead>
<tr>
<th>Role of the Student</th>
<th>Role of the Parent</th>
<th>Role of the Athletic Trainer (AT)</th>
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<tbody>
<tr>
<td>● Be aware of signs and symptoms of head injuries</td>
<td>● Recognize and report any signs and symptoms or changes in behavior to the school’s licensed athletic trainer</td>
<td>● Athletic Trainers are qualified healthcare professionals who can evaluate and create a treatment plan for student-athletes experiencing a concussion</td>
</tr>
<tr>
<td>● Understand importance of early recognition- Don’t hide it, report it!</td>
<td>● Parents are urged to support the recommended modifications for progressive return to academics and physical activity as detailed by the athletic trainer</td>
<td>● Determine the appropriate levels of physical and cognitive rest necessary for the athlete.</td>
</tr>
<tr>
<td>● Be AWARE of teammates on and off the field, specifically any behavior that is out of the ordinary for them and REPORT problems</td>
<td>● Continue to provide feedback, share observations with school staff (athletic trainer, counselors, teachers, etc.)</td>
<td>● Initiate communication to school staff in order to make recommendations on modifications for progressive return to academics and physical activity and guide you throughout the process</td>
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</table>

**Friends don’t let friends play with signs of a concussion!**
WHEN A CONCUSSION IS SUSPECTED

• There is no single “best” test to diagnose a concussion—evaluation is a complex process
• ATs will use a variety of tools to evaluate students from different perspectives, including:
  – Reaction Time
  – Memory
  – Balance
  – Eye tracking
  – Self-reporting symptoms
• Parents will be given written instructions which includes an overview of your child’s current symptoms, information regarding next steps and contact information for your school’s AT.
• The AT will initiate communication with appropriate school staff members
IF YOU SEE A PHYSICIAN OR CONCUSSION SPECIALIST

- The athletic trainer (AT) may refer to a physician or concussion specialist if needed
- If you decide to see a physician on your own, notify the athletic trainers at your school before you go, as they are happy to share the results of their evaluations
- Always report to the athletic trainers following your visits
  - As with any physician visit, please share any documentation with the athletic trainer
COMPUTER-BASED NEUROCOGNITIVE ASSESSMENT

• Computer-based neurocognitive assessment:
  – Is used to examine memory and processing speed
  – Is one of several tools used by athletic trainers to evaluate students with a concussion
  – *Does not diagnose or provide clearance for activity by itself*

• Post-injury neurocognitive assessments are administered as needed during student recovery

• Neurocognitive assessments require students to focus their attention, read instructions and complete various subtests with practice opportunities prior to each task.
• Student-athletes may be asked to complete a baseline neurocognitive assessment
  – Athletic trainers and team coaches will schedule baseline testing early in the season
• While not a requirement to play sports, student-athletes are strongly encouraged to complete a baseline.
  – Baseline tests provide information that is helpful during the recovery process
• Questions or concerns regarding neurocognitive assessment should be directed to the school’s athletic trainers.
CONCUSSION TREATMENT
KEYS TO CONCUSSION TREATMENT

• The AT will guide this process and you can expect:
  – A balance between rest and a gradual increase in overall activity (academic and physical) without an associated increase in symptoms
  – Working with teachers to help make current work more manageable and/or develop a plan to make up any missed assignments
  – A progressive return to athletic activities as symptoms resolve
  – Regular, effective communication between parents/guardians, medical professions, and school staff
FOLLOWING A CONCUSSION...

- Students experiencing the following symptoms may benefit from resting at home following a concussion:
  - Trouble sleeping
  - Persistent headache
  - Sensitivity to light/noise
  - Feeling foggy
  - Dizziness or lightheadedness
  - More irritable than usual

- Students who sleep well and feel up to it should attend school.

- Do not use any pain medications unless directed by a medical professional.

- When in doubt, contact the licensed athletic trainer for further information.
FOLLOWING A CONCUSSION…

• The goal is to resume “normal” daily SCHEDULE (regular sleep, attending school, school work, household chores, etc.) as soon as possible WITHOUT worsening symptoms

• The return to “normal” physical ACTIVITIES such as practice and competitions is determined by the presence of symptoms and will be guided by the AT

More Symptoms = Less Activity  Fewer symptoms = More Activity
FOLLOWING A CONCUSSION...

• It is common for symptoms to worsen unexpectedly during or after participating in new activities or if the intensity of a familiar activity is increased
  – It is important to recognize if/when this occurs
  – If this happens, the athlete MUST stop the activity and report to the AT for further instructions

• If rest does not reduce symptom intensity, the student may benefit from going home

• Remember, each case is unique and each individual will progress at their own rate
RETURN TO LEARN
WHAT IS RETURN TO LEARN?

- Systematic/progressive reintroduction of cognitive and academic activities
- Usually includes series of distinct stages lasting days or weeks, occasionally longer and may include the following:
  - Rest at home/school
  - Limited school attendance/classroom participation
  - Changes in the amount/type of school work and tests
  - Additional academic and instructional support
HOW DOES RETURN TO LEARN WORK?

- Collaborative effort involving the student, parents/guardians, AT, medical professionals and school staff
  - Effective communication is critical!
- As the student recovers, academic demands are increased in a gradual, progressive fashion
- Rate of progression determined by the presence or resolution of symptoms
- Students are expected to be participating normally in the classroom before fully returning to sports
RETURN TO PLAY
WHEN IS IT SAFE TO RETURN TO PLAY?

- Student no longer exhibits any signs or symptoms consistent with concussion, **AND**
- Student receives written release from an appropriate licensed health care provider (Athletic trainer, physician [MD or DO], nurse practitioner, physician assistant or neuropsychologist), **AND**
- Student successfully completes return to play progression
  - Period of supervised, gradually intensifying exercise
  - Process typically takes a MINIMUM of 5-7 school days
    - Usually 24 hours between stages
    - Progression to next stage based on presence of symptoms
    - Remember- each concussion is different and will progress at different rates.
## RETURN TO PHYSICAL ACTIVITY

Progression based on symptoms and Return to Learn status; Stages may take 1 or more days

<table>
<thead>
<tr>
<th>Rehabilitation Stage</th>
<th>Functional Exercise</th>
<th>Objective</th>
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<tbody>
<tr>
<td>1. No activity</td>
<td>Complete physical and cognitive rest</td>
<td>Recovery</td>
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<tr>
<td>2. Light aerobic activity</td>
<td>Walking, swimming, stationary cycling. Mild intensity</td>
<td>Increase HR</td>
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<tr>
<td>3. Sport-specific activity</td>
<td>Running or skating drills. No head impact activities</td>
<td>Add movement</td>
</tr>
<tr>
<td>4. Non-contact training drills</td>
<td>Progression to more complex training drills</td>
<td>Exercise, coordination, cognitive load</td>
</tr>
<tr>
<td>5. Full contact practice</td>
<td>Following medical clearance. Normal training activities</td>
<td>Restore confidence, assessment of functional skills by coaching staff</td>
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<tr>
<td>6. Return to play</td>
<td>Normal game play</td>
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These stages must be supervised by an Athletic Trainer
SUMMARY

• Regular evaluation is essential
  – Licensed athletic trainers will re-evaluate and provide recommendations on a regular basis

• Is the student ready to return to normal activities?
  – Teacher feedback
    • No need for additional instructional supports
    • Classroom participation back to “normal”
      – What was the student like before? What is the student like now?
  – Athlete and Parent feedback
    • Is the parent ready for the student to return?
    • Is the student physically and mentally ready to return?
  – Medical professional feedback
    • Has student completed Return to Learn and Return to Play progressions
LONG-TERM CONCERNS FOLLOWING A CONCUSSION
The relationship between concussion and any possible long-term consequences remains unclear.

Areas of concern include:
- Persistent concussion-related symptoms
- Development of mental health conditions
- Occurrence of chronic, concussion-related changes

Many questions exist regarding which individuals may suffer long-term complications and under what circumstances.
While there are still a lot of questions about concussions, medical experts agree on the following:

- Early identification and proper management is critical to minimizing both short and long-term consequences.
- Returning to activity (physical and cognitive) too soon can negatively impact recovery.
- Physical activity and sport participation minimizes the risk of certain diseases and is essential to promoting a healthy lifestyle.
INFECTIOUS DISEASE
PREVENTING SPREAD OF INFECTIOUS DISEASE

- The nature of sports leads to an increased risk of communicable infections, particularly skin infection.
- Skin infections include, but are not limited to, ringworm (fungal infection), staph, impetigo (bacterial infections), herpes (viral infections), MRSA and conjunctivitis (pink eye).
- Transmission of disease and skin infection can be minimized when athletes practice proper hygiene, including showering daily after practice.
PREVENTING SPREAD OF INFECTIOUS DISEASE

• Carefully and thoroughly inspect your body for lesions or signs of skin infection daily
• Lesions identified during self-inspections or observed on a teammate should be brought to the immediate attention of the coach and the school’s athletic trainer
• Follow the direction of the athletic trainer regarding participation in practices and competition if diagnosed with a communicable infection
TIPS FOR PREVENTING THE SPREAD OF INFECTIOUS DISEASE

- Shower with soap and water immediately following practices or competitions
- Do not share clothes, towels, soap, razors, deodorant, cosmetics, or other personal care items
- All clothes/towels worn or used during practice and competition should be washed daily
- Drink from team water bottles by squirting, not sucking or slurping
SUDDEN CARDIAC ARREST
• Sudden Cardiac Arrest (SCA) occurs when the heart stops beating
• Pre-participation screening should include any family history of sudden cardiac arrest as well as any personal episodes of exertional syncope (fainting), chest pain or shortness of breath
  – It is essential that the licensed athletic trainers be aware of any athlete with a family history of SCA
SUDDEN CARDIAC ARREST

• Starting CPR and using an AED as soon as possible are the best treatments for SCA
  – Athletic trainers have access to an AED and an established Emergency Action Plan in case of emergency
  – FCPS has over 600 AEDs in schools and offices
ENVIRONMENTAL CONDITIONS
ENVIRONMENTAL CONDITIONS

• Lightning
  – The most effective way to prevent lightning injury is to remain or move indoors during lightning activity
  – Each school has an established Emergency Action Plan identifying the safe shelter closest to outdoor athletic venues in case of lightning

• Heat
  – Athletes should gradually adapt to the heat, especially those wearing protective equipment
  – Athletes should hydrate before, during and after activity
ENVIRONMENTAL CONDITIONS

• Cold
  – Student-athletes should be properly dressed when participating outdoors during cold weather
  – Proper attire includes:
    • Long sleeves and pants
    • Hats and gloves
    • Sweatshirts and jackets
  – Students not properly dressed for the weather may not be allowed to participate that day
STEROIDS AND SUPPLEMENTS
• **Anabolic Steroids** are synthetic (man-made) substances designed to increase muscle mass and male characteristics
  – Steroids are a class of drug used to treat a variety of medical conditions
  – Medical does are 10-100 times lower than doses used to enhance performance
• The penalty for using anabolic steroids without a prescription is 2 years disqualification from sports.
  – This is a VA State Law and applies to Virginia universities as well
  – Signs and symptoms of steroid usage: severe acne, mood swings, aggression, depression, very fast strength gains, change in physical characteristics
**STEROIDS AND SUPPLEMENTS**

- **Supplements** are natural and synthetic substances designed to improve athletic performance and/or provide an energy boost
  - Generally legal, but may be illegal for sale to minors
  - Most manufacturers indicate these products are not intended for individuals under the age of 18
- The National Federation of High Schools strongly recommends that **ENERGY PRODUCTS NOT** be used prior to, during, or after athletic activity
  - Energy products have been linked to heart arrhythmia (irregular and/or rapid heart rate), high blood pressure and heart attacks; liver problems; central nervous system issues; gastrointestinal issues and dehydration.
- The Virginia High School League (VHSL) prohibits the consumption of energy drinks during VHSL practices or competitions
PROMOTING MENTAL HEALTH AND WELLNESS
CAUSES OF ANXIETY AND DEPRESSION

- Some have atypical activity in areas of the brain that deal with fear and emotional regulation
- Females are generally more at risk for developing anxiety disorders
- Genetics and temperament play a role
- Environmental factors (stressful environment, witnessed traumatic event)
- Experiences play a part (observe others, overly protective/controlling adults, learning to avoid situations)
- Styles of thinking – negative, unrealistic
# SIGNS OF ANXIETY

- Have headaches, stomachaches, other pain
- Trouble falling or staying asleep
- Difficulty concentrating and remembering information
- Worry excessively
- Feel tired
- Be irritable or angry – may become aggressive or yell
- Cry easily
- Sweat a lot or have shortness of breath
- Tremble/shake
- Easily upset by mistakes
- Avoidance/withdrawal
**SIGNS OF DEPRESSION**

Every person has experienced some of these feelings; however, when many of these occur at once for a period of several weeks, it is time to seek professional help.

- Poor performance in school
- Withdrawal from friends and activities
- Sadness and hopelessness
- Lack of enthusiasm, energy, or motivation
- Anger or rage
- Difficulty dealing with criticism
- Feelings of being unable to reach goals
- Low self esteem or guilt
- Indecision, lack of concentration, forgetfulness
- Restlessness or agitation
- Changes in eating or sleeping patterns
- Substance abuse
- Problems with authority
- Suicidal thoughts or actions
Teens who attempt suicide often have long-standing problems and the attempt is triggered by a specific event that sends them “over the top.”

– No one factor or event causes suicide.

However, there are several risk factors that have been identified, such as:

- History of substance abuse
- Conduct disorder
- Depression
- Access to firearms/weapons
- Hopelessness
- Impulsivity
ADDITIONAL CONTRIBUTING FACTORS

- Abuse or trauma exposure
- Academic difficulties or school failure
- Anniversary of the death of a loved one
- Breakup with a significant other
- Bullying
- Disappointment or rejection

- Extended separation from friends or family
- Family conflict/dysfunction
- Getting into legal trouble
- Knowing someone who died by suicide
- Loss or death of a loved one
- Serious illness or injury
## WARNING SIGNS OF SUICIDE

- Making suicide threats
- Giving away valued possessions
- Overwhelming sense of guilt and/or shame
- Suddenly seeming “fine” when they have been feeling very depressed
- Being obsessed with death
- Severe drop in school performance
- Changed eating or sleeping patterns
- Creating poems, essays, or drawings that refer to death
- Making dramatic changes in personality or appearance
- Engaging in irrational, bizarre behavior
TIPS TO INCREASE MENTAL WELLNESS

- Exercise
- Eat a healthy diet
- Have a support network
- Get enough sleep
- Engage in relaxation activities
- Be well-prepared
- Set realistic, attainable goals
- Be optimistic – look at the bright side of things
Research has proven many benefits from exercise in addition to overall fitness:

- Increased alertness
- Increased amount of “feel good” chemicals in brain
- Improved mood
- Improved self-confidence and esteem
- Improved sense of independence and control
- Improved social support from others
- Decreased anxiety/depression
- Decreased probability of developing mental health disorders
WHAT CAN FRIENDS & FAMILY DO?

• Be available to listen and talk with your child
  — Validate their feelings and let them know you care, even if you do not agree or think that the situation is not a big deal.
• Set clear & consistent boundaries.
• Communicate high expectations, but avoid applying excessive pressure or stress on the student
• Know where your children are and with whom they are hanging out
• Praise them and recognize when they do a good job, but don’t harp on negative things, especially regarding sport performance.
• Teach “life skills” (respect, responsibility, adaptive/coping skills) and build resilience.
• Provide caring and support
• Provide opportunities for meaningful participation (volunteer, mentor, extracurricular activities, et.)
• Increase social bonding
**WHAT CAN FRIENDS & FAMILY DO?**

- If you think your child might be anxious or depressed, ask them if they’ve thought about suicide.

- Know warning signs—remove weapons & pills from your home.

- Seek professional help from a doctor, mental health professional or community mental health resources.

- People with clinical depression can be treated successfully with medication and/or talk therapy.

- Keep teachers, psychologists, doctors, and coaches informed, so we can work together to support your child.
MENTAL HEALTH RESOURCES
24/7 EMERGENCY NUMBERS

In case of a life threatening emergency, call 911

CrisisLink Regional Hotline: 703-527-4077
CrisisText: Text NEEDHELP to 85511
Dominion Hospital Emergency Room: 703-536-2000
Inova Emergency Services: 703-289-7560
Mobile Crisis Unit: 1-844-627-4747
National Suicide Prevention Lifeline: 1-800-273-TALK or 1-800-SUICIDE
Merrifield Center Emergency Services: 703-573-5679
TTY dial 711
RESILIENCE

An ability to recover from or adjust easily to misfortune or change
<emotional resilience>


A safety net
BUILD YOUR RESILIENCE

RESILIENCE: an ability to recover from or adjust easily to misfortune or change <emotional resilience>


ATTITUDES
• Be optimistic
• Build connections
• Welcome change
• Have a sense of humor
• Express gratitude
• Accept help

SKILLS
• Problem solver
• Communicator
• Emotionally Intelligent
• Practice Mindfulness

LIFESTYLE
• Stay active, eat well and get plenty of sleep
RESOURCES

• Additional information about the FCPS Athletic Training Program and the topics covered in the presentation can be found online at www.fcps.edu/sports

• Additional information on concussions is available from:
  – Centers for Disease Control and Prevention: http://www.cdc.gov/headsup/index.html
NEXT STEPS

• Thank you for completing the online FCPS Concussion Education Program for Parents and Student-Athletes

• If you have any questions, please contact the licensed athletic trainer at your school

• Please print the next slide, sign it (both student and parent/guardian) and submit to your school along with your physical
I verify that I have received, reviewed and understand the information contained in the FCPS Concussion Education Presentation

2020-2021 School Year

Student name (print) ______________________________________________________________

School ___________________________________ Student ID# __________________________

Student Signature __________________________________ Date_____________________

Parent/Guardian
Signature __________________________________ Date_____________________

Please return this page to the Activities Office along with your physical!