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Introduction

This manual was created to make the policies and procedures of the Wilkes University Athletic Training Room more clear and concise. The information contained in this manual will be updated on a regular basis. Both Geisinger Health System and Wilkes University representatives will approve these policies.

Statement of Purpose

The purpose of the athletic training room at Wilkes University is to provide the best medical care for the student athletes involved in intercollegiate competition. This medical care includes recognition, treatment, management, rehabilitation, and preventative education related to athletic injuries and illnesses. If referral, guidance or other forms of counseling are deemed necessary, these too shall be included in the overall medical care received.

Statement of Function

The athletic trainers are directly responsible to the athletic director and the Manager of Athletic Training Services at Geisinger Health System. The team physicians will ultimately have the final decision for an athletes return to play. The athletic trainers work under standing orders from the team physicians. The Commonwealth of Pennsylvania has laws that regulate the practice of athletic training. Within these laws are definitions that specify the scope of practice for a Certified Athletic Trainer (A.T.C.) Copies of these orders are on file in the Marts Center athletic training room.


**General Duties and Responsibilities**

1. The prevention, evaluation, care, and rehabilitation of all athletic injuries to all Wilkes University student athletes. This also includes the return of injured athletes to competition in optimum physical condition.

2. Making sure the parents of an injured athlete are informed when they are sent for medical treatment.

3. The proper maintenance, organization, and supervision of the athletic training room.

4. Attending all home practices and games.

5. Performing emergency care as needed to any athlete at home events and to coordinate emergency services with local emergency squads.

6. The selection, ordering and maintenance of all athletic training supplies and equipment.

7. Provide advice on equipment purchases and equipment fittings.

8. To communicate with coaches and athletic director on all injured athletes playing status on a daily basis.

9. Refer athletes to a physicians care when the evaluation or treatment of the injury is beyond the scope of Athletic Training.

10. Maintain injury, insurance, and treatment records on file in the athletic training room.

**Services Rendered**

The athletic trainers at Wilkes University provide services for the following persons:

1. Any student-athlete enrolled at Wilkes University that has a physical on file and is on a team roster.

2. Any visiting athlete who is injured while engaging in competition at Wilkes University.

3. Any coach, official or other personnel directly involved with an athletic event at Wilkes University.

4. Any fan or other outside public will receive general first aid from the athletic trainers if needed.
**Event Coverage**
In accordance to NCAA rules a certified athletic trainer will attend all HOME events. The **AWAY game/TRAVEL policy** is as follows:

**Fall Season**
During the fall sports season the athletic trainers will travel ONLY with FOOTBALL to away varsity & junior varsity contests. The host school of the other sports traveling will be called at least 24 hours in advance to let them know that an athletic trainer will not be traveling with the team. The host athletic trainer will then be given specific instructions on the needs of the team.

**Winter Season**
An athletic trainer will travel with men’s & women’s basketball and wrestling. Priority will be given to Conference games/matches. Non-Conference events will only be covered on an availability basis. No overnight travel unless in the post-season. The coaches and athletic director will be notified if an athletic trainer will NOT be traveling with a team. All schedules are subject to change due to weather postponements and/or other scheduling conflicts.

**Spring Season**
Athletic trainers will not travel with any spring sports, unless in the post-season. Host schools will be notified and any specific needs will be instructed.

**Fall/ Winter Season Overlap**
The overlap of seasons between fall and winter athletic seasons will be covered in the following manner: A certified athletic trainer will cover football practices and fall season sports that have a home game. Winter sport practices will only be covered when there is no fall sporting event that day or if there is an additional certified athletic trainer available.

**Non-Traditional Practice Season Coverage**
Non-Traditional Season practices will be covered ONLY if they fall within already scheduled IN-SEASON practice/games times. Update schedules must be forwarded to the athletic trainers a minimum of 48 hours prior to the first practice. Any home contests will be covered.

**Athletic Training Room Hours**

**FALL SEASON:**
- MARTS CENTER: 7:00 AM - 12:00 NOON
- MUNSON FH: 2:00 – END OF EVENTS

**WINTER SEASON:**
- MARTS CENTER: 10:00 AM – END OF EVENTS
SPRING SEASON:
- MARTS CENTER: 10:00 AM – 2:00 PM (WEATHER PERMITTING)
- MUNSON FH: 2:00 PM – END OF EVENTS

Holiday Break/ Weekend Policy
- PRACTICES: A.T. Room opens 1 Hour prior to scheduled start
- GAMES: A.T. Room opens 1.5 Hours prior to scheduled start.
- AFTER: A.T. Room remains open for 30 minutes after practice/game is complete.

Schedule Changes
The athletic trainers MUST be informed of practice/game schedules at least 48 HOURS in advance whenever possible. If we are informed less than 48 hours in advance, there is a chance the practice will NOT be covered.

Severe Weather Closings
If Wilkes University is closed due to severe weather conditions the athletic trainers will NOT cover any practices that day or until the University re-opens.

Injury Care Policies
It will be the responsibility of the athletic trainers to evaluate, treat and/or refer any injured athlete that is under his/her care. The evaluation will be made on the field at the time of the injury or may be done in the training room. Once an evaluation is made, the athletic trainers will make the decision as to the nature and extent of the injury of the athlete. The athletic trainers will then make the decision as to the appropriate treatment, rehabilitation, and/or physician referral. The coach, athletic director, and parent or guardian will be notified as needed.

In the event that the athlete needs treatment for their injury, the methods used will conform to standard first-aid procedures, recognized use of modalities that are used in the realm of athletic training, the limitations of the training room and the qualifications of the certified athletic trainer. Above all, the standard orders of the team physician will be followed.

A written note, only by a medical physician has the authority to override the athletic trainers’ decision on an athletes playing status.

All medical information regarding Wilkes University student-athletes must be kept confidential. Information may be shared with the respective coach and the athletic director. Anyone else inquiring about an injury, playing status, etc... will need written permission from the athlete before that information is released.
**Away Contest Injury**

If an injury occurs while a team is at an away contest and the athletic trainer is not traveling with them the host school's certified athletic trainer should evaluate the injury and offer his advice.

Upon returning to campus the head coach should leave a voice mail for the athletic trainers indicating:

1. A brief description of the injury
2. The immediate care given to the athlete
3. The student-athletes name and phone number
4. Student-athletes should be encouraged to contact the athletic trainers the next day to schedule a re-evaluation and treatment

**Injury Report/Status**

An injury report will be communicated either by email, voice mail or face to face to the coaches every day by noon. If there is no report it should be assumed that there is no changes to the previous days report.

The injury reports are separated into three different playing status breakdowns.

**“OUT”** - This means the athlete is not to practice at all. A physician and the athletic trainers must clear him/her before returning to games and/or practice. The athlete will have to go through some functional testing as well before returning to play.

**“Questionable”** - This means the athlete will have to be tested before he/she can resume practice. In some cases an athlete will be under this listing because the athletic trainers have not had any communication with him/her on that particular day.

**“Go As Can”** - This is to let the coach know that an athlete does still have an injury and is or should be receiving treatment on a daily basis. Specific limitations are also addressed under the athlete’s name.

Functional testing will be done prior to practice/game and the results will be communicated to the coaches accordingly.
**Physician Referral**

An injured athlete will be referred for further medical evaluation and diagnosis following these conditions:

- The athletic trainers should evaluate the athlete before the referral is made. If the athletic trainer is not available in an emergency situation, the athlete should be sent to the nearest Emergency room.

- The injury suffered by the athlete requires care that exceeds the athletic trainers’ capabilities; the injury is beyond the scope of athletic training or the facilities that are needed to treat the injury are not available.

- The athlete or the parents/legal guardian of the athlete request that the athlete receive further medical evaluation. The student-athlete maintains the right to seek a second opinion from another physician, but should communicate this to the athletic trainer.

- In the event the student-athlete does not respond to treatment, normally 2-3 days, he/she will be referred to a physician.

- Proper follow up between the physician and the athletic trainers will be carried out to ensure that proper rehabilitation will be accomplished and that adequate information regarding the athletes return to competition can be obtained.

**Athlete Medical Information Files**

All athletes participating in an intercollegiate sport at Wilkes University will have a medical information folder on file at the Marts Center athletic training room. The following forms should be included in these folders:

**Physical Form:** All athletes at Wilkes University are required to have a physical upon entry to school. The physical form must be on file in the Marts athletic training room office and in the student health center. A physical is only necessary upon initial enrollment, however it is recommended that all athletes have an annual complete physical done by their family physician.

**Updated Medical History:** All returning student athletes must fill out an updated medical history annually.

**Pre-Participation Physical Exam Form:** To be filled out completely prior to the athletes’ first practice at Wilkes University.
**Medical Consent, Release and Shared Responsibility Form:** To be filled out completely prior to the athletes' first practice at Wilkes University.

**Geisinger Authorization to Release Medical Information Form:** In response to current federal HIPAA laws all athletes must sign this form. This form needs to be signed by the athlete and the certified athletic trainer prior to the athletes’ first practice. A copy of this form is then returned to the athlete for his/her records.

**Emergency Medical Information Form:** This form is to be filled out annually. A copy of this form gets put in the medical kit of the sport the athlete participates in. A copy is also put in the certified athletic trainers’ medical kit.

**Assumption of Risk:** This form is to be filled out by all FOOTBALL players before their first practice at Wilkes University.

**MINOR AGED ATHLETES:** Student-athletes that are under the legal age of 18 years old will need to have their parent/guardian co-sign all forms except the emergency medical information form.

**Fiscal Policies**

The budget is set right now at $8,000/year for athletic training supplies. A list of supplies and amounts needed are sent out for bid in mid April to three different medical supply companies. In May the budget is sent to the athletic director for approval. The athletic trainers must make sure in July that the supplies have been ordered. Capital expenses can be made from time to time depending on the athletic department overall budget.

If there are specific equipment needs in a particular sport, the funds must come out of that sports budget or from their “Colonel Club” budget. All purchases must be approved by the Athletic Director prior to order placement.
Bloodborne Pathogens Policy

New policies have been developed to protect health care workers from bloodborne pathogens (BBP). The bloodborne pathogens of main concern to Certified Athletic Trainers are HIV and Hepatitis B. Certified Athletic Trainers can be exposed in a variety of ways; including open bloody wounds, vomit, saliva from spitting, and blister serum. Therefore it is imperative to practice preventative measures to protect the athletic trainers and student-athletes.

OSHA Regulations:

OSHA (Occupational Safety and Health Administration) has developed federal regulations for employees whose jobs may put them at risk to bloodborne pathogens. Also, the NCAA has developed a ruling for sports participation if an athlete is bleeding.

OSHA requires each workplace to develop and keep on hand an exposure control plan. Copies of the exposure control plan are kept in the Marts Center Athletic Training Room. The exposure control plan lists and defines training of the certified athletic trainers, documentation of exposure, personal protective equipment and any other pertinent items.

OSHA also regulates that all employees who are at risk of exposure to a bloodborne pathogen must be offered the Hepatitis B vaccination series. If the employee declines, a written statement must be signed, however if the employee changes his/her mind, they may still receive the vaccination.

Special containers should be available for biohazard waste only. These containers should have a labeled red biohazard bag. The container must also have a proper red biohazard label. Biohazard materials include, but are not limited to, bloodied gauze, adhesive bandages, and latex gloves. Each facility should also have a red plastic container for sharp equipment. Sharps equipment includes, but is not limited to, scalpel blades, razors, uncapped syringes, and needles.

If you are exposed to a bloodborne pathogen, it is advised to take proper precautions. Wear latex gloves when exposed to any body fluids. This offers some protection between you and the wound or fluid. If a glove should tear, replace immediately. Also change gloves if worn more than ten minutes. Some gloves may be slightly permeable; so two layers may be worn. After use, carefully remove the gloves and discard in a biohazard waste container or bag. Hands should also be washed thoroughly after wearing gloves and handling blood products.
Bloodborne Pathogens Policy (Continued)

The contaminated area (treatment table, counter top, floor, playing surface, etc...) should be cleaned thoroughly to help decontaminate surfaces. Some sources recommend using a 1:10 bleach-water solution, but this needs to be made daily to be effective. When cleaning a contaminated area it is advised to wear latex gloves and absorb the fluids with paper towels- not terry cloth towels. Discard the towels in the biohazard waste container bags. Saturate the area with the appropriate cleansing solution, allowing this solution to soak ten to twenty minutes if possible. Clean up the area with another paper towel utilizing latex gloves. These should also be placed in the biohazard bags for disposal. Again, wash hands thoroughly.

These are the main preventative guidelines set by OSHA. If followed, the risk of exposure to bloodborne pathogens is decreased.

NCAA Regulations:

The following guidelines and precautions for the treatment of bleeding injuries and the transmission of bloodborne diseases can be found in the 2003-04 NCAA Sports Medicine Handbook.

“When a student-athlete is bleeding, the bleeding must be stopped and the open wound covered with a dressing sturdy enough to withstand the demands of activity before the student-athlete may continue participation in practice or competition. Current NCAA policy mandates the immediate, aggressive treatment of open wounds or skin lesions that are deemed potential risks for transmission of disease. Participants with active bleeding should be removed from the event as soon as is practical. Return to play is determined by appropriate medical staff personnel. Any participant whose uniform is saturated with blood, regardless of the source, must have that uniform evaluated by appropriate medical personnel for potential infectivity and changed if necessary before return to participation.”

Bloodborne Pathogens Exposure Control Plan

Purpose of the Plan

This plan is designed to promote safe working conditions for the Athletic Trainers. These guidelines were set forth by the Occupational Safety and Health Administration (OSHA) standard, 29 CFR 1910-1030. The purpose of the bloodborne pathogens standard is to “reduce occupational exposure to Hepatitis B Virus (HBV), Human Immunodeficiency Virus (HIV) and other bloodborne
pathogens (BBP)” that the Certified Athletic Trainers may encounter in their workplace.

It is the intent of the Wilkes University Athletic Trainers to provide appropriate treatment to the athletes of the institution and visiting institutions without exposing the athletes and/or ourselves to bloodborne pathogens.

We believe that if one acts prudently when working with a bloodborne pathogen the risk of contamination is lessened. The risk of exposure to a bloodborne pathogen should never be underestimated.

**Detailed College Bloodborne Pathogens Exposure Control Plan**

The exposure control plan is available in the Marts Center Athletic Training Room office and the Munson Fieldhouse Training Room. This allows the policy to be available at all times. It is advised that this policy is reviewed periodically so that the procedures are understood fully.

**Exposure Determination**

In the athletic training setting one may be exposed to a bloodborne pathogen at any time, therefore any Certified Athletic Trainer may become infected. Listed below are possible work activities one may encounter for potential exposure to a bloodborne pathogen.

- Performing CPR
- Mouth-to-mouth resuscitation
- Managing an ill athlete (vomit)
- Management of compound fracture
- Dressing and wound care
- Suture removal
- Taking care of blisters
- Proper disposal of soiled uniforms or towels
- Cleaning tables and infected areas
- Proper disposal of biohazard waste

**Method of Compliance**

There are many ways to minimize and prevent exposure to a bloodborne pathogen. These include implementing workplace practice controls, such as having rules and regulations in the work place, providing and using personal protective equipment, and appropriate cleaning procedures.

In the workplace, it is necessary to have proper containers for biohazard waste. The containers should be well labeled and contain a red leak proof plastic bag for any blood saturated pads. Another type of container is for sharp instruments
such as needles, scalpels, or razors. These containers should be leak proof, color-coded and labeled as biohazard. When full, containers should be disposed of properly in biohazard waste areas. Another workplace practice control is to provide adequate hand washing facilities with antiseptic cleaners and hand towels. The individual should wash his/her hands immediately after removing latex gloves and exposure to a bloodborne pathogen. It is recommended that food and drink be eliminated from the workplace due to possible exposure to a bloodborne pathogen. Personal protective equipment is used to separate the employees from the bloodborne pathogen. Single use equipment should be disposed of in red biohazard bags and their appropriate containers.

Housekeeping is the third area of compliance. This means maintaining the equipment and Athletic Training facilities in a clean and sanitary condition. In order to follow this it is necessary to follow a specific daily schedule. All tables should be cleaned with an approved disinfectant after being exposed to a bloodborne pathogen. The tables and whirlpools should be cleaned with the solution after each work shift. It is necessary to empty all trash containers on a daily basis, as well as check biohazard waste containers for proper disposal. It is also the responsibility of the staff to make sure that all biohazard waste is disposed of in its proper container.

**Hepatitis B Vaccinations**

Hepatitis B vaccinations consist of a series of three shots or inoculations over a six-month period. If an athletic trainer is involved in an incident that exposes him/her to a bloodborne pathogen, they may receive medical consultation and treatment as soon as possible. All reports will be documented.

**Severe Weather Policy**

The following policy has been designed to protect the Wilkes University faculty/staff, students, athletes and spectators from the threat of severe weather injury. Severe weather includes but is not limited to thunderstorms, tornadoes, hurricanes, earthquakes and floods.

When the National Weather Service declares a severe weather warning in the Wilkes-Barre area or when the Wilkes University Administration closes the Institution due to inclement weather, all athletic competitions and practices will be halted until the severe weather warning has been lifted and the Institution reopens.

**Heat and Cold Exposure Policy**

The following policy has been designed to protect the Wilkes University faculty/staff, students, athletes and spectators from the threat of heat and cold exposure.
**Heat Exposure:**

1. Apparent Temperature below 90°F: No need to modify activity plan.


**Cold Exposure:** For practices or competition in temperatures below 32°F, it is advisable to add a layer of protective clothing for every 5 mph of wind

**Lightning Safety Policy**

The following policy has been designed to protect the Wilkes University athletes, faculty/staff, students and spectators from the threat of a lightning related injury. This policy applies to all athletic competitions and practices to be held at Ralston Fields, Artillery Park, and Kirby Park. The athletic trainers have at their disposal and will utilize the SkyScan™ Lightning Detection System

1. **Flash-to-Bang Method of Determining Lightning Distance:**
   a) Count the number of seconds from the time lightning is sighted to when the clap of thunder is heard.
   b) Divide the number obtained above by five to obtain the distance of lightning in miles.

   The NCAA (National Collegiate Association) and NSSL (National Severe Storms Laboratory) have set a minimum guideline of a flash-to-bang ratio of 30 seconds (equivalent to six miles)
Should the flash-to-bang ratio reach or fall below 30 seconds (six miles), athletic competition/practice shall be suspended for a minimum of 30 minutes following the most recent flash-to-bang count of 30 seconds or less.

II. **Evacuation Procedures:** The Certified Athletic Trainer will notify the contest officials and coaches that evacuation is necessary. It shall be the responsibility of the coaching staff to coordinate evacuation procedures for their respective teams.

   a) **Ralston Fields-**
      All coaches, athletes and staff shall enter and remain inside the Munson Fieldhouse during the 30-minute minimum competition/practice suspension.

   b) **Artillery Park-**
      All coaches, athletes and staff shall enter and remain inside the baseball dugouts during the 30-minute minimum competition/practice suspension. If there is insufficient space, the Munson Fieldhouse will then be utilized.

   c) **Kirby Park-**
      All coaches, athletes and staff shall enter and remain inside the Munson Fieldhouse during the 30-minute minimum competition/practice suspension.

III. **Care of Individuals with a Lightning Injury:**

   d) Individuals who have sustained a lightning injury do not carry an electrical charge and are safe for immediate care. Therefore, first aid and the Wilkes University Emergency Action Plan should be initiated immediately.

**Automated External Defibrillator Policies and Procedures**

Both Certified Athletic Trainers are trained to use the AED.

**Pennsylvania Law Concerning AED Use**

42 Pa.C.S. § Delineates Good Samaritan civil immunity for AED use.  
42 Pa.C.S. § Delineates non-medical Good Samaritan civil immunity for AED use.

**AED Manufacturer and Model**

Agilent Heartstream FR2 M3860A, M3861A Automatic External Defibrillator
**Location of AED**

1. The vacuum splint bag in the Munson Fieldhouse athletic training room in the fall and spring seasons.
2. The vacuum splint bag in the Marts Center athletic training room during the winter season.

The AED will be readily available at all home events.

**AED Inventory**

The AED Case should contain the following:

- 1 AED Unit with functioning battery
- 2 sets of AED Electrodes

**AED Maintenance**

**Daily:** the AED performs a self-test every 24 hours; an alarm sounds if service is required

**Before each season:** the battery will be removed and re-inserted so that a self-test can be done

**AED Use Procedures**

See the Wilkes University Emergency Action Plan

**AED Post-use Procedures**

Clean AED and inventory items used. Replace any items that were used
Chiropractic Care Policy

If a Wilkes University student-athlete is under the care of a chiropractor the Wilkes University athletic training staff will treat the athlete ONLY if the athlete produces orders from a licensed MEDICAL PHYSICIAN (i.e. MD, DO, DDS, PA-C).

If an athlete was held out of practice by the chiropractor and has ended his/her chiropractic care he/she will need a note from a MEDICAL PHYSICIAN (i.e.: MD, DO, DDS, PA-C) to return to play.

Under no circumstances will the Wilkes University Athletic Trainers accept a release to play after an injury or a physical clearance by a chiropractor.
INSURANCE PROCEDURES

$1,000 Insurance Policy Maximum/Injury

- Any athletic injury requiring medical service (doctor, hospital, etc...) must have an AG Administrators insurance claim form completely filled out when they go. In an emergency situation a claim form can be faxed to the facility as soon as possible.
- A copy of the students/parents/guardians own personal health insurance should always accompany the claim form when mailed to AG and when medical service is sought.
- If the students personal insurance is an HMO, PPO, etc... and the injury may reach the $1,000 limit the parents/guardians and the PCP should be notified.
- An insurance tracking form need to be filled out with the following information:
  - Injury – be as specific as possible
  - Date of Injury
  - Date of service
  - Name of facility or doctor
  - Date the form was mailed
- All bills received must be recorded on this form including the following information:
  - Date on the bill
  - Date bill was received at Wilkes
  - Date of injury
  - Account Number
  - Amount of bill
  *All bills need to be itemized for AG to pay them.
- Bill must then be mailed on Friday with the rest from that week.
- After $1,000 maximum is met AG will need an explanation of benefits form (EOB) from students personal health insurance company stating what they will or will not pay on this specific claim. AG will need these EOB’s before they can proceed with the claim.
- A Geisinger/Wilkes University- Student-Athlete Injury/Insurance Disclosure statement will need to be filled out and copied. One copy is sent home to the student-athletes’ parent/guardian and one copy is kept on file at the Marts Center Athletic Training Room.
- Items that should be kept on file are: copy of the AG Administrators completed claim form, copy of the athletes’ personal health insurance information, a copy of the Geisinger/Wilkes University- Student-Athlete Injury/Insurance Disclosure statement, and a insurance tracking form.
Wilkes University Emergency Action Plan

Follow the standard of care outlined by the American Red Cross: **Check, Call, Care**

A. **Check**: Level Of Consciousness.
   1. Conscious: Continue the evaluation, alert a certified athletic trainer and activate EMS as needed.
   2. Unconscious: Determine A, B, C’s and continue to next step.

B. **Call**: Activate EMS. Dial 911
   1. All EMS calls should include the following:
      a. Location of the emergency
      b. The phone number of the phone you are calling from
      c. Caller’s name
      d. What happened and how long ago
      e. Patient’s current condition
      f. Type of care being given
      *Caller should always hang up last
   2. An individual should be designated to meet EMS at the entrance of the facility.

C. **Care**: Continue to care for the athlete as necessary and aid EMS upon arrival.

D. Transportation via ambulance:
   1. If possible the certified athletic trainer will travel with the athlete in the ambulance or meet him/her at the emergency room as soon as possible.
   2. Hospitals:
      a. If the athlete has a **life threatening** emergency Geisinger South Wilkes-Barre Hospital Emergency Room will be used from Munson Fieldhouse and The Marts Center.
      b. If the athlete has a **non-life threatening** injury Geisinger Wyoming Valley Emergency Room will be utilized.

E. Staff Notification:
   1. If possible the certified athletic trainer will travel with the athlete in the ambulance Notify the certified athletic trainers as soon as possible if they are unaware of the situation.
      a. Joe Giunta, MS, ATC - CELL (570) 262-1116
         Carl Andrews, ATC – CELL (570) 709-1774
      b. Marts Gymnasium Training Room (570) 408-4027
      c. Munson Fieldhouse Training Room (570) 714-4760
   2. The Certified Athletic Trainers will notify the Athletic Director and the parents or guardians as soon as possible.
ATHLETIC TRAINING ROOM RULES

- No tobacco or food.
- Not a hangout-if you need something it will be first come first serve.
- No obscenities.
- No Equipment (bags, cleats, etc...) in the training room.
- Wear proper attire-- Shorts and a T-shirt at a minimum.
- Shower before coming into TR if getting an evaluation or rehab after practice.
- Do not take anything out of the training room without asking.
- Be polite and cooperative for best results.
- If an athlete needs something from the athletic training room and the athletic trainers are not there, the athletes’ coach may let them in but the athletes needs to be supervised.
- Under no circumstances should the electric stimulation or ultrasound units be used by anyone other than the Certified Athletic Trainer.
Starting with the Fall 2005 sports seasons, King’s College, in conjunction with Geisinger Health System, will place athletic training students (ATS) at Wilkes University. These students will be under the direct supervision of the certified athletic trainers working at Wilkes and will be enrolled in the King’s College CAAHEP Accredited Athletic Training Education Program (ATEP). The supervising athletic trainers at Wilkes have completed an educational course to become Approved Clinical Instructors (ACI) at King’s.

Following are general rules & regulations to be implemented:

- ATS will be placed at the beginning of the Fall & Winter semesters as per the Director of King’s College ATEP.
- ATS will be directly supervised by the ACI’s at Wilkes University.
- ATS will report directly to the ACI’s.
- ATS will perform all duties up to their individual abilities and proficiency levels.
- ATS will follow guidelines and bylaws of both the Wilkes University and King’s College ATEP Policy & Procedure Manuals, available in Marts Center & Munson Fieldhouse Athletic Training Rooms.
- ATS must complete John Deere Gator™ Safety course & video prior to driving any of Wilkes’ Gators™.
- ANY & ALL RETURN TO PLAY DECISIONS WILL BE MADE BY THE ACI’S.
Sports Concussion and Closed Head Injury Policy and Protocol for Student-Athletes

If a member of the Wilkes University Department of Sports Medicine has a concern that a student-athlete may have sustained a sports concussion or closed head injury due to their participation in athletics, or if one or more individuals express concern to a member of the Department of Sports Medicine that a student-athlete may have suffered a sports concussion or closed head injury, this Policy and Protocol will be followed. The health and welfare of the student-athlete will be the primary consideration throughout the process.

Definition of Sports Concussion:

1. Concussion may be caused by a direct blow to the head, face, neck, or elsewhere on the body with an “impulsive” force transmitted to the head.

2. Concussion typically results in the rapid onset of short lived impairment of neurological function that resolves spontaneously.

3. Concussion may result in neuropathological changes, but the acute clinical symptoms largely reflect a functional disturbance rather than structural injury.

4. Concussion results in a graded set of clinical syndromes that may or may not involve loss of consciousness. Resolution of the clinical and cognitive symptoms typically follows a sequential course.

5. Concussion is typically associated with grossly normal structural neuroimaging studies.

Definition of Closed Head Injury:
Any injury to the head can cause damage to the brain stem and other vital centers of the brain. This can include but is not limited to traumatic brain injury, cerebral contusion, epidural hematoma, and subdural hematoma. (NATA Position Statement: Management of Sport-Related Concussion, 2004)

Signs and Symptoms of Sports Concussion and/or Closed Head Injury:
A sports concussion and/or closed head injury will be suspected if any Wilkes University student-athlete presents with one of the following signs, symptoms, or problems, in excess of his/her baseline score, after sustaining direct or indirect contact to the head. If no baseline test is available, a student-athlete must be symptom free according to the Certified Athletic Trainer’s assessment. These can include clinical symptoms, physical signs, cognitive impairment, and/or loss of consciousness. Any student-athlete with signs, symptoms, or problems will be removed from play that day, monitored and will not return to play on the day of injury.
The following is a list of possible signs, symptoms, or problems of a sports concussion or closed head injury: This list is not an all inclusive list, other signs, symptoms, or problems may occur that are not listed. (Sports Concussion Assessment Tool 2 Card)

- Headache
- Nervous or Anxious
- “Pressure in the head”
- Trouble falling asleep
- Neck Pain
- Sleeping more than usual
- Balance problems or dizzy
- Drowsiness
- Nausea or vomiting
- Fatigue
- Vision problems
- More emotional than usual
- Hearing problems/ringing
- Irritability
- Feeling “dinged” or “dazed”
- Sadness
- Confusion
- Sensitivity to light
- Felling slowed down
- Sensitivity to noise
- Feeling like “in a fog”
- Slurred speech
- Convulsions or Seizures
- Loss of consciousness
- “Don’t feel right”
- Difficulty concentration

REFERRAL GUIDELINES:

Once a student-athlete has presented with any of the above signs, symptoms, or problems; they will be monitored, including vital signs and level of consciousness, every several minutes after the onset of symptoms. Monitoring will continue until one of the following scenarios is determined:

1. Immediate Referral to Emergency Room:

   Any student-athlete presenting with any of the following signs, symptoms, or problems will be referred to the emergency room immediately upon on-field assessment:
   - Deterioration of neurological function
   - Decreasing level of consciousness
   - Irregularity in respirations
   - Irregularity in pulse
   - Unequal, dilated, or unreactive pupils
   - Any signs or symptoms of associated injuries, e.g. spine or skull fracture, or bleeding
   - Mental status changes: lethargy, difficulty maintaining arousal, confusion, or agitation
   - Seizure activity

2. Referral to Physician on the Day of Injury:

   a. Any student-athlete presenting with any of the following signs, symptoms, or problems when compared to the initial on-field assessment, will be referred to a physician on the day of injury:

   - Loss of consciousness
   - Amnesia lasting longer than 15 min
   - Increase in blood pressure
• Cranial nerve deficits
• Vomiting
• Motor deficits subsequent to initial on-field assessment
• Sensory deficits subsequent to initial on-field assessment
• Balance deficits subsequent to initial on-field assessment
• Cranial nerve deficits subsequent to initial on-field assessment
• Postconcussion symptoms that worsen
• Additional postconcussion symptoms as compared with those on the field

b. A student-athlete will also be referred to a physician on the day of injury if he/she has not shown improvement in their signs, symptoms or problems by the end of practice or competition.

3. Release of the Student-Athlete from the Supervision of a Certified Athletic Trainer with Take-Home Instructions:

If the student-athlete has shown an improvement in their signs, symptoms or problems by the end of the practice or competition, they will be given Take-Home-Instructions (See Appendix A) for care while they are at home and not under the supervision of a Certified Athletic Trainer. These instructions will be given and explained to a responsible individual as determined by the Certified Athletic Trainer. The student-athlete will be continually monitored for deterioration every few hours and days afterwards as problems could arise over the next 24-48 hours. The student-athlete will be monitored regularly until they are symptom free.

4. Delayed Referral (after the day of injury):

If a student-athlete that was released from the supervision of a Certified Athletic Trainer and given Take-Home Instructions presents with any of the following signs, symptoms, or problems after the day of injury, he/she will be referred to a physician as determined by the Certified Athletic Trainer.

• Any of the findings in the “Referral on Physician on Day-of-Injury” category that have developed since the initial evaluation
• Postconcussion symptoms worsen or do not improve over time
• Increase in the number of postconcussion symptoms reported
• Postconcussion symptoms begin to interfere with the athlete’s daily activities (i.e., sleep disturbances or cognitive difficulties.

Any Student-Athlete that has presented with signs, symptoms, or problems related to a sports concussion will be monitored regularly using the Post Concussion Symptom Scale (See Appendix B).

RETURN-TO-PLAY ASSESSMENT

Assessment Tools:
The Wilkes University Department of Sports Medicine will utilize the SCAT2, Sport Concussion Assessment Tool. The SCAT2 is a standardized method of evaluating people after concussion in sport and can also be used for patient education. This tool has been produced as part of the Summary and Agreement Statement of the 3rd International Consensus Meeting on Concussion in Sport held in Zurich, Switzerland in 11/08. Baseline assessments will be taken for certain, higher risk contact/collision sports.
RETURN-TO-PLAY GUIDELINES:

Once a student-athlete has displayed any of the signs, symptoms, or problems stated above the student-athlete will be removed from practice or competition for the remainder of that day. When the student-athlete is symptom free for 24 hours, the student-athlete will be retested using the SCAT2. The student-athlete will not be physically tested until the SCAT2 results have returned to baseline.

Sport Concussion Assessment Tool 2 (SCAT2) Testing/Retesting:

Criteria 1:
If a student-athlete is symptom free or has returned to baseline on the Post-Concussion Symptom Scale, within the first 24 hours after injury and has remained symptom free for 24 hours he/she will be SCAT2 retested. If the first attempt of the SCAT2 retest has returned to baseline, the student-athlete can begin the Physical Exertion Testing Protocol, steps 1-3, that day. The student-athlete must return to baseline on the Modified SCAT2 test, be symptom free throughout the Physical Exertion Testing Protocol, steps 1-3, and remain symptom free until the next day before he/she can continue to step 4 of the Physical Exertion Testing Protocol and return to play.

If the student-athlete has a recurrence of signs, symptoms, or problems during the Physical Exertion Testing Protocol, steps 1-3, or by the next day, he/she must follow Criteria 2 for return to play. If the first attempt of the SCAT2 retest has NOT returned to baseline but the student-athlete continues to have no signs, symptoms, or problems, he/she must follow Criteria 3 for return to play.

Criteria 2:
If the student-athlete is not symptom free within the first 24 hours after the injury he/she will not be retested with the SCAT2 until he/she is symptom free for 24 hours. If the first attempt of the SCAT2 retest has returned to baseline, the student-athlete can begin the Physical Exertion Testing Protocol that day but will not be able to complete any steps of the Physical Exertion Testing on the same day.

If the first attempt of the SCAT2 retest has NOT returned to baseline but the student-athlete continues to have no signs, symptoms, or problems, he/she must follow Criteria 3 for return to play.

Criteria 3:
If the student-athlete is not symptom free within the first 24 hours after the injury he/she will not be retested with SCAT2 until he/she is symptom free for 24 hours. If the first attempt of the SCAT2 retest has NOT returned to baseline, the student-athlete must wait 24 hours to take the SCAT2 retest each time it has not returned to baseline. Once the SCAT2 has returned to baseline the student-athlete can begin the Physical Exertion Testing Protocol that day but will not be able to complete any steps of the Physical Exertion Testing on the same day.

Student-Athletes Without SCAT2 Baseline Testing:

If a student-athlete without a SCAT2 baseline test is symptom free within the first 24 hours after injury and has remained symptom free for 24 hours he/she can begin the Physical Exertion
Testing Protocol, steps 1-3, that day. The student-athlete must be symptom free throughout the Physical Exertion Testing Protocol, steps 1-3, and remain symptom free until the next day before he/she can continue to step 4 of the Physical Exertion Testing Protocol and return to play.

If the student-athlete is not symptom free within the first 24 hours after the injury he/she will not be permitted to begin Physical Exertion Testing until he/she is symptom free for 24 hours and will not be able to complete any steps of the Physical Exertion Testing on the same day. Once the student-athlete has been symptom free for 24 hours, the student-athlete can begin the Physical Exertion Testing Protocol that day.

**Physical Exertion Testing Protocol:**

The student-athlete must be symptom free each consecutive day (minimum of 12 hours between each day) before he/she can progress to the next step in the sequence, with the exception of Criteria 1 and Student-Athletes without SCAT2 Baseline Testing whose symptoms resolve within 24 hours (above). The student-athlete will not be returned to full contact activity until he/she has remained symptom free, or for those with a pre-test baseline returned to baseline on the SCAT2 re-test, and he/she has been able to accomplish all of the Physical Exertion Testing Protocol steps without experiencing any signs, symptoms or problems.

If a student-athlete experiences any signs, symptoms, or problems at any one step he/she will stop the physical exertion testing protocol and begin at the previous step the next symptom free day as long as he/she has been symptom free for a minimum of 12 hours.

**Step 1.** Aerobic exercise – short sprints, sit-ups, push-ups, etc.
**Step 2.** Non-contact drilling/ Sport-specific exercise
**Step 3.** Controlled contact drilling
**Step 4.** Full-contact/ Competition
Athlete is symptom free or has returned to baseline on Post Concussion Symptom Scale within 24 hrs of initial injury and has remained that way for 24 hrs

Take SCAT test

Pass SCAT

Begin Physical Exertion testing that day

Step 1. Aerobic exercise
Step 2. Non-contact drilling/Sport-specific exercise
Step 3. Controlled contact drilling
*all steps completed on the same day

Symptom free

Symptom free until next day

Step 4. Full contact drilling/competition

Fail SCAT

Follow CRITERIA 3

Symptom free for 24 hrs

Symptoms occur at any stage: STOP

Follow Physical Exertion Testing under CRITERIA 2

Athlete has no baseline SCAT

Symptom free within 24 hrs

Not symptom free within 24 hrs

Symptom free for 24 hrs

Wait next day*

Symptom free until next day

Step 2. Non-contact drilling/Sport-specific exercise

Symptoms occur

Wait next day*

Athlete has not returned to baseline on Post Concussion Symptom Scale for 24 hrs before taking the SCAT test

Take SCAT test

Pass SCAT

Begin Physical Exertion Testing that day

Step 1. Aerobic exercise

Symptom free

Symptoms occur

Wait next day*

Step 2. Non-contact drilling/Sport-specific exercise

Symptom free

Symptoms occur

Wait next day*

Step 3. Controlled contact drilling

Wait next day*

Step 4. Full contact drilling/competition

Symptom free

Symptoms occur

Wait next day*

Step 4. Full contact drilling/competition

* Minimum of 12 hours

CRITERIA 1

CRITERIA 2

CRITERIA 3
Disqualification:

If the data shows that a student-athlete has suffered a sports concussion or closed head injury, a multidisciplinary approach will be taken to return the student-athlete to active status. The student-athlete will be spoken with regularly until symptom free. Because no two concussions are the same, disqualification for practice, competition, season or career will be determined by the certified athletic trainer, team physician, and any other involved medical specialists.

References:


Sex Differences and the Incidence of Concussions Among Collegiate Athletes, *Journal of Athletic Training*, 2003; 38(3); 238-244
Appendix A:
Take-Home-Instructions

Any student-athlete who experiences any of the signs, symptoms, or problems of a sports concussion and is not being referred to a physician or emergency room the day of injury will be given these Take-Home-Instructions and the front page of the SCAT2 card (see Appendix C). The student-athlete must be monitored for possible deterioration as problems could arise over the first 24-48 hours. **The student-athlete should not be left alone and must go to the hospital at once if you experience any of the following:**

- Have a headache that gets worse
- Are very drowsy or can’t be awakened (woken up)
- Can’t recognize people or places
- Have repeated vomiting
- Behave unusual or seem confused; are very irritable
- Have seizures (arms and legs jerk uncontrollably)
- Have weakness or numbness in arms, legs, or face
- Are unsteady on your feet (Dizziness)

- Have slurred speech
- Experiences changes in breathing / pulse rate
- Experiences any memory deficits
- Experiences any vision difficulties
- Experiences anything out of the ordinary
- Experiences any increases in symptoms (see front page of Modified SCAT card)

***Remember, it is better to be safe.***

I believe that ___________________________ sustained a concussion on ________________. To make sure he/she recovers, please follow the following important recommendations:

1. Please **remind** ___________________________ to report to the Munson Athletic Training Room / Marts Athletic Training Room on ___________________________ at ___________________________ for a follow-up evaluation.

2. Please **review** the items outlined above. If any of these problems develop prior to his/her visit, please go to the hospital immediately. Otherwise, you can follow the instructions outlined below.

**It is OK to:**
* Wake up every several hours to monitor symptoms
* Use ice pack on head and neck as needed for comfort
* Eat a light diet
* Return to school
* Go to sleep
* Rest (no strenuous activity or sports)

**There is NO need to:**
* Check eyes with flashlight
* Test reflexes
* Stay in bed

**Do NOT:**
* Drink alcohol
* Do drugs
* Drive
* Take medications for symptoms
* Exert yourself physically or mentally
Appendix B:  
Post Concussion Symptom Scale

**Instructions:** The Post Concussion Symptom Scale should not only be used for the initial evaluation, but for each subsequent follow-up assessment until all symptoms have cleared at rest and during physical exertion. In lieu of simply checking each symptom present, the ATC can ask the student-athlete to grade or score the severity of the symptom on a scale of 0-6, where 0 = none, 1-2 = mild, 3-4 = moderate, and 5-6 = most severe.

**Student-Athlete:** ______________________________

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Date: Time:</th>
<th>Date: Time:</th>
<th>Date: Time:</th>
<th>Date: Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Pressure in Head”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neck Pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balance Problems (Dizzy)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nausea or Vomiting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vision Problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hearing Problems / Ringing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Don’t Feel Right”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeling “Dinged” or “Dazed”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confusion Feeling</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeling Slowed Down</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeling like “in a Fog”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drowsiness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fatigue or Low Energy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More Emotional than Usual</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irritability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty Concentrating</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty Remembering</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sadness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nervous or Anxious</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trouble Falling Asleep</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sleeping more than Usual</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensitivity to Light</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensitivity to Noise</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Modified SCAT Card
(Sport Concussion Assessment Tool)

Medical Evaluation

Name: __________________________   Date __________
Sport/Team: _____________________   Mouth guard? Y    N

1) SIGNS
Was there loss of consciousness or unresponsiveness?    Y    N
Was there seizure or convulsive activity?       Y    N
Was there a balance problem/unsteadiness?      Y    N

2) MEMORY
Modified Maddocks questions (check correct)
Day of Week ? _______     Month ? _______
Year ? _______      Time ? (within 1 hour) _______

3) SYMPTOM SCORE
Total number of positive symptoms (from reverse side of the card) = ________

4) COGNITIVE ASSESSMENT

<table>
<thead>
<tr>
<th>Word</th>
<th>Immediate</th>
<th>Delayed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) cat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) pen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) shoe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) book</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) car</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Ask delayed 5-word recall now

5) NEUROLOGICAL SCREENING

<table>
<thead>
<tr>
<th>Pass</th>
<th>Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech</td>
<td></td>
</tr>
<tr>
<td>Eye motion and pupils</td>
<td></td>
</tr>
<tr>
<td>Pronator drift</td>
<td></td>
</tr>
<tr>
<td>Gait assessment</td>
<td></td>
</tr>
</tbody>
</table>

Any neurological screening abnormality necessitates formal neurological or hospital assessment

Total Score: _____________

ATC Signature: ___________________________________

Instructions:
This side of the card is for the use of medical doctors, physical therapists, or athletic trainers. In order to maximize the information gathered from the card, it is strongly suggested that all athletes participating in contact sports complete a baseline evaluation prior to the beginning of their competitive season. This card is a suggested guide only for sport concussion and is not meant to assess more severe forms of brain injury. Please give a COPY of this card to athletes for their information and to guide follow-up assessment.

Signs:
Assess for each of these items and circle Y (yes) or N (no)

Memory:
If needed, questions can be modified to make them specific to the sport (eg, “period” versus “half”).

Cognitive Assessment:
Select any 5 words (an example is given). Avoid choosing related words such as “dark” and “moon,” which can be recalled by means of word association. Read each word at a rate of one word per second. The athlete should not be informed of the delayed testing of memory (to be done after the reverse months and/or digits). Choose a different set of words each time you perform a follow-up exam with the same candidate.

Neurological Screening:
Trained medical personnel must administer this examination. These individuals might include medical doctors, physical therapists, or athletic trainers. Speech should be assessed for fluency and lack of slurring. Eye motion should reveal no diplopia in any of the 4 planes of movement (vertical, horizontal, and both diagonal planes). The pronator drift is performed by asking patients to hold both arms in front of them, palms up, with eyes closed. A positive test is pronating the forearm, dropping the arm, or drifting away from midline. For gait assessment, ask the patient to walk away from you, turn, and walk back.

Return to Play:
A structured, graded exertion protocol should be developed and individualized on the basis of sport, age, and the concussion history of the athlete. Exercise or training should be commenced only after the athlete is clearly asymptomatic with physical and cognitive rest. Final decision for clearance to return to competition should ideally be made by a medical doctor.

For more information:
See the “Summary and Agreement Statement of the Second International Symposium on Concussion in Sport” in:
Neurosurgery 2005, in press
The Physician and Sportsmedicine 2005;33(4):29-44
Post concussion Symptoms
Ask athletes to score themselves based on how they feel now. It is recognized that a low score may be normal for some athletes, but clinical judgment should be exercised to determine if a change in symptoms has occurred following the suspected concussion event.

It should be recognized that the reporting of symptoms may not be entirely reliable. This may be due to the effects of a concussion or because the athlete’s passionate desire to return to competition outweighs the natural inclination to give an honest response.

If possible, ask someone who knows the athlete well about changes in affect, personality, behavior, etc.

Remember, concussion should be suspected in the presence of ANY ONE or more of the following:
- Symptoms (such as headache), or
- Signs (such as loss of consciousness), or
- Memory problems.

Any athlete with a suspected concussion should be monitored for deterioration (ie, should not be left alone) and should not drive a motor vehicle.

For more information see the “Summary and Agreement Statement of the Second International Symposium on Concussion in Sport” in:
Neurosurgery 2005, in press
The Physician and Sportsmedicine 2005;33(4):29-44
This tool may be copied for distribution to teams, groups, and organizations.

The Modified SCAT Card
(Sport Concussion Assessment Tool)
Athlete Information

What is a concussion? A concussion is a disturbance in the function of the brain caused by a direct or indirect force to the head. It results in a variety of symptoms (like those listed below) and may, or may not, involve memory problems or loss of consciousness.

How do you feel? You should score yourself on the following symptoms, based on how you feel now.

Postconcussion Symptom Scale

<table>
<thead>
<tr>
<th>Symptom</th>
<th>None</th>
<th>Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>&quot;Pressure in head&quot;</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Neck pain</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Balance problems or dizzy</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Nausea or vomiting</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Vision problems</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Hearing problems/ringing</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>“Don’t feel right”</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Feeling “dinged” or “dazed”</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Confusion</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Feeling slowed down</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Feeling like “in a fog”</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Drowsiness</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Fatigue or low energy</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>More emotional than usual</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Irritability</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Difficulty concentrating</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Difficulty remembering</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Other: 0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Do you normally experience any of the above symptom(s) with exercise? YES ______ NO ______
If yes, which one(s)? ________________________________

What should I do?
Any athlete suspected of having a concussion should be removed from play, and then seek medical evaluation.

Signs to watch for:
Problems could arise over the first 24-48 hours. You should not be left alone and must go to a hospital at once if you:
- Have a headache that gets worse
- Are very drowsy or can’t be awakened (woken up)
- Can’t recognize people or places
- Have repeated vomiting
- Behave unusually or seem confused; are very irritable
- Have seizures (arms and legs jerk uncontrollably)
- Have weak or numb arms or legs
- Are unsteady on your feet; have slurred speech.

Remember, it is better to be safe. Consult your doctor after a suspected concussion.

What can I expect?
Concussion typically results in the rapid onset of short-lived impairment that resolves spontaneously over time. You can expect that you will be told to rest until you are fully recovered (that means resting your body and your mind). Then, your doctor will likely advise that you go through a gradual increase in exercise over several days (or longer) before returning to sport.
What is the SCAT2?  
This tool represents a standardized method of evaluating injured athletes for concussion and can be used in athletes aged from 10 years and older. It supersedes the original SCAT published in 2005. This tool also enables the calculation of the Standardized Assessment of Concussion (SAC) score and the Maddocks questions for sideline concussion assessment.

Instructions for using the SCAT2  
The SCAT2 is designed for the use of medical and health professionals. Preseason baseline testing with the SCAT2 can be helpful for interpreting post-injury test scores. Words in Italics throughout the SCAT2 are the instructions given to the athlete by the tester.

This tool may be freely copied for distribution to individuals, teams, groups and organizations.

What is a concussion?  
A concussion is a disturbance in brain function caused by a direct or indirect force to the head. It results in a variety of non-specific symptoms (like those listed below) and often does not involve loss of consciousness. Concussion should be suspected in the presence of any one or more of the following:

- Symptoms (such as headache), or
- Physical signs (such as unsteadiness), or
- Impaired brain function (e.g. confusion) or
- Abnormal behaviour.

Any athlete with a suspected concussion should be REMOVED FROM PLAY, medically assessed, monitored for deterioration (i.e., should not be left alone) and should not drive a motor vehicle.

How do you feel?  
You should score yourself on the following symptoms, based on how you feel now.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>none</th>
<th>mild</th>
<th>moderate</th>
<th>severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>“Pressure in head”</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Neck Pain</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Nausea or vomiting</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Dizziness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Blurred vision</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Balance problems</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Sensitivity to light</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Sensitivity to noise</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Feeling slowed down</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Feeling like “in a fog”</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>“Don’t feel right”</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Difficulty concentrating</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Difficulty remembering</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Fatigue or low energy</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Confusion</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Drowsiness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Trouble falling asleep (if applicable)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>More emotional</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Irritability</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Sadness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Nervous or Anxious</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Total number of symptoms (Maximum possible 22)  
Symptom severity score  
(Add all scores in table, maximum possible: 22 x 6 = 132)

Do the symptoms get worse with physical activity?  
Do the symptoms get worse with mental activity?  

Overall rating  
If you know the athlete well prior to the injury, how different is the athlete acting compared to his / her usual self? Please circle one response.
Cognitive & Physical Evaluation

1 Symptom score (from page 1)
   22 minus number of symptoms of 22

2 Physical signs score
   Was there loss of consciousness or unresponsiveness? \[ Y \] \[ N \] N
   If yes, how long? \[ \text{minutes} \]
   Was there a balance problem/unsteadiness? \[ Y \] \[ N \] Y
   Physical signs score (1 point for each negative response) of 2

3 Glasgow coma scale (GCS)
   Best eye response (E) \[ \text{1} \]
   No eye opening \[ \text{1} \]
   Eye opening in response to pain \[ \text{2} \]
   Eye opening to speech \[ \text{3} \]
   Eyes opening spontaneously \[ \text{4} \]
   Best verbal response (V) \[ \text{1} \]
   No verbal response \[ \text{1} \]
   Incomprehensible sounds \[ \text{2} \]
   Inappropriate words \[ \text{3} \]
   Confused \[ \text{4} \]
   Oriented \[ \text{5} \]
   Best motor response (M) \[ \text{1} \]
   No motor response \[ \text{1} \]
   Extension to pain \[ \text{2} \]
   Abnormal flexion to pain \[ \text{3} \]
   Flexion/Withdrawal to pain \[ \text{4} \]
   Localizes to pain \[ \text{5} \]
   Obey commands \[ \text{6} \]
   Glasgow Coma score (E + V + M) of 15

4 Sideline Assessment – Maddocks Score
   “I am going to ask you a few questions, please listen carefully and give your best effort.”

   Modified Maddocks questions (1 point for each correct answer)
   1. At what venue are we at today? \[ 0 \] \[ 1 \]
   2. Which half is it now? \[ 0 \] \[ 1 \]
   3. Who scored last in this match? \[ 0 \] \[ 1 \]
   4. What time is it right now? (within 1 hour) \[ 0 \] \[ 1 \]
   5. At what venue are we at today? \[ 0 \] \[ 1 \]
   6. Did your team win the last game? \[ 0 \] \[ 1 \]
   7. What team did you play last week/game? \[ 0 \] \[ 1 \]
   8. Was there a balance problem/unsteadiness? \[ 0 \] \[ 1 \]
   9. Was there loss of consciousness or unresponsiveness? \[ 0 \] \[ 1 \]

   Maddocks score of 5

5 Cognitive assessment

Standardized Assessment of Concussion (SAC)

Orientation (1 point for each correct answer)
   1. What month is it? \[ 0 \] \[ 1 \]
   2. What is the date today? \[ 0 \] \[ 1 \]
   3. What is the day of the week? \[ 0 \] \[ 1 \]
   4. What year is it? \[ 0 \] \[ 1 \]
   5. What time is it right now? (within 1 hour) \[ 0 \] \[ 1 \]
   Orientation score of 5

Immediate memory
   “I am going to test your memory. I will read you a list of words and when I am done, repeat back as many words as you can remember, in any order.”

   Trials 2 & 3:
   “I am going to repeat the same list again. Repeat back as many words as you can remember in any order, even if you said the word before.”

   Complete all 3 trials regardless of score on trial 1 & 2. Read the words at a rate of one per second. Score 1 pt. for each correct response. Total score equals sum across all 3 trials. Do not inform the athlete that delayed recall will be tested.

   List | Trial 1 | Trial 2 | Trial 3 | Alternative word list
   --- | --- | --- | --- | ---
   elbow | 0 | 1 | 0 | 1 | candle | baby | finger
   apple | 0 | 1 | 0 | 1 | paper | monkey | penny
   saddle | 0 | 1 | 0 | 1 | sugar | perfume | blanket
   bubble | 0 | 1 | 0 | 1 | sandwich | sunset | lemon
   Total

   Immediate memory score

Concentration
   Digits Backward:
   “I am going to read you a string of numbers and when I am done, you repeat them back to me backwards, in reverse order of how I read them to you. For example, if I say 7-1-9, you would say 9-1-7.”

   If correct, go to next string length. If incorrect, read trial 2. One point possible for each string length. Stop after incorrect on both trials. The digits should be read at the rate of one per second.

   Complete all 3 trials regardless of score on trial 1 & 2. Read the words at a rate of one per second. Score 1 pt. for each correct response. Total score equals sum across all 3 trials. Do not inform the athlete that delayed recall will be tested.

   Alternative digit lists
   4-9-3 | 0 | 1 | 6-2-9 | 5-2-6 | 4-1-5
   6-2-9-7-1 | 0 | 1 | 1-5-2-8-6 | 3-8-5-2-7 | 6-1-8-4-3
   7-1-8-4-6-2 | 0 | 1 | 5-3-9-1-4-8 | 8-3-1-9-6-4 | 7-2-4-8-5-6

   Months in Reverse Order:
   “Now tell me the months of the year in reverse order. Start with the last month and go backward. So you’ll say December, November ... Go ahead”

   1 pt. for entire sequence correct


Concentration score

Balance examination

This balance testing is based on a modified version of the Balance Error Scoring System (BESS). A stopwatch or watch with a second hand is required for this testing.

Balance testing

“I am now going to test your balance. Please take your shoes off, roll up your pant legs above ankle (if applicable), and remove any ankle taping (if applicable). This test will consist of twenty seconds tests with different stances.”

(a) Double leg stance:

“The first stance is standing with your feet together with your hands on your hips and with your eyes closed. You should try to maintain stability in that position for 20 seconds. I will be counting the number of times you move out of this position. I will start timing when you are set and have closed your eyes.”

(b) Single leg stance:

“If you were to kick a ball, which foot would you use? [This will be the dominant foot]. Now stand on your non-dominant foot. The dominant leg should be held in approximately 30 degrees of hip flexion and 45 degrees of knee flexion. Again, you should try to maintain stability for 20 seconds with your hands on your hips and your eyes closed. I will be counting the number of times you move out of this position. If you stumble out of this position, open your eyes and return to the start position and continue balancing. I will start timing when you are set and have closed your eyes.”

(c) Tandem stance:

“Now stand heel-to-toe with your non-dominant foot in back. Your weight should be evenly distributed across both feet. Again, you should try to maintain stability for 20 seconds with your hands on your hips and your eyes closed. I will be counting the number of times you move out of this position. If you stumble out of this position, open your eyes and return to the start position and continue balancing. I will start timing when you are set and have closed your eyes.”

Balance testing – types of errors

1. Hands lifted off iliac crest
2. Opening eyes
3. Step, stumble, or fall
4. Moving hip into > 30 degrees abduction
5. Lifting forefoot or heel
6. Remaining out of test position > 5 sec

Each of the 20-second trials is scored by counting the errors, or deviations from the proper stance, accumulated by the athlete. The examiner will begin counting errors only after the individual has assumed the proper start position. The modified BESS is calculated by adding one error point for each error during the three 20-second tests. The maximum total number of errors for any single condition is 10. If a athlete commits multiple errors simultaneously, only one error is recorded but the athlete should quickly return to the testing position, and counting should resume once subject is set. Subjects that are unable to maintain the testing procedure for a minimum of five seconds at the start are assigned the highest possible score, ten, for that testing condition.

Which foot was tested: [ ] Left [ ] Right
(i.e. which is the non-dominant foot)

Condition | Total errors
--- | ---
Double Leg Stance (feet together) | of 10
Single leg stance (non-dominant foot) | of 10
Tandem stance (non-dominant foot at back) | of 10
Balance examination score (30 minus total errors) | of 30

Coordination examination

Upper limb coordination

Finger-to-nose (FTN) task: “I am going to test your coordination now. Please sit comfortably on the chair with your eyes open and your arm (either right or left) outstretched (shoulder flexed to 90 degrees and elbow and fingers extended). When I give a start signal, I would like you to perform five successive finger to nose repetitions using your index finger to touch the tip of the nose as quickly and as accurately as possible.”

Which arm was tested: [ ] Left [ ] Right

Scoring: 5 correct repetitions in < 4 seconds = 1

Note for testers: Athletes fail the test if they do not touch their nose, do not fully extend their elbow or do not perform five repetitions. Failure should be scored as 0.

Coordination score of 1

Cognitive assessment

Standardized Assessment of Concussion (SAC)

Delayed recall

“Do you remember that list of words I read a few times earlier? Tell me as many words from the list as you can remember in any order.”

Circle each word correctly recalled. Total score equals number of words recalled.

<table>
<thead>
<tr>
<th>List</th>
<th>Alternative word list</th>
</tr>
</thead>
<tbody>
<tr>
<td>elbow</td>
<td>candle</td>
</tr>
<tr>
<td>apple</td>
<td>paper</td>
</tr>
<tr>
<td>carpet</td>
<td>sugar</td>
</tr>
<tr>
<td>saddle</td>
<td>sandwich</td>
</tr>
<tr>
<td>bubble</td>
<td>wagon</td>
</tr>
<tr>
<td>apple</td>
<td>paper</td>
</tr>
<tr>
<td>monkey</td>
<td>perfume</td>
</tr>
<tr>
<td>penny</td>
<td>blanket</td>
</tr>
<tr>
<td>lemon</td>
<td>sunset</td>
</tr>
<tr>
<td>iron</td>
<td>insect</td>
</tr>
</tbody>
</table>

Delayed recall score of 5

Overall score

Test domain | Score
--- | ---
Symptom score | of 22
Physical signs score | of 2
Glasgow Coma score (E + V + M) | of 15
Balance examination score | of 30
Coordination score | of 1
Subtotal | of 70
Orientation score | of 5
Immediate memory score | of 5
Concentration score | of 15
Delayed recall score | of 5
SAC subtotal | of 30
SCAT2 total | of 100
Maddocks Score | of 5

Definitive normative data for a SCAT2 “cut-off” score is not available at this time and will be developed in prospective studies. Embedded within the SCAT2 is the SAC score that can be utilized separately in concussion management. The scoring system also takes on particular clinical significance during serial assessment where it can be used to document either a decline or an improvement in neurological functioning.

Scoring data from the SCAT2 or SAC should not be used as a stand alone method to diagnose concussion, measure recovery or make decisions about an athlete’s readiness to return to competition after concussion.
This patient has received an injury to the head. A careful medical examination has been carried out and no sign of any serious complications has been found. It is expected that recovery will be rapid, but the patient will need monitoring for a further period by a responsible adult. Your treating physician will provide guidance as to this timeframe.

If you notice any change in behaviour, vomiting, dizziness, worsening headache, double vision or excessive drowsiness, please telephone the clinic or the nearest hospital emergency department immediately.

Other important points:
- Rest and avoid strenuous activity for at least 24 hours
- No alcohol
- No sleeping tablets
- Use paracetamol or codeine for headache. Do not use aspirin or anti-inflammatory medication
- Do not drive until medically cleared
- Do not train or play sport until medically cleared

Remember, it is better to be safe.
Consult your doctor after a suspected concussion.

---

**Athlete Information**

**Signs to watch for**

Problems could arise over the first 24-48 hours. You should not be left alone and must go to a hospital at once if you:

- Have a headache that gets worse
- Are very drowsy or can’t be awakened (woken up)
- Can’t recognize people or places
- Have repeated vomiting
- Behave unusually or seem confused; are very irritable
- Have seizures (arms and legs jerk uncontrollably)
- Have weak or numb arms or legs
- Are unsteady on your feet; have slurred speech

Consult your doctor after a suspected concussion.

**Return to play**

Athletes should not be returned to play the same day of injury. When returning athletes to play, they should follow a stepwise symptom-limited program, with stages of progression. For example:

1. rest until asymptomatic (physical and mental rest)
2. light aerobic exercise (e.g. stationary cycle)
3. sport-specific exercise
4. non-contact training drills (start light resistance training)
5. full contact training after medical clearance
6. return to competition (game play)

There should be approximately 24 hours (or longer) for each stage and the athlete should return to stage 1 if symptoms recur. Resistance training should only be added in the later stages.

**Medical clearance should be given before return to play.**

---

**Concussion injury advice** (To be given to concussed athlete)

This patient has received an injury to the head. A careful medical examination has been carried out and no sign of any serious complications has been found. It is expected that recovery will be rapid, but the patient will need monitoring for a further period by a responsible adult. Your treating physician will provide guidance as to this timeframe.

If you notice any change in behaviour, vomiting, dizziness, worsening headache, double vision or excessive drowsiness, please telephone the clinic or the nearest hospital emergency department immediately.

Other important points:
- Rest and avoid strenuous activity for at least 24 hours
- No alcohol
- No sleeping tablets
- Use paracetamol or codeine for headache. Do not use aspirin or anti-inflammatory medication
- Do not drive until medically cleared
- Do not train or play sport until medically cleared

---

**SCAT2**

<table>
<thead>
<tr>
<th>Tool</th>
<th>Test domain</th>
<th>Time</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Date tested</td>
<td>Days post injury</td>
<td></td>
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</tbody>
</table>

**SCAT2**

- Symptom score
- Physical signs score
- Glasgow Coma score (E + V + M)
- Balance examination score
- Coordination score
- Orientation score
- Immediate memory score
- Concentration score
- Delayed recall score

**SCAT2 Score**

**Total SCAT2**

**Symptom severity score (max possible 132)**

**Return to play**

<table>
<thead>
<tr>
<th>Y</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Additional comments**

---

**Clinic phone number**

---

**Patient's name**

---

**Date/time of injury**

---

**Date/time of medical review**

---

**Treating physician**

---

**Contact details or stamp**