Grand Island Northwest High School
Emergency Care Plan

I. Summary of Emergency Care Plan
   A. Emergency Medical Evaluation and Transportation Procedures
      1. Situations may arise which require emergency medical attention. The cooperation of the head athletic trainer, coaching staff and EMT's is essential.
      2. All coaches involved with Grand Island Northwest Athletics should be current and certified in CPR and life support measures.
      3. If at any time the athlete becomes ill or seriously injured, please adhere to the following guidelines:
         a. Establish consciousness/responsiveness. If unconsciousness, DO NOT move the athlete at anytime unless the athlete is in danger due to other external circumstances. In addition, the helmet and shoulder pads or other protective devices should not be removed.
            1. The facemask, however, should be removed prior to transportation, regardless of current respiratory status. The helmet and chin strap should only be removed in extenuating circumstances.
         b. If the athlete is unconscious, send for help immediately. Activate EMS 911 and have a responsible person stabilize the head and check ABC's (Airway/Breathing/Circulation) as soon as possible.
         c. The athlete should not be moved unless absolutely essential to maintain airway, breathing and circulation.
         d. Initiate rescue breathing (RB) and/or CPR if indicated. An athlete's facemask should be removed for life support access. If an athlete needs to be moved to perform either of these activities, maintain head and neck immobilization and have two-three other responsible people to help roll the athlete as one unit and move to an appropriate position.
         e. Continue rescue breathing and CPR until EMS arrives or until another certified individual takes over for you, or the athlete begins to breath on their own.
      4. If the athlete begins to breath on their own prior to EMS arrival, continue to monitor the athletes vital signs, ABC's and maintain head immobilization.
      5. Have the athletes medical information available (if possible) for EMS upon arrival.
      6. Contact the certified athletic trainer and or athletic director ASAP.
      7. Notify parents ASAP.
      8. Most importantly:
         a. Establish responsiveness
         b. Activate EMS
         c. If unconscious, stabilize head and neck, check ABC's and initiate RB or CPR
         d. Stay with the athlete until EMS or physician takes over
         e. Never do more than you feel you can or are qualified to do. Never make a situation more difficult or worse.
   B. Guidelines for Sideline Personnel During Serious On-Field Injuries
      1. Only authorized personnel are allowed on the field as deemed necessary by the Head Athletic Trainer.
      2. Players and coaches must go to and remain on the bench area. Direct all players and coaches accordingly. Always ensure adequate lines of vision between the medical staff and all available emergency personnel.
      3. Attempt to keep players a significant distance away from the seriously injured player.
      4. DO NOT allow a player to roll the injured athlete over, pull an injured teammate or opponent from a pile-up or assist a teammate who is lying on the field. (i.e. Remove the helmet or chin strap or attempt to assist breathing by elevating the waist)
      5. Once the medical staff begins to work on an injured athlete, all members of the officiating crew should control the total playing field environment and team personnel, allowing medical staff to perform services without interruption or interference.
      6. Players and coaches should be appropriately controlled to avoid dictating medical services to or taking time of the certified athletic trainers or team physicians.

Northwest High School
Emergency Care Plan

The emergency plan addresses immediate need for medical assistance in the event of traumatic injury or illness. The emergency plan outlines the guidelines for effective evaluation, transportation and follow-up of the situation. The emergency plan impacts coaches, spectators, practice/game officials as well as athletes. The emergency plan addresses situations that may arise from the first day of practice to the last team meeting, including weekends. The emergency action plan will be reviewed by all coaches, certified athletic trainers, and athletic training students during the first week of fall sports. Athletic training students will review and sign a release form stating they have reviewed and understood the policies and procedures.

Included in the emergency plan are site specific emergency action plans and maps of each site with highlighted areas of entrance. (Maps of each site have been provided to local EMS as well.)

Should an injury occur which needs medical assistance, the following are critical items that would need to be addressed by the certified athletic trainer (ATC), coach, designated first aid responder and/or athletic director.

- Athlete Injury Evaluation:
    - Certified Athletic Trainer
    - Head Coach
    - Athletic Director or School Official
    - Northwest Athletic Training Students
- Notification of Ambulance (911):
    - Certified Athletic Trainer
    - Head Coach
    - Athletic Director or School Official

**AED Located: ATC's golf cart; Northeast Hallway by Nurses Office

- Meet Ambulance:
    - Athletic Director or School Official
    - Northwest Athletic Training Students
- Notification of Parents:
    - Certified Athletic Trainer
    - Head Coach
    - Athletic Director or School Official

First aid kits, with emergency care and concussion cards, and quick access to ice will be the standard for each practice and event. The Certified Athletic Trainer will be within easy contact to provide care.

In case of catastrophic injury, no information should be given to any part other than the EMS. The ATC and/ or coach should notify the athletic director. The athletic director should be responsible for contacting the superintendent and/or principal of the school. The athletic director or other school administrator will release the appropriate information to the media.

Emergency Action Plans
Viking Athletics/Facilities

Football Practice Fields

Coverage: A minimum of three athletic training students will be present at all practices. The Head Athletic Trainer will be present at all practices, with the exception of conflicting varsity competition.
In a cardiac event we will have an AED on-site and will activate EMS immediately.
In a heat related emergency there will be ice and cold water to start the cooling process. EMS will be activated and athlete will be moved to the football shed for shade. Athlete will be placed in a Heat Illness Recovery Tank (HIRT tank) located next to the football shed. Athlete will stay in the HIRT tank for 15 to 20 minute or deemed appropriate to transport or remove from the tank. Tank will be available when heat index is greater than 90 degrees.
Inclimate weather situation will be conducted when thunder is heard or lightning is seen, people should vacate to a previously identified safe location. People should remain inside for at least 30 minutes after the last lightning strike or last sound of thunder.
Phone Location: Mobile phones; ATC's Office; Weight Room Office
AED Locations: ATC's golf cart; Northeast Hallway by Nurses Office
EMS Access: Exit gate on North Rd., then straight through teachers parking lot; someone will meet ambulance and direct them.

Viking Field

Coverage: A minimum of three athletic training students will be present at all Varsity home games; a minimum of two students will be present at all freshmen/junior varsity games. The Head Athletic Trainer will be present at all varsity games; the Head Athletic Trainer will be present at freshman/junior varsity games when available.
In a cardiac event we will have an AED on-site and will activate EMS immediately.
In a heat related emergency there will be ice and cold water to start the cooling process. EMS will be activated and athlete will be moved to the football shed for shade. Athlete will be placed in a Heat Illness Recovery Tank (HIRT tank) located next to the football shed. Athlete will stay in the HIRT tank for 15 to 20 minutes or deemed appropriate to transport or remove from the tank. Tank will be available when heat index is greater than 90 degrees.
Inclimate weather situation will be conducted when thunder is heard or lightning is seen, people should vacate to a previously identified safe location. People should remain inside for at least 30 minutes after the last lightning strike or last sound of thunder.
Phone Location: Mobile phones; ATC's Office; Weight Room Office
AED Locations: Golf Cart located on field
EMS Access: Exit gate on North Rd., then straight through teachers parking lot; someone will meet ambulance and direct them.

Vets Park (Softball Fields)

Coverage: No athletic trainer coverage will be provided for practices. The Head Athletic Trainer will be present for Varsity games when available.
In a cardiac event we will have an AED on-site and will activate EMS immediately.
In a heat related emergency there will be ice to start the cooling process. EMS will be activated and athlete will be moved to a shaded area.
Inclimate weather situation will be conducted when thunder is heard or lightning is seen, people should vacate to a previously identified safe location. People should remain inside for at least 30 minutes after the last lightning strike or last sound of thunder.
Phone Location: Mobile phones
AED Locations: No available AED on-site
EMS Access: Head North on 281, enter the Vets Sports complex and proceed to field C ; someone will meet ambulance at gates and direct them.

Volleyball/Basketball Courts (Big/Small Gym)

Coverage: A minimum of one athletic training student will be available for non-varsity games; athletic trainer coverage will be provided for practices when available. The Head Athletic Trainer will be present for games when available.
In a cardiac event we will have an AED on-site and will activate EMS immediately.
In a heat related emergency there will be ice to start the cooling process. EMS will be activated and athlete will be moved to an air conditioned room next to the gym.
Phone Location: Mobile phones; ATC's Office; Weight Room Office
AED Locations: North hallway by concession stand; northeast hallway by Nurse's Office
EMS Access: Main entrance gate on North Rd. straight to main office doors; someone will meet ambulance and direct them.

Wrestling Deck

Coverage: A minimum of one athletic training student will be available for practice; a minimum of one student and the Head Athletic Trainer will be present at home wrestling events.
In a cardiac event we will have an AED on-site and will activate EMS immediately.
In a heat related emergency there will be ice to start the cooling process. EMS will be activated and athlete will be moved to an air conditioned room next to the gym.
Phone Location: Mobile phones; ATC's Office; Weight Room Office
AED Locations: North hallway by concession stand; northeast hallway by Nurse's Office
EMS Access: Main entrance gate off of North Rd. straight around to the back of the school to double doors; someone will meet ambulance and direct them.

Track

Coverage: A minimum of one athletic training students will be present at all home track meets; student athletic trainers and head athletic trainer will be present at practices, with the exception of conflicting varsity competition.
In a cardiac event we will have an AED on-site and will activate EMS immediately.
In a heat related emergency there will be ice and cold water to start the cooling process. EMS will be activated and athlete will be moved to the football shed for shade.
Inclimate weather situation will be conducted when thunder is heard or lightning is seen, people should vacate to a previously identified safe location. People should remain inside for at least 30 minutes after the last lightning strike or last sound of thunder.
Phone Location: Mobile phones; ATC's Office; Weight Room Office
AED Locations: Track Shed (during home meets); ATC's office; northeast hallway by Nurse's Office
EMS Access: Exit gate on North Rd., then straight through teachers parking lot; someone will meet ambulance and direct them.

Boys/Girls Soccer Fields

Coverage: A minimum of two athletic training students will be present at all home games, unless conflicting track meet. The Head Athletic Trainer will be present at all practices.
In a cardiac event we will have an AED on-site and will activate EMS immediately.
In a heat related emergency there will be ice to start the cooling process. EMS will be activated and athlete will be moved to the football shed for shade.
Inclimate weather situation will be conducted when thunder is heard or lightning is seen, people should vacate to a previously identified safe location. People should remain inside for at least 30 minutes after the last lightning strike or last sound of thunder.

Phone Location: Mobile phones; ATC's Office; Weight Room Office
AED Locations: ATC's golf cart (games only); ATC's Office; Northeast Hallway by Nurses Office
EMS Access: Exit gate on North Rd., then straight through teachers parking lot; someone will meet ambulance and direct them. (Girls Field)
Straight down Capital Ave., turn on Jan St. and head straight through gate; someone will meet ambulance and direct them further (Boys Field)

Jack Rabbit Run Golf Course
Coverage: No athletic trainer coverage will be provided for golf meets/practice.
Inclimate weather situation will be conducted when thunder is heard or lightning is seen, people should vacate to a previously identified safe location. People should remain inside for at least 30 minutes after the last lightning strike or last sound of thunder.
Phone Location: Mobile phones; Golf club house
AED Locations: Located in the Golf Pro Shop
EMS Access: Head North on N Shady Bend Rd. Enter the Jackrabbit Golf Course Entrance. Take that Road until you Reach the clubhouse and someone will meet EMS there.

Cheerleaders/Vikettes
Coverage: No athletic trainer coverage will be provided for practices. An athletic trainer will be on-site if needed.
Phone Location: Mobile phones
AED Locations: North hallway by concession stand; northeast hallway by Nurse's Office
EMS Access: Will be dependant of event going on

Intramurals
Coverage: No athletic trainer coverage will be provided for intramural athletics. An athletic trainer will be on-site after school hours if needed.
Phone Location: Mobile phones
AED Locations: North hallway by concession stand; northeast hallway by Nurse's Office
EMS Access: Main entrance gate on North Rd. straight to main office doors; someone will meet ambulance and direct them.

Viking Weight Room
Contact school nurse with injury related problems during school hours. An athletic trainer will be on-site after school hours if needed.
In a cardiac event we will have an AED on-site and will activate EMS immediately.
In a heat related emergency there will be ice and cold water to start the cooling process. EMS will be activated and athlete will be moved to the football shed for shade.
Inclimate weather situation will be conducted when thunder is heard or lightning is seen, people should vacate to a previously identified safe location. People should remain inside for at least 30 minutes after the last lightning strike or last sound of thunder.
Phone Location: Weight Room Office
AED Locations: North hallway by concession stand (unless fall/spring sports season, then look in ATC's office); northeast hallway by Nurse's Office
EMS Access: Exit gate on North Rd., then straight through teachers parking lot; someone will meet ambulance and direct them.

NATA Blood Borne Pathogens Guidelines for Athletic Trainers

Athletic Participation

Decisions regarding the participation of athletes infected with bloodborne pathogens in athletic competitions should be made on an individual basis. Such decisions should be made following the standard or appropriate procedures generally followed with respect to health-related participation questions, and taking into account only those factors that are directly relevant to the health and rights of the athlete, the other participants in the competition, and the other constituencies with interest in the competition; the athletic program, the athletes, and the sponsoring schools and organizations.

The following are examples of factors that are appropriate in many settings to the decision-making process:

- The current health of the athlete
- The nature and intensity of the athlete's training
- The physiological effects of the infection being transmitted
- The desires of the athlete
- The administrative and legal needs of the competitive program

Education of the Physically Active

In a rapidly changing medical, social, and legal environment, educational information concerning blood borne pathogens is of particular importance. The athletic trainer should play a role with respect to the creation and dissemination of educational information that is appropriate to and particularized with respect to that athletic trainer's position and responsibilities.

Athletic trainers who are responsible for developing educational programs with respect to blood borne pathogens should provide appropriate information concerning:

- The risk of transmission or infection during competition
- The risk of transmission or infection generally
- The availability of HIV testing
- The availability of HBV testing and vaccinations

Athletic trainers who have educational program responsibility should extend educational efforts to include those, such as the athletes' families and communities, who are directly or indirectly affected by the presence of blood borne pathogens in athletic competitions.

All educational activities should, of course, be limited to those within athletic trainers' scope of practice and competence, be within their job description or other relevant roles, and be undertaken with the cooperation and/or consent of appropriate personnel, such as team physicians, coaches, athletic directors, school or institutional counsel, and school and community leaders.

The Athletic Trainer and Blood Borne Pathogens at Athletic Events

The risk of bloodborne pathogen transmission at athletic events is directly associated with contact with blood or other body fluids. Athletic trainers who have responsibility for overseeing events at which such contact is possible should use appropriate preventative measures and be prepared to administer appropriate treatment, consistent with the requirements and restrictions of their job, and local, state, and federal law.

In most cases, these measures will include:

- Pre-event care and covering of existing wounds, cuts, and abrasions
- Provision of the necessary or usual equipment and supplies for compliance with universal precautions, including latex gloves, biohazard containers, disinfectants, bleach solutions, antiseptics, and sharps containers
- Early recognition and control of a bleeding athlete, including measures such as appropriate cleaning and covering procedures, or changing of blood-saturated clothes
- Requiring all athletes to report all wounds immediately
- Insistence that universal precaution guidelines be followed at all times in the management of acute blood exposure
- Appropriate cleaning and disposal policies and procedures for contaminated areas of equipment
- Appropriate policies with respect to the delivery of life-saving techniques in the absence of protective equipment
- Post-event management including, re-evaluation, coverage of wounds, cuts and abrasions

- Appropriate policy development, including incorporation, with necessary legal and administrative assistance, of existing OSHA and other legal guidelines and conference or school rules and regulations

Student Athletic Trainer Education

NATA encourages appropriate education of and involvement of the student athletic trainer in educational efforts involving blood borne pathogens. These efforts and programs will vary significantly based on local needs, requirements, resources, and policies.

At the secondary school level, educational efforts should include items such as the following:

- Education and training in the use of universal precautions and first aid for wounds
- Education regarding the risks of transmission/infection from the participants that they care for
- Education on the availability of HIV testing
- Education on the availability of HBV vaccinations and testing
- Education of parents or guardians regarding the students' risk of infection

Universal Precautions and OSHA Regulations

Athletic trainers should, consistent with their job descriptions and the time and legal requirements and limitations of their jobs and professions, inform themselves and other affected and interested parties of the relevant legal guidance and requirements affecting the handling and treatment of blood borne pathogens.

Athletic trainers cannot be expected to practice law or medicine, and efforts with respect to compliance with these guidelines and requirements must be commensurate with the athletic trainer's profession and professional requirements. It may be appropriate for athletic trainers to keep copies of the Center for Disease Control regulations and OSHA regulations and guidelines available for their own and others' use.

Medical Records and Confidentiality

The security, record-keeping, and confidentiality requirements and concerns that relate to athletes' medical records generally apply equally to those portions of athletes' medical records that concern bloodborne pathogens.

Since social stigma is sometimes attached to individuals infected with bloodborne pathogens, athletic trainers should pay particular care to the security, record-keeping, and confidentiality requirements that govern the medical records for which they have a professional obligation to see, use, keep, interpret, record, update, or otherwise handle.

Security, record-keeping, and confidentiality procedures should be maintained with respect to the records of the other athletic trainers, employees, student athletic trainers, and athletes, to the extent that the athletic trainer has responsibility for these records.

The Infected Athletic Trainer

An athletic trainer infected with a bloodborne pathogen should practice the profession of athletic training taking into account all professionally, medically, and legally relevant issues raised by the infection. Depending on individual circumstances, the infected athletic trainer will or may not wish to:

- Seek medical care and ongoing evaluation
- Take reasonable steps to avoid potential and identifiable risks to his or her own health and the health of his or her patients
- Inform, as or when appropriate, relevant patients, administrators, or medical personnel

HIV and HBV Testing

Athletic trainers should follow federal, state, local, and institutional laws, regulations, and guidelines concerning HIV and HBV testing. Athletic trainers should, in appropriate practice settings and situations, find it advisable to educate or assist athletes with respect to the availability of testing.

HBV Vaccinations

Consistent with professional requirements and restrictions, athletic trainers should encourage HBV vaccinations for all employees at risk, in accordance with OSHA guidelines.

Management of Athletes with Exertional Heat Illness

Prevention

Proper identification of environmental risk factors should be noted prior to practice or competition. This includes monitoring temperature and humidity levels. Athletes with greatest risk of exertional heat illness (history of heat illness, poorly conditioned, lack acclimatization, larger athletes) will be identified prior to practice starting and monitored. Education on proper methods of hydration will be provided to all athletes prior to the start of the season.

Recognition

It is important to understand the signs and symptoms associated with heat illness. Heat illness includes muscle cramps, heat exhaustion, heat syncope (fainting) and heat stroke. Each has different signs and symptoms and should be managed properly at the first sign or symptoms.

Muscle (heat) cramps: acute, painful, involuntary muscle contractions. Muscle cramps can be caused by a sodium deficiency, dehydration and neuromuscular fatigue. Muscle cramps can be reduced by ceasing training/exercise and replacing fluids and electrolytes with sports drinks. Emergency medical attention may be needed if cramps can not be reduced.

Heat Exhaustion:

Symptoms include: diarrhea, fatigue, hyperventilation, weakness, headache, nausea, inability to continue exercise
Causes: sodium deficiency, dehydration, energy depletion, hyperthermia
Resolutions: cease training/ exercise, replace fluids and electrolytes with a sports drink, move to a cooler environment. Emergency medical attention may be needed if the body can not cool off or symptoms worsen.

Heat Syncope:

Symptoms: fainting after sudden cessation of exercise or sudden/prolonged standing, headache, nausea
Causes: peripheral pooling of blood, dehydration, cerebral ischemia
Resolutions: cease training/exercise, replace fluids and electrolytes with a sports drink, relocate to a cooler environment. Athletes with heat syncope may need to be referred on for further medical attention to replace fluids.

Heat Stroke:

Symptoms: central nervous symptom dysfunction manifested as altered mental status (ex. confusion, combativeness), seizure, coma
Causes: thermoregulatory overload or failure
Resolutions: rapid cooling of the body. Emergency medical attention is a must in athletes with heat stroke.

Management

Proper hydration and rehydration is the most efficient way to manage any heat illness. Thirst is not an effective method in determining hydration. Athletes and coaches should establish a re-hydration schedule for practice and personal times. Any athlete who has a heat related illness will carefully be monitored and slowly introduced back to activity. If the athlete has been referred on for further medical attention, return to play will be determined by a physician.

Management of Athletes with Sports Related Concussion

Includes information on C-Spine Injuries and Head Down Contact

A concussion is a type of traumatic brain injury that changes the way the brain normally works. A concussion is caused by a bump, blow, or jolt to the head or body that causes the head and brain to move rapidly back and forth. Even a “ding” or “getting your bell rung” or what seems to be a mild bump or blow to the head can be serious.

Recognition

Signs of concussion include: appears dazed or stunned; is confused about assignment or position; forgets instructions; is unsure of game, score, or opponent; moves clumsily; answers questions slowly; loses consciousness (even briefly); shows mood, behavior, or personality changes; can’t recall event prior to hit or fall; and can’t recall events after the hit or fall. Symptoms of concussion are reported by the athlete and include: Headache or “pressure in head; nausea or vomiting; balance problems or dizziness; double or blurry vision; sensitivity to light and/or noise; feeling sluggish, hazy, foggy, or

groggy; concentration or memory problems; confusion; and just not “feeling right” or “feeling down”.

Prevention
Concussions can be prevented with proper technique. Athletes who are at risk of concussion or have a previous history of concussion will be identified by the athletic trainer prior to the start of the season. Pre-season testing will be administered on all sports considered to be “contact”. Each year, freshman, juniors and new students will be tested. Test scores will be read and observed by the head athletic trainer. Athletes, coaches and parents should be provided with educational material regarding concussion, if desired.

Management
If an athlete is suspected of having a concussion, they will be removed from play and be evaluated by the athletic trainer. Symptoms will be monitored until the athlete is picked up by a parent or guardian. The athlete will remain out of play until they are symptom-free and are medically cleared to return to play, both by the athlete's physician and by post-concussion testing. The physician may dictate a return to learning protocol, which directs the athlete’s school involvement. Once the athlete has progressed through the return to learn and has been medically cleared, they will begin the return to play protocol. The athlete will be run through exertional activities to determine return to play status. If symptoms reappear, the athlete will be pulled from activity until symptoms subside, then begin activities again until the supervision of the athletic trainer. Rest is key to helping an athlete recover from a concussion. Exercising or activities that involve a lot of concentration, such as studying, working on the computer, or playing video games, may cause concussion symptoms to reappear or get worse. After a concussion, returning to sports or school is a gradual process that should be carefully managed and monitored by a healthcare professional and/or Head Athletic Trainer.

C-Spine Injuries
Prevention
Athletic trainers should be familiar with sport-specific causes of cervical spine injury (c-spine) and understand the physiologic responses in spinal cord injury. Coaches and athletes should be educated on the mechanisms of c-spine injuries and safety rules should be enacted to prevent c-spine injuries. Corrosive-resistant hardware should be used in helmets and helmets should be regularly maintained throughout the season. Helmets should undergo regular reconditioning and recertification. The local EMS providers should be familiar with proper athletic equipment removal.

Recognition
The presence of any of the following, alone or in combination, requires the initiation of the spine injury management protocol: unconsciousness or altered level of consciousness, bilateral neurologic findings or complaints, significant midline spine pain with or without palpation, or obvious spinal column deformity.

Treatment and Management
The cervical spine should be in neutral position, and manual cervical spine stabilization should be applied immediately. Traction should not be applied to the cervical spine! Immediate attempts should be made to expose the airway, even if the athlete is still breathing. If rescue breathing becomes necessary, the person with the most training and experience should establish an airway and begin rescue breathing. If the spine is not in a neutral position, rescuers should realign the cervical spine. Realignment is contraindicated if there is an increase in pain with movement, neurologic symptoms are present, muscle spasm, the airway is compromised, there is physical difficulty repositioning the spine, resistance is encountered, or apprehension is expressed by the athlete. The athlete's head should be immobilized by external devices when available, then manual stabilization should be applied again. Athletes should then be placed on the spine board for transportation. Athletic equipment should be removed, as much as possible, prior to spine boarding and transportation.

Head-Down Contact in Football
Prevention
Axial loading is the primary mechanism for catastrophic c-spine injuries Head-down contact is defined as initiating contact with the top or crown of the helmet. Spearing is the intentional use of a head-down contact technique. Unintentional head-down contact is the inadvertent dropping of the head just before contact. Both head-down techniques are dangerous and may result in axial loading of the c-spine and can result in injury. Proper contact should be taught at all levels of competition. It is important for coaches to educate players on proper technique.

NSAA Wet Bulb Globe Thermometer (WBGT) Heat Modification Guidelines

The NSAA Board of Directors approved the Wet Bulb Globe Thermometer (WBGT) as the recommended measurement practice and device for measuring acceptable heat / humidity levels for practices and contests. The use of WBGT is recommended throughout the calendar year when the ambient temperature is above 80 degrees.

Region 1	Region 2	Activity Guidelines
< 76.1	< 79.7	NORMAL ACTIVITIES 3 SEPARATE - 3 TO 5 MINUTE REST / WATER BREAKS PER HOUR
76.2 - 81	79.8 - 84.6	USE DISCRETION FOR INTENSE / PROLONGED PRACTICE 3 SEPARATE - 4 TO 6 MINUTE REST / WATER BREAKS PER HOUR MONITOR AT-RISK ATHLETES CLOSELY COLD WATER IMMERSION AVAILABLE
81.1 - 84	84.7 - 87.6	MAXIMUM PRACTICE TIME IS 2 HOURS HELMETS AND SHOULDER PADS ONLY REMOVE HELMETS AND SHOULDER PADS IF CONDITIONTING (FOOTBALL) 4 SEPARATE - 4 TO 6 MINUTE REST / WATER BREAKS PER HOUR MONITOR AT-RISK ATHLETES CLOSELY COLD WATER IMMERSION AVAILABLE
		CONTESTS: PER NFHS RULES, IMPLEMENT ADDITIONAL/EXTENDED TIMEOUTS FOR REST / WATER BREAKS
84.1 - 86.1	87.7 - 89.7	MAXIMUM PRACTICE TIME IS 1 HOUR HELMETS AND SHOULDERS PADS PROHIBITED (FOOTBALL) NO CONDITIONING 4 SEPARATE - 5 TO 7 MINUTE REST / WATER BREAKS PER HOUR MONITOR AT-RISK ATHLETES CLOSELY COLD WATER IMMERSION AVAILABLE
		CONTESTS: PER NFHS RULES, IMPLEMENT ADDITIONAL/EXTENDED TIMEOUTS FOR REST / WATER BREAKS CONTESTS: CONSIDER DELAYING / POSTPONING START TIMES
> 86.1	> 89.7	NO OUTDOOR ACTIVITIES CANCEL OR DELAY OUTDOOR PRACTICES / CONTESTS UNTIL LOWER WBGT IS RECORDED

Additional Information:

PARTICIPANTS SHOULD ALWAYS HAVE UNRESTRICTED ACCESS TO WATER / FLUIDS
WBGT SHOULD BE MEASURED EVERY 30 MINUTES
INDIVIDUAL REACTIONS TO HEAT WILL VARY PER ATHLETE
SCHOOLS SHOULD HAVE AN EXERTIONAL HEAT ILLNESS EMERGENCY ACTION PLAN
AT RISK ATHELETES SHOULD ALWAYS BE MONITORED CLOSELY

WBGT is an all-inclusive measure of the heat stress in direct sunlight, which takes into account ambient temperature, humidity, sun angle, wind speed, cloud cover (solar radiation)

Management of Inclimate Weather Situations (Lightning)

Recommendations

The most effective prevention of lightning injury is to remain indoors during inclimate weather. When thunder is heard or lightning is seen, people should vacate to a previously identified safe location. People should remain inside for at least 30 minutes after the last lightning strike or last sound of thunder.

Treatment and Management

Victims who have been struck by lightning should be triaged with those who appear to be dead. Aggressive CPR and AED use may resuscitate these patients. Apply AED and perform CPR as warranted. Treat additionally for concussion, shock, fractures and dislocations as needed. Activate EMS immediately.

Special Considerations

Includes information of pregnancy, sickle cell trait, commotio cordis, female athlete triad/disordered eating, skin infections/MRSA, ergogenic aids

Pregnancy

Pregnancy creates numerous changes in the body. It is important for pregnant athletes to be as healthy as possible, this includes regular physician visits, diet and exercise. Pregnant athletes will be under the direct care of a physician and the athletic trainer will follow all physician guidelines.

Recommendations and Cautions on Exercise During Pregnancy

The pregnant athlete should avoid the following:

- Avoid supine (stomach lying) exercise after the first trimester
- Be discouraged from heavy weight lifting
- Be discouraged from activities that require Valsalva maneuver
- Avoid activities associated with high risk of falling
- Consider noncompetitive activity for those athletes involved in endurance sports
- Avoid contact sports after the 14th week of pregnancy
- Avoid any physical activity pending evaluation by an OB GYN when they have previously diagnosed medical condition that may affect normal pregnancy, such as uncontrolled diabetes or hypertension

Sickle Cell Trait

Recommendations

The athletic trainer should educate coaches, athletes, and parents about complications of exertion in the athlete with sickle cell trait (SCT). Targeted education and tailored precautions may provide a margin of safety for the athlete with SCT. Athletes with known SCT should be allowed longer periods of rest and recovery between conditioning repetitions, and be excluded from participation in performance tests such as mile runs and serial sprints. Workouts will be adjusted accordingly to include cycling. Emphasize hydration in the presence of environmental heat stress. The SCT athlete should avoid workouts when feeling ill.

Recognition

Screening for SCT, by self-report, is a standard component of the participation physically. The athletic trainer should know the signs and symptoms of exertional sickling, which include muscle cramping, pain, swelling, weakness and tenderness; inability to catch one's breath; and fatigue, and be able to differentiate exertional sickling from other causes of collapse. The athletic trainer should understand the usual settings for patterns of exertional sickling.

Treatment

Signs and symptoms of exertional sickling warrant immediate removal from activity. High flow oxygen at 15 L/min with a nonrebreather face mask should be administered. Vital signs should be monitored and EMS should be activated should vital signs decline. Sickling collapse is a medical emergency and should be treated as such.

Commotio Cordis

Commotio cordis refers to trauma to the chest wall that interrupts the electrical impulse in the heart. Normal heart rhythm must be stabilized to avoid sudden cardiac death. Younger athletes are at highest risk for commotio cordis, however teenages are not limited to this condition. Timing of the hit/incident rather than degree of impact of the object is the causative factor. Commotio cordis is the only significant cause of sudden cardiac death in athletes.

Prevention
Changes in practice equipment (especially in younger athletes) can potentially reduce the risk of commotio cordis. Immediate activation of the EMS and early defibrillation (AED) need to be administered in athletes with suspected commotio cordis. It is important for coaches to be trained in advanced life saving skills.

Female Athlete Triad/Disordered Eating
Female athlete triad is a potentially life threatening problem that involves a combination of an eating disorder (either bulimia or anorexia), amenorrhea (absence of menstrual period) and osteoporosis (diminished bone density). It is important for the athletic trainer to recognize the signs and symptoms associated with female athlete triad. Observing behaviors associated with eating patterns/weight loss/gain, frequency of stress fractures and questions regarding menstruation should all be asked.

Management of female athlete triad lies with prevention. It is important for the athletic trainer to educate parents, coaches and athletes on proper eating habits. Athletes should be educated on what an ideal weight and body type means. Further medical intervention may be necessary.

Disordered eating can be defined as a spectrum of abnormal eating behaviors, ranging from mild food restriction and occasional binging and purging, to severe conditions of bulimia nervosa and anorexia nervosa. The athletic population is at a significantly higher risk for disordered eating than the general population. Disorder eating can create a multitude of problems including high risk of injury, emotional and psychological distress, and poor athletic and academic performance. The female athlete is at higher risk for an eating disorder than their male counterpart. Proper education and identification is essential in prevention of disordered eating.

Anorexia Nervosa is a potentially life threatening condition. Anorexia develops when an athlete restricts or otherwise compensates for eating to the point that the athlete's weight drops below 85% of ideal body weight. Possible signs and symptoms associated with anorexia nervosa include gastrointestinal problems, amenorrhea, dehydration, electrolyte imbalance, bradycardia, decreased muscle mass and body weight, increased musculoskeletal injuries, fatigue and weakness.

Bulimia Nervosa is typically more common than anorexia nervosa. Individuals with bulimia nervosa can have normal or above normal body weight. Bulimia nervosa is characterized by binge eating followed by an inappropriate compensatory mechanism to prevent weight gain. Compensatory mechanisms include dieting or fasting, vomiting, laxative or diuretic use, or extreme exercise. Athletes with bulimia nervosa are at greater risk for fluid loss, electrolyte imbalance, gastrointestinal issues, dental conditions, muscle weakness, visual problems and menstrual irregularities.

Skin Infections/MRSA
Skin infection encompasses a very broad spectrum including viral, bacterial, and fungal infections. Each presents its own set of complications. Skin wounds can easily become infected if not managed properly.
Signs of wound infection appear two to seven days after injury and include:

- Red, swollen, hot and tender
- Swollen and painful lymph glands near the area of infection (groin, neck, or axilla)
- Mild fever and headache

Management of skin infections includes early recognition. If an athlete is suspected of having a skin infection, they need to be referred on for further medical attention. In most cases, an oral antibiotic or cream will be prescribed to help manage the infection. It is important for athletes to understand the seriousness of untreated infection. The athletic trainer should provide preseason education of skin infections. Educational material should be given on how to clean wounds and proper basic hygiene should be practiced to avoid any sort of skin infection.

Methicillin-resistant Staphylococcus aureus (MRSA) infection is caused by a strain of staph bacteria that has become resistant to the antibiotics commonly used to treat ordinary staph infections. Another type of MRSA infection has occurred in the wider community — among healthy people. This form, community-associated MRSA (CA-MRSA), often begins as a painful skin boil. It's spread by skin-to-skin contact. Staph skin infections, including MRSA, generally start as small red bumps that resemble pimples, boils or spider bites. These can quickly turn into deep, painful abscesses that require surgical draining.

Treatment of MRSA and CA-MRSA is done under physician care. Wounds can sometimes be drained to help relieve pain and swelling. Oral antibiotics and creams are typically prescribed as well. Prevention is key and can be achieved with good hygiene practices and proper cleaning of all athletic gear and equipment. If an athlete contacts MRSA it is important to alert the coaching staff and other athletes who might have come in contact with each other. Immediate cleaning of all equipment needs to be done to assure no spread of disease. It is also important to cover all wounds prior to practice to help prevent any skin infections from spreading.

Ergogenic Aids

Ergogenic aids are any external influences that can be determined to enhance performance in high-intensity exercises. These include mechanical aids (such as ergogenic fabrics), pharmacological aids, physiological aids, nutritional aids (sports supplements), and psychological aids. Ergogenic aids are not encouraged and should be monitored closely. It is important for the athletic trainer to educate all athletes of the potential side effects of using an ergogenic aid, specifically nutritional, pharmacological, physiological, and psychological.

Management of Athletes with Diabetes Mellitus

Prevention

Each athlete with diabetes should have a diabetes care plan that includes blood glucose monitoring and insulin guidelines, treatment guidelines for hypoglycemia and hyperglycemia, and emergency contact information on file with the school and/or athletic trainer. Glucose and insulin monitoring should be done by the athlete.

Recognition

Hypoglycemia typically presents with rapid heart rate, sweating, heart palpitations, hunger, nervousness, headache, trembling and dizziness. Hyperglycemia can present with or without ketosis. Typical signs and symptoms include nausea, dehydration, reduced cognitive performance, feelings of sluggishness, and fatigue.

Treatment

Mild hypoglycemia (conscious athlete) can be treated by administering approximately 10-15 grams of carbohydrates (eg. glucose tablets, gatorade). Blood glucose levels should be monitored immediately and 15 minutes later.Severe hypoglycemia (unconscious athlete) is a medical emergency, requiring activation of the EMS system. Return to play will be dependent upon each individual athlete.

Management of Athletes with Asthma

Prevention and Screening

Athletes who have or are suspected of having asthma should undergo a thorough medical and physical examination. The athlete should also inform the athletic trainer and coaching staff of their condition. The athletic training staff will provide the coaching staff with proper education on recognizing the signs and symptoms associated with asthma, along with the proper use of asthma medications. The athlete should provide the athletic trainer with additional asthma medication, but is not required.

> Asthma sign and symptoms: shortness of breath, difficulty completing sentences, cough, wheezing, chest tightness

Treatment

For acute asthma exacerbation, the athlete should use their prescribed inhaler to relieve symptoms. In the case of severe exacerbation, rapid sequential use of the inhaler may be necessary. If three administrations of the inhaler do not work, the athlete will be referred on for additional medical treatment. Once the athlete has recovered, the athlete's lung function will be monitored until athlete is able to return to play.

Sudden Cardiac Death in Athletics

Prevention

Access to early defibrillation is essential in the prevention of sudden cardiac death. A goal of less than 3-5 minutes from the time of collapse to delivery of the first shock is strongly recommended.

Recognition

Sudden cardiac arrest (SCA) should be suspected in any athlete who has collapsed and is unresponsive. A patient's airway, breathing, circulation and heart rhythm (using AED) should be assessed. An AED should be applied as soon as possible for rhythm analysis. Myoclonic jerking or seizure-like activity is often present after collapse from SCA and should not be mistaken for a seizure. Occasional or agonal gasping should not be mistaken for normal breathing.

Management

EMS system should be activated as soon as possible. CPR should be provided while the AED is being retrieved, and the AED should be applied as soon as possible. Interruption in chest compressions should be minimized by stopping only for rhythm analysis and defibrillation