
Review Frequency
The Head Athletic Trainer, Athletic Director, Team Physician, and coaches review the Policies and Procedures annually.
Reviewed: 08/2013

Pre-participation Physical Exam (PPE)
Pre-participation physical exams attempt to identify pre-existing medical problems and to gain any other information that will allow the athlete to more safely participate in sports activities.
In compliance with the PIAA rules and standards of practice, Archbishop Carroll High School requires all student athletes complete and turn in a pre-participation physical examination form prior to official start date of sport.
A link to the PPE: http://www.piaa.org/assets/web/documents/Section%20VII%20Forms.
%20CIPPE_FORM_SECTIONS_1_2_3_4_5_6_7_AND_8_(no_shading).pdf

Communication & Documentation
Documentation of all treatment, coaches’ reports, rehabilitation, progress notes etc. should be kept up-to-date.
Any catastrophic or significant situation must be communicated to the Athletic Trainer, Athletic Director, and ATI Physical Therapy as soon as possible.

Contact Directory

Jesse Fehr Athletic Trainer 267-221-6471 trainer@jcarroll.org
Kevin Walsh Team Physician 610-520-6170 kevinwalshmd@gmail.com
Jim Corkery Athletic Director 610-688-7610 jcorkery@jcarroll.org
Emergency Action Plan

Emergency Equipment
Location – splints and AED located with athletic trainer on field, other supplies in athletic training room. Spine board and cervical collar located with EMS

Key location – athletic trainer will have all necessary keys at all times

Site Specific Protocol & Directions: Emergency Action Plan Protocol
Roles and responsibilities in an emergency situation

Chain of command
Athletic trainer will be the first to respond to emergency situations. The team physician will then be notified, and if the conflict cannot be resolved the athletic director and coaches will be contacted. If there are still issues present ATI Physical Therapy will be informed.

Contacting emergency services
Phone location: Athletic trainer will keep their cell phone on them at all times. There is a fixed line in the school’s athletic training if cell phones are unreachable: 610-688-7610 ext. 153 (dial 9 for an outside line, then 911)

Necessary information to provide EMS operator: Suspected injury, vital signs, present and current symptoms, athlete’s name, age, sport, pertinent information (allergies, diabetes, etc.), if condition worsens/gets better when EMS arrives

Location of athlete’s information: PPE/health history, consent form, emergency contact information, etc. will be located in file cabinet in athletic office

Notification of parents/guardians: Will be notified in emergency situations if patient is a minor or asks for parental notification

Emergency Action Plan: All Venues
Roles of First Responders:
1. Survey the scene for any potential hazards and make sure it is safe
2. Alert the athletic trainer
   a. In cases of serious injury please dial 911 first
3. Activation of emergency medical system (EMS)
   a. 911 call: provide name, address, telephone number; number of individuals injured; condition of injured; first aid treatment; specific directions; exact location; other information as requested
      a.i. School address is: Archbishop Carroll High School, 211 Matsonford Rd, Radnor PA 19087
      a.ii. Football home field address is: Conshohocken Field House, A field – located between E. 10 St and Fayette St
4. Immediate care of the injured or ill student-athlete
5. Emergency equipment retrieval
6. **Direction of EMS to scene**
   a. Open appropriate gates if necessary
   b. Designate individual to “flag down” EMS and direct to scene
   c. Control the scene: limit to first aid providers and move bystanders away from area

**Venue Directions:**

**Girls Soccer/ Girls Lacrosse Field** – Enter Archbishop Carroll High School
   Follow road; will see field immediately on left

**Field Hockey/Softball Field** – Enter Archbishop Carroll High School
   Take first right (visitors lot) and hop curb
   Enter clearing in the fence on furthest right of field

**Baseball Field** – Enter Archbishop Carroll High School
   Take first right (visitors lot) and hop curb
   Enter clearing in the fence on furthest right of field
   Follow clearing down slope – baseball field on left

**Boys Soccer Field** – Enter Archbishop Carroll High School
   Take first right (visitors lot) and hop curb
   Enter clearing in the fence on furthest right of field
   Follow clearing down slope and across baseball field

**Football Practice/Boys Lacrosse Field** – Enter Archbishop Carroll High School
   Drive straight past front of school until on side
   Field to far left - hop curb to destination

**Gym Courts** - Enter Archbishop Carroll High School
   Drive straight past front of school until on side
   Courts on right – flagger will be outside court doors

**Football Home Game Field** – Arrive on E. 10th St – destination will be on right

**EMS dispatcher is Pleasant Valley Ambulance located on 500 E. Hector St in Conshohocken.**
EMS is not present at games. In event of emergency dial 911 and give location of field**

**Emergency Care Facility**
Bryn Mawr Hospital will be the emergency care facility when a patient is transported off the field.
ATI physical therapy has two close locations; Trooper clinic will serve as the primary, Springfield clinic will be the secondary.
Asthma & Respiratory Distress

Policy
The following steps are recommended by the National Athletic Training Association on how to manage asthma and other potential environmental respiratory distresses.

Diagnosis and Assessment
All athletes must receive a pre-participation examination in which the initial screening for asthma will begin in the form of a questionnaire. Those who have a questionable asthma related illnesses will be further assessed. For athletes suspected with exercise induced asthma an exercise challenge test will be administered to confirm diagnosis.

Long Term Management
The patient is advised to have regular checkups with their primary care physician, at intervals deemed necessary by the physician. The athletic trainer is NOT responsible to ensure that the athlete meets with the physician. The physician may prescribe treatments to assist in the daily management of asthma.

Management
1. All patients will be referred if they suffer serious or life threatening attacks of breathing difficulty, this includes a significant increase of wheezing, chest tightness, increased respiration rate, inability to speak in full sentences, uncontrolled cough, significantly prolonged expiration, nose flaring, or paradoxic abdominal movement.

2. The AT and the patient will carry patient’s prescribed rescue inhaler to administer in the event of an emergency.

3. If necessary activate EAP.
Epi-Pens & Anaphylaxis

Policy
All epinephrine auto-injectors must be prescribed and dispensed by a physician directly to the patient. An AT, physician or any other trained personnel will use epi-pens in an emergency.

Management
If an athlete begins to exhibit signs or symptoms of anaphylaxis, especially following an exposure to a potential allergen:

1. Activate Emergency Action Plan
2. If the athlete has an Epi-Pen auto-injector, the medication should be injected and the directions on the packaging should be followed, along with previous instructions provided by the prescribing physician. Any athlete receiving an Epi-Pen injection must be sent to the closest medical facility for further treatment, regardless of how the athlete is feeling after the injection.
3. All care of the athlete should be documented using appropriate HS Athletic Training forms and placed in the athlete’s file in the athletic training facility.
Cardiac Emergencies

Policy
Prevention of cardiac emergencies can be increased with performing thorough pre-participation examinations focusing on past medical history and family history.

Management
- Early recognition of possible cardiac emergency
- Check responsiveness of patient
- Check for breathing and pulse
- Activation of EAP
- Bring emergency equipment to the scene
- If no pulse:
  - Begin CPR and continue until AED is available
- Continue CPR and use of AED until the arrival of emergency medical services or the victim regains a pulse.

<table>
<thead>
<tr>
<th>Personnel</th>
<th>Duty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletic Trainer</td>
<td>Respond to on-field emergency</td>
</tr>
<tr>
<td>Athletic Training Student or Athletic Director</td>
<td>Activate EMS, direct EMS upon arrival</td>
</tr>
<tr>
<td>Athletic Training Student</td>
<td>Retrieve emergency equipment</td>
</tr>
<tr>
<td>Non-Medical Personnel</td>
<td>Provide crowd control</td>
</tr>
</tbody>
</table>
Concussion

PIAAA Rules & Regulations

• Only an M.D. (Medical Doctor), D.O. (Doctor of Osteopathy), or A.T. (Athletic Trainer) is empowered to make the on-site determination that an athlete has not received a concussion. If any one of these individuals has answered that “yes” there has been a concussion, that decision is final. Under no circumstances can that athlete return to play that day. “When in doubt, hold them out”.
• If the event continues over multiple days, then the designated event physician has ultimate authority over return to play decisions. However, if the health care professional (MD, DO or AT) has evaluated the athlete, who has been removed from competition due to exhibiting the signs and symptoms of a concussion, and has determined that the athlete did not sustain a concussion, that student may return to play with the submission of the written authorization by the health care professional. Once a concussion has been diagnosed by one of the above listed on-site providers, only an MD, or DO, can authorize subsequent return to play (RTP), and such authorization shall be in writing to the AT of the school. This written RTP authorization shall be kept at the school until the statute of limitations expires, which is seven years from the date of the student’s 18th birthday.

Concussion Recognition

Zurich Concussion Definition: “Concussion is defined as a complex pathophysiological process affecting the brain, induced by traumatic biomechanical forces.”
A concussion can be caused by a direct blow to the face, head, neck or elsewhere on the body with an impulsive or rotational force transmitted to the head.
Signs and symptoms of a concussion:
• Headache
• Tinnitus
• Dizziness/balance disturbances
• Disorientation/slow cognitive function
• Loss of Consciousness
• Nausea/vomiting
• Photophobia
• Numbness/tingling
• Slurred speech
• Visual disturbances
• Amnesia
• Irritable
• Seizures
• Fatigue
• Noise sensitivity
*If these symptoms go unrecognized they can result in “second impact syndrome” or death.
In the event of a suspected concussion, the concussion management protocol requires the evaluation of the athlete’s symptoms, neurocognitive function, and balance, which provide the sports medicine staff with the objective information necessary to return the athlete to play safely.

**Concussion Management Protocol**

1. A student-athlete suspected of sustaining a concussion will be evaluated by the team’s athletic trainer using the ATI HIT form
   
   a. Re-evaluation will also occur 24 hours, 48 hours, etc. post-injury looking for the presence or absence of symptoms

2. Any student-athlete diagnosed with a concussion **shall not return** to activity for the remainder of that day. Medical clearance will be determined by a physician (MD or DO)

   NO STUDENT-ATHLETE SUSPECTED OF HAVING A CONCUSSION IS PERMITTED TO RETURN TO PLAY THE SAME DAY, AND NO STUDENT-ATHLETE IS PERMITTED TO RETURN TO PLAY WHILE SYMPTOMATIC FOLLOWING A CONCUSSION.

3. The athletic trainer will follow proper documentation reporting within 24-48 hours of injury.

4. Once the student-athlete is asymptomatic for 24 hours:
   
   a. The athletic trainer will begin a gradual return to play protocol with the athlete to assess for increasing signs and symptoms.

5. Symptoms should be reassessed immediately following exertional activities.

6. If the student-athlete remains asymptomatic on the day following the first step(s) of the **graduated exertional RTP protocol**, the athlete will be reassessed using the measures above (#1), and continue with the next step(s) on the **graduated exertional RTP protocol**.

7. If at any point during the RTP process the athlete displays or becomes symptomatic the student-athlete will stop activity and be re-assessed 24 hours later until asymptomatic. Once asymptomatic, the student-athlete will attempt the failed step again.

**Graduated Return to Play Protocol**

With no symptoms, a gradual return to play program can be initiated. Follow these gradual progressive steps of the training sequence. There should be approximately 24 hours between each step. If any symptoms return at any time during these activities, stop the work out, rest until symptom free for 24 hours then return to the previous asymptomatic step. If symptoms return or worsen, return to your authorized health care provider.
<table>
<thead>
<tr>
<th>Step</th>
<th>Date</th>
<th>Activity</th>
<th>Tolerance/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Light Aerobic Exercise</strong></td>
<td></td>
<td>Begin with sport specific warm up. Do 15-20 minute workout: stationary bike, fast paced walking or light jog, rowing or freestyle swimming. Intensity &lt; 70% MPHR. No resistance training.</td>
<td></td>
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<tr>
<td>Goal: Increase HR</td>
<td></td>
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<tr>
<td><strong>2. Sport Specific Exercise</strong></td>
<td></td>
<td>Sport specific warm-up. Slowly increase intensity and duration of workout to 20-30 minutes.</td>
<td>- Begin <strong>sport specific skill work</strong> within the workout. No spins, dives, or jumps. No contact.</td>
</tr>
<tr>
<td>Goal: Add Movement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3. Non-Contact Training</strong></td>
<td></td>
<td>Continue with general conditioning up to 60 minutes. Increase intensity and duration. Begin interval and resistance training.</td>
<td>- Continue individual skill work. - Begin <strong>skill work with a partner</strong> but with no contact. Continue with individual skill work as per Step 3. - Begin spins, dives, jumps.</td>
</tr>
<tr>
<td>Goal: Add movement, teammate skill work</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>4. Full Contact Practice</strong></td>
<td></td>
<td>Resume regular conditioning and duration of practice</td>
<td>- Obtain medical clearance - Participate in a <strong>full practice</strong>. - If a full practice is completed with no symptoms, return to competition is appropriate.</td>
</tr>
<tr>
<td>Goal: Team skill work, Restore confidence, Assess performance level</td>
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HIT Form  
ATI Physical Therapy  
Head Injury Tool (HIT) & Home Care Sheet

You have been diagnosed with a concussion (also known as mild traumatic brain injury, or MTBI). This evaluation and personal plan is based on your medical assessment and is designed to help with your recovery. Your careful attention and compliance to instructions are essential to recovery.

Injury Description: ____________________________________________________________

Evidence of a blow to the head (direct/indirect)? □ Y □ N □ unknown  
Evidence of intracranial injury or skull fracture? □ Y □ N □ unknown

Location of impact: □ Frontal □ L Temporal □ R Temporal □ L Parietal □ R Parietal □ Occipital □ Cervical □ Facial □ Indirect Force

Seizures/loss of consciousness observed? □ Y □ N details (occurrence, duration): ____________________________________________________________

If Y to any above, please explain/Additional Info: ____________________________________________________________

SYMPTOM CHECKLIST: Symptoms present today. Score is based on a 1-6 scale with 1 being mild & 6 being severe.

<table>
<thead>
<tr>
<th>PHYSICAL</th>
<th>THINKING</th>
<th>EMOTIONAL</th>
<th>SLEEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td>Tinnitus</td>
<td>Mentally foggy</td>
<td>Irritability</td>
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<tr>
<td></td>
<td></td>
<td>Problems</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>concentrating</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>remembering</td>
<td></td>
</tr>
<tr>
<td>Nausea</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Sensitivity to</td>
<td>Problems</td>
<td></td>
</tr>
<tr>
<td></td>
<td>noise/light</td>
<td>concentrating</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>remembering</td>
<td></td>
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<tr>
<td>Fatigue</td>
<td></td>
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<tr>
<td></td>
<td>Numbness/Tingling</td>
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<tr>
<td>Visual problems</td>
<td>Vomiting</td>
<td>Feeling slowed</td>
<td>Nervousness</td>
</tr>
<tr>
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<td></td>
<td>down</td>
<td></td>
</tr>
<tr>
<td>Balance problems</td>
<td>Dizziness</td>
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</tr>
</tbody>
</table>

SIDELINE ASSESSMENT:

Orientation: Month □ Date □ Day □ Year □  
Time □ ___/5

Immediate Recall: ___________________________  
________________________  ___/5

Neurologic: (strength, sensation, pupils)

Retrograde (before) or Anterograde (after) amnesia questions:

Concentration: Digits backward (if correct progress to longer string) Pass/Fail

4-9-3 6-2-9

8-3-1-4 3-1-4-3

6-2-9-7-1 1-5-2-8-6

7-1-8-4-6-2 5-3-9-1-4-8


Delayed Recall (same words as Immediate recall) ___/5

Visual tracking assessment box:

8 --------> 6 --------> 1 --------> 5

-------- 3 -------- 9 -------- 0 -------- 4 --------

1 -------- 7 -------- 9 -------- 4 -------- 8 --------

0 -------- 2 -------- 6

First Attempt: _____ seconds  Second Attempt: _____ seconds

Sx’s:
□ Y □ N

___/5

TOTAL SIDELINE SCORE: ____/20

□ Y □ N □ nt

30-27-24-18-15-12-9-6-3
□ Y □ N □ nt

Visual Tracking: □ Pass □ Fail

Vestibular (EO/EC): DLS □ Pass □ Fail

Tandem □ Pass □ Fail

SLS □ Pass □ Fail

Heel/Toe Walk □ Pass □ Fail

Rhombeg’s □ Pass □ Fail

RETURNING TO SCHOOL:

Until your symptoms have significantly decreased, it is recommended that you make modifications to your school day. The following are recommended (Athletic Training Staff will communicate with your counselor and/or school nurse to inform them of the situation):

□ No return to school.

Return: ____________________________________________

□ Return to school as follows: (to be reviewed with Athletic Training Staff and communicated with counselor and/or school nurse when changed)

□ Shortened Day □ Reduced homework load □ Allow extra time to complete coursework/assignments/tests

□ No significant classroom or standardized testing at this time □ Take rest breaks during the day as needed

□ Check for return of symptoms (use table on front page of this form) when doing activities that require a lot of attention or concentration

PHYSICAL EDUCATION RECOMMENDATIONS:

You should NEVER return to play if you still have ANY symptoms. Be sure that the PE teacher, coach and Athletic Trainer are aware of your symptoms daily. The following are recommended at this time:

□ Do not return to PE class at this time

□ Return to PE class gradually (Communicate with your PE teacher and Athletic Trainer if there is any return of symptoms)

This referral plan is based on TODAY’s evaluation. Re-evaluation by the Athletic Training Staff is required DAILY to progress.

□ Return to Athletic Training Room for re-evaluation

□ Refer to: Neurology Neuropsychologist Healthcare Professional with background in MTBI Other:

COMMENTS:

____________________________________________________

____________________________________________________

____________________________________________________
Diabetes

Policy
Pre-participation exams will identify patients with diabetes and/or family history. Together with the patient’s primary care physician, a diabetic care plan will be developed. The AT will also outline our expectations of the athlete for blood glucose monitoring and review the protocols with both the athlete and parents.

Definition, Identification and Treatment for Hypoglycemia and Hyperglycemia

<table>
<thead>
<tr>
<th>Definition</th>
<th>Hypoglycemia</th>
<th>Hyperglycemia</th>
</tr>
</thead>
</table>
| Definition | • <70 mg/dl  
• Increased glucose uptake without increase of glucose levels  
  o Excessive amounts of insulin  
  o Delay or decrease in food intake  
  o Increase in physical activity level  
• Can occur during, immediately after or several hours after exercise  
• Mild = athlete is conscious and able to swallow and follow directions  
• Severe = patient is unable to swallow or eat or is unconscious | • Fasting blood glucose > 250 mg/dL  
• Blood glucose value > 300 mg/dL |
| Identification (Signs & Symptoms) | Neurogenic  
• Shakiness  
• Sweating  
• Irritability  
• Nervousness  
• Tachycardia  
• Hunger  
• Tremors  
• Palpitations  
Neuroglycopenic – due to low plasma blood glucose and diminished availability of glucose to CNS  
• Headache  
• Mental dullness  
• Slurred speech  
• Blurred vision  
• Seizure  
• Confusion  
• Irrational behavior  
• Amnesia  
• Inability to concentrate | Frequent urination  
• Thirst  
• Hunger  
• Weight-loss  
• Visual disturbances  
• Fatigue  
• If suspected, test urine and/or blood for ketones  
• Can progress to hyperosmolar hyperglycemic non-ketotic coma = markedly elevated blood glucose (>600 mg/dL), hyperosmolarity, severe dehydration and minimal acidosis and neurologic manifestations (seizure, coma, focal neurologic findings) |
Pre-participation requirements
Athlete responsible for:
- Having their HbA1c levels checked every 3-4 months
- Having an annual exam for eye, kidney or neurological deficits
- Knowing early warning signs of hypoglycemia
- Providing the supply kit
- Strategies to be followed in case of having to change pre- or post- exercise dosages

*no participation until all requirements are met

Supply Kit Recommendations
Athlete should provide:
- Copy of diabetes care plan (as determined by physician)
- Blood glucose monitoring equipment and supplies
- Supplies to treat hypoglycemia (glucose tablets, glucagon injection kit) that are preferred by/work well for the athlete
- Sharps container (if syringes are used)
- Spare batteries
- Log book for blood glucose monitoring

Blood Glucose Monitoring (BGM) Guidelines
- 2-3 times before participation in practice or competition at 30-minute intervals
- Blood glucose level recorded in log book and shown to AT
- Every 30 minutes during practice or at the end of each period/quarter during competition – athlete must report to AT for BGM
- Athletes who exercise in extremes (>86F, <36F) require additional monitoring as requested by AT
- Athletes who experience post exercise late-onset hypoglycemia should measure levels every 2 hours for the 4 hours following exercise and record in log

Prevention of Hypoglycemia through carbohydrate supplementation
- Before exercise, consume carbohydrates dependent on the blood glucose level:
  - If less than <100 mg/dl, carbs should be consumed
- During exercise, carbohydrates should be consumed if activity lasts more than 1 hour
- After exercise, athlete should eat a snack or meal

Management

<table>
<thead>
<tr>
<th>Treatment</th>
<th>If blood glucose level is less than 100 mg/dL, no participation until their blood glucose level has returned to normal (100-180mg/dL).</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In order to re-establish normal blood glucose levels, 10-15 grams of fast-acting sugar (as found in the athlete’s supply kit) will be given and 15 minutes will elapse</td>
</tr>
<tr>
<td></td>
<td>If blood glucose levels are over 180 mg/dL, no participation for at least 15 minutes until re-tested. Levels must return to normal (100-180) before competition is resumed.</td>
</tr>
<tr>
<td></td>
<td>• Athlete will drink non-carbohydrate fluids</td>
</tr>
</tbody>
</table>


| before retesting occurs. If severe, glucagon injection will be administered. | • Insulin will be given as needed |

*In the event the patient becomes unconscious activate the EAP.*
Fluid Replacement

Policy
Water loss through sweat allows the body to cool. Both outdoor and indoor athletes need to properly hydrate before, during, and after exercise.

- Fluid loss of 1%-2% of body weight is the first stage of dehydration inhibiting performance and normal physiological function.
- A loss of 3% of body weight further decreases performance and normal bodily functions while increasing the athletes' risk of heat illness.
- Over consumption of fluids may lead to hyponatremia, which may lead to bloating, GI distress, lack of thirst, or death.

Early recognition of dehydration can prevent the occurrence and severity of heat related illnesses. The athletic trainer and coaching staff need to be aware of the following signs and symptoms of dehydration:

- Extreme thirst
- Nausea
- Severe headache
- Vomiting
- Dizziness
- Chills
- Cramping muscle fatigue
- Decreased performance
- Irritability

Hydration Recommendations

Before Activity:
- Athletes should consume 17-20 ounces of fluid 2-3 hours prior to engaging in physical activity.
- In addition, athletes should consume 7-10 ounces of fluid 15-20 minutes prior to exercise.
- However, it is important that fluid intake should not exceed fluid loss.

During Activity:
- Throughout activity, there needs to be water breaks every 10-20 minutes.
- Fluids are preferred at 50-59°F and should consist of water or sports drink containing 6-8% carbohydrate.

After Activity:
- Within two hours after exercise, athletes should consume fluids to rehydrate.
- **16oz of fluid should be consumed for every pound lost after exercise**
- Fluids need to be replaced before the next practice so that the athlete is hydrated.
- The amount of fructose in the beverage should be limited to 2-3% to minimize the risk for GI distress.
- Encourage extra salt on foods to help replenish electrolyte levels.

One way to assess hydration status is through observing urine color. The following chart should to be posted in the locker rooms so that athletes have a visual comparison.
Fluid loss can be monitored through pre and post-workout weigh-ins. This method should be supervised by the AT or coaching staff. These findings should be compared to the baseline hydration weight. The same clothing needs to be worn for the pre and post-workout weigh-ins.

- If an athlete has lost 3% or more of his/her body weight, he/she **CANNOT PARTICPATE** due to a higher risk of dehydration. This can be determined by calculating the following formula:
  \[
  \frac{\text{pre-exercise body weight} - \text{post-exercise body weight}}{\text{pre-exercise body weight}} \times 100
  \]
- If athletes are participating in two-a-days, weigh-in need to be done before and after both practices.
Exertional Heat Illness

**Policy**

**Classification**
The traditional classification of heat illness defines 4 categories: heat cramps, heat syncope, heat exhaustion, and heat stroke. The signs and symptoms of the exertional heat illnesses are as follow:

- Light-headed or dizziness
- Irritability
- Fainting
- Muscle pain or spasms
- Heat rash
- Nausea or vomiting
- Possible loss of consciousness

The athletic trainer retains the authority to withhold any athlete from activity that he/she suspects is suffering from a heat related illness. If a coach suspects an athlete is suffering from a heat related illness, he or she should refer that athlete to the athletic trainer or team physician immediately.

**Prevention Recommendations**

1. Conduct a physician-supervised pre-participation medical screening before the season starts to identify athletes predisposed to heat illness and those who have a history of exertional heat illness.

2. Educate athletes and coaches regarding the prevention, recognition, and treatment of heat illnesses and the risks associated with exercising in hot, humid environmental conditions. Educate athletes to match fluid intake with sweat and urine losses in order to maintain adequate hydration.

3. Instruct athletes to drink fluids containing electrolytes (especially sodium) to keep their urine clear to light yellow and to replace fluids between practices in order to maintain less than 2% body-weight change.

4. Encourage athletes to sleep at least 6 to 8 hours at night in a cool environment.

5. Develop event and practice guidelines for hot, humid weather based on the wet-bulb globe temperature (WBGT) or heat and humidity as measured by a sling psychrometer. Include the number of participants, the nature of the activity, and other predisposing risk factors.

6. Identify individuals who are susceptible to heat illnesses.

7. Check the environmental conditions before and during the activity, and adjust the practice schedule accordingly. Schedule training sessions to avoid the hottest part of the day (10 AM to 5 PM) and to avoid radiant heat from direct sunlight, especially in the acclimatization during the first few days of practice sessions.
8. Plan rest breaks to match the environmental conditions and the intensity of the activity. Implement rest periods at mealtime by allowing 2 to 3 hours for food, fluids, nutrients, and electrolytes (sodium and potassium) to move into the small intestine and bloodstream before the next practice.

9. Provide an adequate supply of proper fluids (water or sports drinks) to maintain hydration and institute a hydration protocol that allows the maintenance of hydration status. The goal should be to lose no more than 2% to 3% of body weight during the practice session (due to sweat and urine losses).

10. Minimize the amount of equipment and clothing worn by the athlete in hot and/or humid conditions. When athletes exercise in the heat, they should wear loose-fitting, absorbent, and light-colored clothing; mesh clothing and new generation cloth blends have been specially designed to allow more effective cooling.

11. Allow athletes to practice in shaded areas and use electric or cooling fans to circulate air whenever feasible.

12. Include the following supplies on the field, in the locker room, and at various other stations: A supply of cool water and/or sports drinks to meet the participants’ needs, ice for active cooling (ice bags, tub cooling), rectal thermometer (when available) to assess body-core temperature, and a telephone or 2-way radio to communicate with medical personnel.

13. Notify local hospital and emergency personnel before mass participation events to inform them of the event and the increased possibility of heat-related illnesses.

Heat Index and High Humidity Chart
The Heat Index identifies the temperature the body feels when heat and humidity are combined. Daily measurements of heat and humidity will be monitored closely prior to practices and competition on high-risk days. The athletic trainer holds the authority to cancel or postpone athletic events due to unsafe weather conditions.
Methods of monitoring heat and humidity:

- Sling psychrometer
- Computer or weather channel if no access to a sling psychrometer or Wet-Bulb Globe Temperature (WBGT)-Hotbox
  - Weather.com

<table>
<thead>
<tr>
<th>WBGT</th>
<th>Flag Color</th>
<th>Risk Level</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 65° F</td>
<td>Green</td>
<td>Low</td>
<td>Risk low but still exists on the basis of risk factors</td>
</tr>
<tr>
<td>65-73° F</td>
<td>Yellow</td>
<td>Moderate</td>
<td>Risk level increases as event progresses through the day</td>
</tr>
<tr>
<td>73-82° F</td>
<td>Red</td>
<td>High</td>
<td>Everyone should be aware</td>
</tr>
</tbody>
</table>
The following graph depicts what equipment should be worn as the heat index rises.


**Management**

**Treatment for Heat Illnesses: heat syncope, heat cramps, and heat exhaustion**

1. Immediate removal from activity
2. Move the athlete to a cool or shaded area
3. Remove excess clothing
4. Cool the athlete with fans, ice towels, ice bags on the neck, armpits, trunk, and groin, and/or ice immersion
5. Replace fluids
6. Assess core body temperature and vitals
7. If applicable, refer or activate EAP

**Treatment for Heat Stroke**
*Following steps 1-4 above
1. Activate EAP immediately.
2. Position athlete into shock recovery position. Legs are elevated above the head unless in ice immersion
3. Continue to monitor signs and symptoms until EMS arrives
4. Reassess vitals until EMS arrives

PIAA Guidelines
Heat Acclimitization

PIAA Guidelines:
All sports:
http://www.piaa.org/assets/web/documents/BOD_Agenda/2013/March/Att2.pdf#page=3

Recommendations
The heat-acclimatization period is the initial 14 consecutive days of preseason practice. Any practices or conditioning conducted before this time should not be considered a part of the heat-acclimatization period. The goal of the acclimatization period is to increase exercise heat tolerance and enhance the ability to exercise safely in hot & humid conditions.

The consensus statement lists seven key recommendations for a 14-day heat-acclimatization period prior to full-scale athletic participation by secondary school students, as follows:

1. Day 1-5: athletes may not participate in more than one practice per day.
   - Total practice time should not exceed three hours per day.
   - A one-hour maximum walk-through is permitted during the first five days of the heat-acclimatization period; however, a three-hour recovery period should be inserted between the practice and walk-through.
   - Days 1-2: a helmet should be the only protective equipment permitted.
   - Days 3-5: only helmets and shoulder pads should be worn.
2. Day 6: all protective equipment may be worn and full contact may begin.
3. No earlier than Day 6 and continuing through Day 14, double-practice days must be followed by a single-practice day.
   - On single-practice days, one walk-through is permitted, but it must be separated from the practice by at least 3 hours of continuous rest.
4. On a 2-a-day practice, practice should exceed 3 hours total
   - Student-athletes should not participate in more than five total hours of practice
   - Warm-up, stretching, cool-down, walkthrough, conditioning and weight-room activities are included as part of the practice time.
   - The practices should be separated by at least 3 continuous hours in a cool environment.
Inclimate Weather

Lightening

Policy

Chain of Command

- It is the responsibility and final decision of the athletic trainer to suspend outdoor activity and remove student-athletes from unsafe areas.
- If the athletic trainer is not present, the athletic director or head coach of that particular sport will assume responsibility.
- If neither athletic trainer nor head coach are present, an assistant coach of that particular sport will assume responsibility.

Criteria for Evacuating Outdoor Area

- The athletic trainer will watch for lightning and listen for thunder and also keep track of the “flash-to-bang” count.
- **Flash-to-bang protocol:**
  - Begin timing in seconds as soon as a lightning flash is seen.
  - Stop timing as soon as the thunder sound is heard after the lightning flash. This number is the “flash-to-bang” count.
  - Divide the “flash-to-bang” count by five.
  - The resulting number is the distance, in miles from the practice or game area to the lightning flash.
  - The activity must be stopped and area must be cleared when lightning is within six miles or 30 seconds.
  - When the “flash-to-bang” count is greater than 40 seconds and/or the 8-20 miles away, the athletic trainer needs to continue monitoring the impending conditions and notify the head coach, visiting team, and game officials that activity may need to be stopped at any time.

- **ALL** personnel are to evacuate to a safe structure or location when the “flash-to-bang” count is or less than 30 seconds

The athletic trainer will instruct the student athletes, coaching staff, and spectators where to go after clearing the practice/game location.

- **Safe shelters:** defined as “any building normally occupied or frequently used by people with plumbing and/or electrical wiring that acts to electrically ground the structure.”
  - Examples: school, concession stand (inside stadium), locker rooms, office building, house
  - Fully enclosed metal vehicle with a hard-top, windows shut, and no body part touching the outside metal frame.
Designated areas and safe locations should be labeled or marked by appropriate signs. A list of these locations for each field should be posted throughout the facility.

Examples of locations that routinely are high risk areas of shelter:

- Baseball/softball dugouts, metal bleachers, golf carts, storage sheds, isolated trees, flagpoles, open fields, swimming pools, metal fences, bikes

Avoid taking showers, using plumbing facilities, electrical appliances, and land-line telephones during a thunderstorm

If unable to reach safe shelter:

- Assume lightning safe position if you feel threatened or feel your hair stand on end or skin tingle. When either of these phenomena’s occur you should crouch on the ground, weight on the balls of your feet, feet together, head lowered, and ears covered. Do not lie on the ground.

Criteria for Safe Return to Outdoor Area

- Wait 30 minutes after the last sound of thunder or sight of lightning to resume.
- Return to play decision is at athletic trainer’s discretion.
- If at any point during resumed play inclement weather proceeds, follow the above protocol

EAP

To manage victims of lightning strike

- Activate Emergency Action Plan
- Survey the scene for safety. Ongoing thunderstorms may still pose a threat to emergency personnel responding to the situation.
- Activate the local emergency management system.
- Move the victim carefully to a safer location, if needed.
- Evaluate and treat for apnea and asystole.
- Evaluate and treat for hypothermia and shock.
- Evaluate and treat for fractures and burns.

Tornado

When a tornado warning is in effect for the area, all practices or games will be postponed until the warning has been withdrawn.
• All athletes, coaches, visitors, and fans will be taken to the safe shelter locations where they will assume the “tornado-safe” position.

• “Tornado-Safe” Position:
  o Person is sitting or kneeling FACING the wall, with his/her hands over the back of his/her head and neck, tucked into a ball.

• Safe Shelters:
  o In the interior rooms and hallways of the lowest floor and away from windows.
    Examples: school, concession stand (inside stadium), locker rooms, office building, house

All individuals should have the right to leave an athletic site or activity, without fear of repercussion or penalty, in order to seek a safe structure or location if they feel they are in danger from inclement weather.
Infectious Diseases

Policy
The Occupational Safety and Health Administration (OSHA) guidelines should be followed when dealing with all bodily fluids. Any cross-contamination incidents should be documented and reported as outlined in the OSHA guidelines. Athletes are a high-risk population often due to their increased exposure to different people, environments, and outgoing lifestyles and behaviors.

National Federation of State High School Association (NFHS) Position Statement and Guidelines for Sports Related Infections:

Ringworm, Tinea Corporis
These fungal lesions are due to dermatophytes. As they are easily transmissible the athlete should be treated with an oral or topical antifungal medication for a minimum of 72 hours prior to participation. Once the lesion is considered to be no longer contagious it may be covered with a bio occlusive dressing.

Impetigo, Folliculitis, Carbuncle and Furuncle
While these infections may be secondary to a variety of bacteria, they should all be treated as Methicillin-Resistant Staphylcoccus aureus (MRSA) infections. The athlete should be removed from practices and competition and treated with oral antibiotics. Return to contact practices and competition may occur after 72 hours of treatment providing the infection is resolving.

All lesions are considered infectious until each one has a well-adherent scab without any drainage or weeping fluids. Once a lesion is no longer considered infectious, it should be covered with a bio occlusive dressing until complete resolution. Since nasal colonization of these bacteria is common, treatment with intranasal topical mupirocin should be considered for recurrent episodes.

All team members should be carefully screened for similar infections. If multiple athletes are infected, consideration should be given to obtaining nasal cultures of all teammates. This can identify carriers and allow for targeted treatment with intranasal mupirocin and daily body washes with a chlorhexidine 4% solution for at least five days.

Shingles, Cold Sores
These are viral infections which are transmitted by skin-to-skin contact. Lesions on exposed areas of skin that are not covered by clothing, uniform, or equipment require the player to be withdrawn from any activity that may result in direct skin-to-skin contact with another participant. Covering infectious lesions with an occlusive dressing is not acceptable. Primary outbreaks of shingles and cold sores require 10-14 days of oral antiviral medications while recurrent outbreaks require five days of treatment as a minimum treatment time prior to returning to participation. To be considered “non-contagious,” all lesions must be scabbed over with no oozing or discharge and no new lesions should have occurred in the preceding 48 hours.

Herpes Gladiatorum
This skin infection is caused by Herpes Simplex Virus Type 1 (HSV-1). The spreading of this virus is strictly skin-to-skin with the preponderance of the outbreaks developing on the head, face and
neck, reflecting the typical lock-up position. The initial outbreak is characterized by a raised rash with groupings of 6-10 vesicles (blisters). The skin findings are accompanied by sore throat, fever, malaise and swollen cervical lymph nodes. The infected individual should be removed from contact and treated with antiviral medications. They may return to contact only after all lesions are healed with well adherent scabs, no new vesicle formation and no swollen lymph nodes near the affected area. Consideration should be given to prophylactic oral antivirals for the remainder of the season and each subsequent season.

As the HSV-1 may spread prior to vesicle formation, anyone in contact with the infected individual during the three days prior to the outbreak must be isolated from any contact activity for eight days and be examined daily for suspicious skin lesions. To be considered “non-contagious,” all lesions must be scabbed over with no oozing or discharge and no new lesions should have occurred in the preceding 48 hours.

Miscellaneous Viral Infections
Molluscum contagiosum and verruca are types of warts that are caused by viruses, but are not considered highly contagious. Therefore these lesions require no treatment or restrictions, but should be covered if prone to bleeding when abraded.

Communicable Disease Procedures/Management
While risk of one athlete infecting another with HIV/AIDS during competition is close to non-existent, there is a remote risk that other blood borne infectious diseases can be transmitted. Procedures for reducing the potential for transmission of these infectious agents should include, but not be limited to all standard blood-borne pathogens procedures.

Infectious Diseases
Any athlete that reports systemic problems (fever, malaise, productive cough, etc) to the AT should be referred to a physician for further evaluation.

Skin Disease
Any suspicious lesions should be reported, documented, and inspected by an AT. If further examination is required, the AT will refer the athlete to a physician. All return to competition decisions will be based on the physician recommendations.

MRSA
Any athlete who is suspected to have MRSA or who has MRSA should be immediately isolated from the rest of the team and referred to a physician. As a precaution, the athletic training facility and locker room should be disinfected.

Education & Prevention

Hygiene
- Administration, coaching staff, and custodial staff must be informed of the importance of institutional support for maintaining proper infection control policies.
- Coaches must be informed of the importance of being vigilant with their athletes following infection control policies to minimize transmission of infectious disease.
- Athletes must be educated about the following:
Avoid sharing towels, athletic gear, water bottles, disposable razors, deodorant, shower shoes, hair and nail clippers, and other toiletry items that come in contact with the body.

Perform daily self-surveillance and report all abrasions, cuts, and skin lesions to and seek attention from the athletic training staff immediately for proper assessment, cleansing, treatment, and wound dressing.

The necessary hygiene materials must be provided to the athletes including antimicrobial liquid soap in showers and by all sinks.

- Visibly dirty hands should be washed with an antimicrobial soap utilizing the following hand washing technique: wet the hands, apply antimicrobial liquid soap, rub the hands together vigorously for at least 15 seconds, rinse the hands with water, then dry thoroughly with a disposable towel.
- If hands are not visibly dirty, the use of an alcohol based hand rub (hand sanitizer) to decontaminate is acceptable.
- Hands should be decontaminated before and after touching a patient’s skin or clothing.
- Athletes must shower after every practice and game using antimicrobial soap and water over the entire body.
- Athletes should refrain from cosmetic body shaving.
- Soiled clothing, including practice gear, undergarments, outerwear, and uniforms, must be laundered on a daily basis.
- Equipment, including joint sleeves and braces, should be disinfected on a daily basis.

Environment

- Frequently touched surfaces including wrestling mats, treatment tables, rehabilitation equipment, locker room benches, and floors should be cleaned and disinfected after contact with each individual patient.

Surfaces should be disinfected with a bleach-water solution with a 1:9 ratio.

PIAA Guidelines

Sickle Cell Trait

Policy
Sickle cell trait (SCT) is a genetic disorder characterized by the inheritance of one gene for sickle hemoglobin and one gene for normal hemoglobin. During intense or extensive bouts of exercise the normal circular red blood cell can turn into a half moon or sickle shape. This abnormality in structure can create blockages in blood vessels that leads to the damage of vital organs, muscles, and even death. This disorder is most prevalent in people of African, Mediterranean, and Middle Eastern decent.

Considerations for increased risk
- Extreme heat & humidity
- Dehydration
- Asthma
- Illness
- Higher altitudes
- High intensity training
- Long duration training

Prevention
Athletes with SCT are still able to participate in athletics/physical activity; however, several precautions should be taken. These include:
- Prescreening: SCT athletes will be identified during the pre-participation exam
- Educate coaching staff on SCT signs and symptoms

Special Considerations
1) Slow progressions into practice/training which includes longer rest and recovery periods between repetitions.
2) Encourage athletes to engage in year round training that allows them to prepare for the rigors and demands of their sport.
3) Time trials, performance tests, and other efforts or tests that require maximal effort should be avoided by athletes with SCT.
4) The SCT athlete should cease activity when the following complaints occur: muscle cramping, pain, swelling, weakness, inability to catch their breath, or fatigue.
5) Practices in the environmental conditions mentioned earlier should be altered to avoid inducing a crisis. Strategies include: adjustment of work to rest ratio, emphasis on hydration, and closely monitor athletes who are new to training at a higher altitude.
6) Allow athlete to set their own pace.
7) Report any symptoms to the athletic trainer and immediately seek medical attention.

Management
A sickling crisis is a medical emergency. The following signs and symptoms warrant the immediate activation of the EAP:
- Muscle weakness exceeds muscle pain especially in the legs and low back, as opposed to the excruciating pain associated with heat cramps
- Athletes typically “slump” to the ground with weak muscles (instead of “locked up” muscles with heat cramps or a “sudden fall” from a cardiac pathology)
- Muscles will appear and feel normal, unlike the rock-hard and contracted muscles associated with heat cramps
- Rapid breathing is caused by lactic acidosis

The following steps should be completed by the athletic trainer until EMS arrives, if the necessary resources are available:
- Monitor vitals
- Cool the athlete as necessary
- Give supplemental oxygen by face mask
- Prepare for CPR and defibrillation with an AED if necessary

PIAA Guidelines
Suspected Spinal Cord Injury

EAP
In the event of a suspected spinal cord injury the EAP will be activated by the AT. The AT will delegate tasks to the personnel available.

- ATS - retrieve necessary equipment for emergency situation
- Coach - activate EMS from the AT’s verbal cues
- Assistant Coach - crowd control
  - Athletic Director - unlock gates & doors along appropriate route to location and meet and direct EMS.
- Send a staff AT or team physician with EMS if available. Call 911 to activate EMS. Use the Athletic Training room phone, cell phone, or 2-way radio to inform someone to call 911 and/or send Athletic Trainer to your location.

Airway Management
1. Airway management tools should be kept on the Athletic Trainer
2. Primary instrument used should be a cordless screwdriver, but a secondary instrument should be accessible including but not limited to:
   - FM extractor
   - Trainer’s Angel
   - Anvil pruners
3. Use jaw thrust maneuver to open airway.
4. A pocket mask with attached bag valve may be used to expedite ventilation assistance.

Moving the Patient
- Identify the level of consciousness.
- If patient is unresponsive and not breathing, he or she must be immediately moved to supine position to administer life saving techniques.
- If breathing is uncompromised, a prone athlete should be moved using the log roll technique.
- Reposition neck to neutral provided that contraindications are not present

Immobilization and Transport
- Manual cervical stabilization should be maintained until patient is stabilized on a spineboard.

Equipment Considerations
- Two underlying principles for equipment removal:
  i. Helmet does not fit properly - as per AT’s discretion.
  ii. Equipment does not provide proper neutral alignment - as per AT’s discretion.

Informing Parents/Guardians
The AT will be responsible for informing the appropriate individuals.