

# Northern Arizona Healthcare Athletic Training Policies & Procedures Manual



# Table of Contents

---

1. NAH Mission Statement, Vision, and Values Statement – pg. 4
2. What is an Athletic Trainer (AT) / Athletic Training? – pg. 4
3. Athletic Trainer Domains – pg. 5
4. Lawful Practice – pg. 6
5. Athletic Trainer Scope of Practice – pg. 6
6. Athletic Training Facility/Room Policies and Procedures – pg. 8
  - Athletic Training Facility/Room – pg. 8
  - Standard Orders – pg. 8
    - i. Physician Standing Orders Regarding Onsite Reduction of Dislocated Joints – pg. 8
  - Secondary School Student Aides (SAs) – pg. 10
  - Athletic Clearance and Pre-Participation Physical Examination – pg. 10
  - Daily Reporting and Recoding of Injuries – pg. 11
  - Reporting for Treatment – pg. 12
  - Practice & Event Procedures for an Injured / Ill Student-Athlete – pg. 13
  - General Return to Play Protocol – pg. 14
  - Athletic Training Coverage – pg. 15
  - Relationship and Responsibilities – pg. 16
  - Equipment – pg. 17
7. Standard Operational Procedures for Specific Injuries or Illnesses – pg. 19
  - General Emergency Procedures Protocol – pg. 20
    - i. Primary Assessment – pg. 22
    - ii. Secondary Assessment – pg. 24
  - Abdominal and Other Related Injuries Protocol – pg. 26
  - Anaphylactic Shock Protocol – pg. 28
  - Asthma Protocol – pg. 28
  - Back Injuries Protocol – pg. 32
  - Chest, Thoracic, and Lung Injuries Protocol – pg. 32
  - Bites Protocol – pg. 33
  - Bleeding and Other Wound Care Protocol – pg. 33
  - Bloodborne Pathogen Exposure Plan – pg. 34
  - Universal Precautions – pg. 35
  - Sudden Cardiac Arrest (SCA) Protocol – pg. 37
  - Dermatological Problems & Other Infectious Diseases Protocol – pg. 39
  - Exertional Heat Illness Policy and Procedures – pg. 40
  - Heat and Cold Injuries Protocol – pg. 41
  - Diabetes Protocol – pg. 42
  - Eye Problems Protocol – pg. 42
  - General Illness Protocol – pg. 43
  - Head Injuries Protocol – pg. 44
  - Concussion Management Protocol – pg. 45
  - Spinal and Nerve Injuries Protocol – pg. 48
    - i. Suspected Spinal Cord Injury for a Student-Athlete with Protective Equipment – pg. 49
  - Dental and Oral Conditions Protocol – pg. 49
  - Nasal and Ear Conditions Protocol – pg. 50
  - Orthopedic Problems Protocol – pg. 51

- Reproductive Organ Problems Protocol – pg. 52
  - Seizures Protocol – pg. 53
  - Shock Protocol – pg. 54
  - Sickle Cell Trait Protocol – pg. 54
  - Water Safety as it Pertains to the AT – pg. 54
8. Standard Operational Procedures for Therapeutic Modalities – pg. 55
    - General Principles of Therapeutic Modalities – pg. 56
    - Cryotherapy Protocol – pg. 57
    - Hot and Cold Whirlpools Protocol – pg. 59
    - Moist Heat Pack Protocol – pg. 60
    - Contrast Therapy Protocol – pg. 60
    - Therapeutic Ultrasound Protocol – pg. 61
    - Electrical Stimulation Protocol – pg. 63
    - Ultrasound and Electrical Muscle Stimulation Combo Protocol – pg. 64
    - Dry Cupping Therapy Protocol – pg. 64
    - Massage Protocol – pg. 65
  9. Severe Weather Protocol – pg. 67
    - Lightning Protocol – pg. 68
    - Heat Protocol – pg. 70
    - Cold Temperature Protocol – pg. 76
    - Air Quality Protocol – pg. 77
  10. Medication Policy – pg. 79
  11. Psychological Concerns of Student-Athletes – pg. 79
    - Mental Health Emergency Action Plan (EAPs) – pg. 83
  12. Venue-Specific Emergency Action Plans (EAPs) – pg. 85
  13. Direction of a Licensed Physician-Medical Director Agreement – pg. 88
  14. Final Sign-Off of Understanding & Physician Agreement – pg. 89
  15. Appendices – pg. 90
    - Appendix #1: NATA Position Statements – pg. 91
    - Appendix #2: NFHS Position Statements – pg. 92
    - Appendix #3: Arizona Interscholastic Association (AIA) – pg. 93
    - Appendix #4: Secondary School Student Aides (SAs) – pg. 93
    - Appendix #5: Equipment Fitting – pg. 93
    - Appendix #6: Individualized Asthma Care Plan – pg. 94
    - Appendix #7: Skin Lesion Chart – pg. 95
    - Appendix #8: Individualized Diabetic Care Plan – pg. 97
    - Appendix #9: Strategies to Prevent Hypoglycemia – pg. 98
    - Appendix #10: Treatment Guidelines for Mild and Severe Hypoglycemia – pg. 99
    - Appendix #11: ADA Guidelines Concerning Hyperglycemia and Exercise – pg. 100
    - Appendix #12: Nutrition – pg. 100
    - Appendix #13: Concussions – pg. 100
    - Appendix #14: Symptom Tracking Form – pg. 101
    - Appendix #15: Post-Concussion Home Care Instructions – pg. 102
    - Appendix #16: Physician Referral Form – pg. 104
    - Appendix #17: Academic Accommodation Considerations – pg. 105
    - Appendix #18: Return to Play Progression Chart – pg. 106
    - Appendix #19: Dry Cupping Therapy Informed Consent – pg. 107

# NAH Mission, Vision, and Values Statement

---

## NAH Mission Statement:

Improving health, healing people

## NAH Vision Statement:

Always better care. Every person, every time...together

## NAH Values:



## What is an Athletic Trainer (AT) / Athletic Training?

---

Athletic trainers (ATs) are highly qualified, multi-skilled health care professionals who render service or treatment, under the direction of or in collaboration with a physician, in accordance with their education, training and Arizona statutes, rules and regulations. As a part of the health care team, services provided by athletic trainers include primary care, injury and illness prevention, wellness promotion and education, emergent care, examination and clinical diagnosis, therapeutic intervention and rehabilitation of injuries and medical conditions. The NATA Code of Ethics and the BOC Standards of Professional Practice state the principles of ethical behavior that should be followed in the practice of athletic training.

The AT is an integral part of the health care system associated with physical activity and sports. The ATs for/in partnership with NAH have the full responsibility for the operational procedures of the athletic training room. These responsibilities include, but are not limited to: 1. Injury Prevention 2. Evaluation and Assessment 3. Immediate Care 4. Treatment, Rehabilitation, and Recognition 5. Organization and Administration 6. Professional Development.

ATs are credentialed medical professionals through the National Athletic Training Association (NATA) Board of Certification (BOC) and licensed by the state of Arizona. They must be a NATA member in good standing, have an up-to-date Arizona AT license and BLS CPR certification at all times.

"Athletic training" includes the following performed under the direction of a licensed physician and for which the athletic trainer has received appropriate education and training as prescribed by the board:

(a) The prevention, recognition, examination, evaluation, rehabilitation and management of athletic

injuries. (b) The prevention, evaluation, immediate care and monitoring of athletic illnesses. (c) The referral of a person receiving athletic training services to appropriate health care professionals, as necessary. (d) The use of heat, cold, water, light, sound, electricity, passive or active exercise, massage, mechanical devices or any other therapeutic modality to prevent, treat, rehabilitate or recondition athletic injuries. (e) The planning, administration, evaluation, and modification of methods for prevention and risk management of athletic injuries and athletic illnesses. (f) Education and counseling related to all aspects of the practice of athletic training. (g) The use of topical pharmacological agents in conjunction with the administration of therapeutic modalities and pursuant to a prescription issued pursuant to the laws of this state and for which an athletic trainer has received appropriate education and training.

## **Athletic Trainer Domains**

---

- **Domain 1: Injury Prevention**
  - Implement various preventative treatments/programs for individuals and athletic teams.
  - Educate student-athletes on proper long-term health and wellness.
- **Domain 2: Clinical Evaluation and Diagnosis of Injury, Illnesses and Conditions**
  - Uses a variety of special tests, goniometry, functional testing and gait analysis in the treatment of the student-athletes.
  - Provides effective evaluations and revising plans of care based on changes in patient status and individual's response to treatment.
- **Domain 3: Immediate and Emergency Care**
  - Provides acute first aid care to all student-athletes.
  - Maintains updated Emergency Action Plans and performs annual training of said EAPs.
- **Domain 4: Treatment, Rehabilitation and Reconditioning**
  - Plans therapy programs and administers treatment to restore body function and strength, relieve pain and prevent disability.
  - Utilizes various therapeutic modalities such as exercise programs, mobility plans, facilitation techniques, muscle reeducation, gait training, hydrotherapy and electrotherapy.
  - Utilizes various equipment, prosthetic and orthotic devices in the treatment programs.
  - Provide and demonstrate instructions to the patient.
  - Provides emotional reassurance and guidance to student-athletes, families and coaches, particularly those adjusting to acute/chronic injuries.
- **Domain 5: Organization and Administration**
  - Assist student-athletes and parents/guardians with medical appointments as needed
  - Maintains clean and organized athletic training facility.
  - Follow the Code of Ethics set forth by the NATA and ASD20 Code of Conduct Policy
  - Collaborate with other athletic trainers of the district to enhance the professional reputation of athletic trainers and be a positive representative of ASD20.
  - Designated weather watcher for ASD20 high schools.
  - Keeps up to date inventory of medical supplies and maintains Athletic Training Budget.

- **Domain 6: Professional Responsibility**
  - Maintains medical records of evaluation, treatment and progress of each patient.
  - Properly record injuries and treatments via hard copy and/or online resource.
  - Supervise and manage secondary school student aides.
  - Effectively communicates with student-athletes, parents/guardians, coaches, Athletic Directors, staff and the community.
  - Act as a resource for the student-athletes as a qualified medical professional.

## Lawful Practice

---

**32-4151. Lawful practice** A. An athletic trainer shall refer a person with an athletic injury to one or more appropriate health care practitioners if the athletic trainer has reasonable cause to believe symptoms or conditions are present that require services beyond the scope of practice of athletic training or if athletic training is contraindicated. B. An athletic trainer shall adhere to the recognized standards and ethics of the athletic training profession and as further established by rule. C. This chapter does not authorize an athletic trainer to practice any other profession regulated under this title and does not expand the scope of practice of any health care provider who is not licensed pursuant to this chapter but who is licensed pursuant to this title.

## Athletic Trainer Scope of Practice

---

**Scope of Practice:** Athletic trainers are health care professionals who collaborate with physicians to optimize patient physical capacity, health and well-being. The practice of athletic training encompasses the prevention, examination and diagnosis, treatment, and rehabilitation of emergent, acute, subacute, and chronic neuromusculoskeletal conditions, and certain medical conditions in order to minimize subsequent impairments, functional limitations, disability, and societal limitations<sup>6</sup>. The practitioner's scope of practice in athletic training is determined by several factors, including (A) entry-level practice; (B) CE or advanced qualification in a skill; (C) state regulation; and (D) public protection.

[Arizona Administrator Code-Board of Athletic Training](#)

[Arizona Athletic Trainer Practice Act](#)

[BOC Standards of Professional Practice](#)

[Continuing Education](#)

[NATA Code of Ethics](#)

**Athletic  
Training  
Facility/Room  
Policies and  
Procedures**

## Athletic Training Facility/Room

---

The ATR is a facility where student-athletes receive treatments, preventative care, as well as rehabilitation. The AT is responsible for providing services in an attempt to maintain the student-athlete's highest level of competition safely.

The ATR is considered an acute care facility. Although the AT can assist, the responsibility of long-term care and management of an injury lay with the student-athlete and his/her family.

This facility is not to be used as a "lounge" or meeting room for any sport or student-athlete. Food and drinks are not permitted in this facility by student-athletes. The ATR is NOT a "health club" facility. Student-athletes are not allowed to self-treat or use any aspect of the ATR without the AT's permission and/or supervision.

## Standing Orders

---

Athletic trainers working for/in medical partnership with Northern Arizona Healthcare (NAH) have received Standing Orders from the NAH Supervising Physicians for the immediate evaluation, treatment, functional testing, and post-injury care of athletic injuries, therapeutic modalities, universal precautions and return to play protocol.

### ***Physician Standing Orders Regarding On-Site Reduction of Dislocated Joints***

---

The following are Standing Orders for Immediate Management of Appendicular Joint Dislocations and Onsite Reduction for Licensed Athletic Trainer.

In the event of an appendicular joint dislocation, the licensed Athletic Trainer will follow the below general joint-reduction procedure checklist:

- Step 1: Pre-Reduction Assessment
  - Assess and verify joint dislocation is present
  - Consider variables
    - Time elapsed of dislocated joint
    - Patient's age and general health
  - Assess for presence of concomitant injury or contraindication for reduction (i.e. fracture)
  - Assess and document neurovascular integrity
  - Consider pre-intervention imaging or pain management or both
  - Obtain consent to perform reduction after discussing risks and benefits with the patient
- Step 2: Reduction
  - Select and perform appropriate reduction technique
- Step 3: Post-Reduction Assessment
  - Assess and document neurovascular integrity

- Refer for post-reduction imaging for all patients
- Step 4: Post-Reduction Care
  - Apply appropriate post-reduction care, including joint immobilization in the appropriate position
  - Document all care provided
  - Inform directing supervising physician

Joint Specific Procedures:

- Glenohumeral Joint
  - A single attempt will be made for a first-time or recurrent anterior shoulder dislocation
  - No attempt will be made if a posterior dislocation is present
- Femoracetabular Joint
  - No attempt will be made
  - Licensed Athletic Trainer will activate EMS immediately and refer patient to the Emergency Department
- Tibiofemoral Joint
  - No attempt will be made
  - Licensed Athletic Trainer will activate EMS immediately and refer patient to the Emergency Department
- Patellofemoral Joint
  - A single attempt will be made for an acute patellar dislocation
- Humeroulnar Joint
  - No attempt will be made
  - Licensed Athletic Trainer will activate EMS immediately and refer patient to the Emergency Department
- Proximal Radioulnar Joint
  - No attempt will be made
  - Licensed Athletic Trainer will activate EMS immediately and refer patient to the Emergency Department
- Talocrural or Subtalar Joint
  - No attempt will be made
  - Licensed Athletic Trainer will activate EMS immediately and refer patient to the Emergency Department
- Metacarpophalangeal/Metatarsophalangeal Joint
  - A single attempt will be made
- Interphalangeal Joint (Toe/Finger)
  - A single attempt will be made

The NAH Directing Supervising Physician understands that the athletic trainer shall execute said standing order for immediate management of appendicular joint dislocations and on-site reduction. It is also understood that the NAH Directing Supervising Physician is not subject to civil liability for providing this direction.

## Secondary School Student Aides (SAs)

---

Athletic training students are defined as individuals enrolled in CAATE accredited training education program (ATEP). They have varying responsibilities depending on their skill level and progression through their program. All athletic training students are directly responsible to the AT and are required to stay within the established limitations of their level of clinical skills competency as outlined by their clinical contracts.

Secondary School Student Aides (SAs) are exposed to the field of athletic training in an educational environment only. They are limited to observing the daily activities of the athletic training room and athletic trainer. If they are CPR/First Aid certified they are allowed to act within the bounds of their certification. Please see the NATA guidelines position statement on the proper supervision of secondary school student aids.

Proper student aide educational practice:

- Field set up and take down
- Hydration specialization
- Cleaning duties
- Performing inventories
- Stocking kits
- Stocking shelves, taping tables, etc.
- Making ice bags
- Eyes and ears-sideline recognition of a student-athlete struggling with heat illness, head injury, etc. (we teach players to do this for each other)
- Give students a different color shirt that says AIDE on the back.

### ***Appendix #4: Secondary School Student Aides (SAs)***

## Athletic Clearance and Pre-Participation Physical Evaluation

---

In order to obtain clearance to participate, all student-athletes and parents/guardians must complete AIA specified pre-participation requirements in addition to the individual member school requirements.

Physical Form:

AIA Annual Pre-Participation Physical Evaluation Form – student-athletes will complete the athlete portion only. The evaluating physician will complete the remainder of the form, including clearance status and specific recommendations. The evaluating physician will affix their contact information, and sign and date the sports physical form.

Any changes in a student-athlete's medical history, insurance coverage, or ability to participate should be reported to the AT or athletic office immediately.

Student-athletes will be restricted from participation until all forms are on file in the athletics office, or returned to the athletic trainer, as requested.

## Daily Reporting and Recording of Injuries

---

It is the student-athlete's responsibility to report all injuries to the AT and coach. When an AT learns of such an injury, he/she will notify the appropriate coach or coaches. Similarly, when a coach learns of an injury, he/she will notify the AT. The AT will make the necessary medical referrals as indicated.

Coaches will NOT refer student-athletes out to physicians. The first and only referral by a coach is to the AT (excluding EMS emergencies).

In the event of an injury:

- Student-athletes will report to the ATR and contact AT regarding the injury. If the injury is severe and the student-athlete cannot be moved the coach should contact the AT via phone or radio (if available) for the AT to meet the student-athlete at the injury location.
- AT will evaluate injury and report findings to the student-athlete and coach.
  - If the injury is to remain confidential, AT will not report the exact finding to the coach. AT will report to the coach if the student-athlete will be unable to participate due to injury.
- AT will notify parents/guardians or emergency contacts if the student-athlete is a minor. The AT will provide current information regarding options for follow-up care, EMS or current transport.
  - In the event the parents/guardians or emergency contacts cannot be reached—call EMS, if needed.
  - When EMS is called, there are Hospital/ER options for the parents/guardians to choose from: Verde Valley Medical Center / Sedona Medical Center / Flagstaff Medical Center
  - If parents/guardians cannot be reached, EMS will transport to the following default hospitals: Verde Valley Medical Center / Sedona Medical Center / Flagstaff Medical Center
- All ATs will maintain accurate written or online records of student-athlete's treatment/care.
  - ATs will collect and record all physician notes returned to them by the student-athletes, as a running tabulation of injury as well as medical record.
  - A daily record of all new injuries as well as current treatment of ongoing injuries will be maintained by the AT.
- Coaches Reports and Injury Status Updates
  - Coaches can expect injury status reports and updates in person or via email/text message from the athletic trainer. The AT will act as a liaison for the injured student-athlete. The student-athlete is not expected, or trusted, to be able to communicate medical information to the coach. The AT will contact the coach as soon as it is feasible and explain the current and future state of the injured student-athlete. Including: participation status and limitations, game status, recovery notes.

All paper documents will be managed by typical accepted medical records management guidelines:

- Each page must have the student-athlete's name.
- Must be stored out of sight of unauthorized individuals.
- Locked in a cabinet, room or building when not supervised or in use.

### Communication with Other Healthcare Providers:

Any communication that the athletic trainer has with another healthcare provider regarding the evaluation, treatment and return to play of a student-athlete should be documented within that student-athlete's specific injury record.

## Reporting for Treatment

---

All student-athletes should report to the ATR for injury evaluation and treatment during the hours of operations. The AT will administer care to the student-athletes and at no time should the student-athlete be permitted to use the ATR without permission and/or supervision.

- Dress:
  - Student-athletes should be dressed appropriately for evaluation
  - Dress should include athletic clothing
  - Student-athletes reporting in jeans or other clothing that may hinder evaluation may be asked to change or come in the next day with proper clothing
  - Student-athletes must be present for evaluation and follow-up treatment in clean clothing, those dressed in soiled or dirty clothing will be asked to change or report for treatment the next day
- Athletic Training Facility/Room Conduct:
  - All school rules of conduct apply in the ATR similar to the classroom
  - All student-athletes and non-student-athletes not needing evaluation or treatment of an injury may be asked to leave
  - Student-athletes may have to wait to see the AT, and are encouraged to wait patiently
- Hours of Operation:
  - The ATR is open for treatment and care during established practice times, pre – and post – practice time, event window, and open hours determined by AT at each designated school.
- ATR Rules:
  - No one is to be in the athletic training room without permission of the AT. No student-athletes are to be in the athletic training room without the AT present.
  - No coach administrator or manager will allow student-athletes into the athletic training room without direct supervision
  - No equipment or supplies in the athletic training room may be utilized and/or taken from the athletic training room by and sports team, coach or student-athletes without permission from the AT
  - Cruising, swearing, or foul language will not be tolerated. Student-athletes should be respectful.
  - The athletic training room is a coed facility. Appropriate attire must be worn at all times
  - No cleats or shoes with grass and/or mud, are to be worn in the athletic training room. Shoes are not to be placed onto treatment tables.

## **Practice & Event Procedure for an Injured / Ill Student-Athlete**

---

Decisions regarding the availability of the student-athlete for practice or competition require the cooperative efforts of the student-athlete, coach, AT, team physician, parents/guardians, and the Athletic Director. These decisions should and will be based on sound medical judgments, with the outcome being proper athletic health care. With this in mind, the AT will provide quality athletic health care for the student-athlete under the following guidelines:

- If the student-athlete is under the care of a physician, or the team physician is present, the physician determines the ability of the student-athlete to practice or compete.
- If the student-athlete is NOT under a physician's care, and the AT is providing the primary care, the AT determines the ability of the student-athlete to practice or compete.
- The AT will convey a "no-play" decision to the appropriate coach.
  - Under no circumstances should the coach allow the student-athlete to practice or compete until either they are cleared directly by the AT or there is written documentation by the physician that the student-athlete is able to return to play.
  - Verbal communication from the physician will be accepted on a 24-hour basis, written documentation is required for full clearance to return to play for all injuries other than concussion.
  - Concussion final clearance for RTP is by AT only after Stepwise Protocol is completed.
  - A representation by the student-athlete to the AT and/or coach will NOT meet the requirements for the student-athlete to return to play.
  - A "no-play" decision by the physician will always be followed.
- Under NO circumstance shall a coach allow a student-athlete to practice/compete when a "no-play" decision of the AT or physician is in effect.
  - Should a coach or student-athlete desire to disregard the "no-play" order, action will be taken to safeguard the student-athlete's health.
    - AT will notify the AD of the actions of the student-athletes and/or coach.
    - AT will notify the student-athlete's parents/guardians.
  - THE NUMBER ONE PRIORITY OF THE AT IS THE HEALTH OF THE STUDENT-ATHLETE, IF IT IS UNSAFE FOR THE STUDENT-ATHLETE TO PARTICIPATE OR IT IS DEEMED FURTHER PLAY WILL RESULT IN FURTHER INJURY, THEY SHOULD NOT BE PARTICIPATING.
- If a "no-play" decision is in place the student-athlete may be able to perform rehabilitation of the injury and is expected to report to the ATR daily for treatments.
- Medical Referral and Continued Care:
  - At the time of the comprehensive examination of the injury, the AT will present his/her opinion on the need of medical referral.
  - Parents/guardians will be notified if there is need for medical referral.
  - The final decision of referral rests with the student-athlete and parents/guardians; if they disregard the referral the student-athlete will be medically disqualified until they are seen by a physician.
  - If the student-athlete receives care from a physician, a completed form or prescription will indicate the diagnosis and suggestions for the continued care of the student-athlete; this note is required after seeing a physician.

- In the event an injured student-athlete sees a physician without prior knowledge of the AT, the student-athlete must bring a written report of the physician's findings for the release to play. If this is not provided the student-athlete will not be permitted to practice/compete until this note is filed with the AT.
- Student-athletes who decide to visit a physician without prior knowledge from the AT risk missing competition time. Therefore, it is advised that all student-athletes report to the AT prior to seeing a physician. Emergency situations are exempt.
- Continued care of the student-athlete is carried out in the form of daily re-evaluation of the student-athlete's progress, daily treatments, and rehabilitation.
- Where needed and appropriate, such care is performed with periodic consultation of the attending physician.

## **General Return to Play Protocol**

---

All student-athletes who have sustained an injury must be cleared by the AT or the physician in order to return to play.

Regardless of clearance from a physician, a student-athlete wishing to return to play must adhere to this protocol in order to return to play.

The following is a standard protocol for releasing a student-athlete to return to play:

- Student-athlete must have little to no swelling within the injury site in order to be eligible to return to play
- Student-athlete must maintain full range of motion bilaterally in order to be eligible to return to play
- Student-athlete must maintain full strength bilaterally in order to be eligible to return to play.
- Student-athlete must be pain free while performing functional aspects to their sports.
- Any student-athlete needing extra support or padding must report to the ATR daily in order to maintain that equipment given to the student-athlete.
  - Taping of any injury will occur for a time period deemed medically necessary by AT.
  - Any additional support the student-athlete may need after this time period must come in the form of a brace, which the AT will aid in supplying or suggesting places for student-athlete to purchase.
  - AT will ultimately make the decision regarding taping vs bracing
- Student-athlete must understand the risks involved in returning to play after injury and must be ready to adapt to the physical demands of their sport in relation to their injury
- If AT feels that continued play with injury is detrimental to the student-athlete, regardless of physician clearance, the student-athlete will remain under no play/practice status until AT can contact physician and get clarification on exact findings of the evaluation.

# Athletic Training Coverage

---

AT will cover home games, away football games, and practices. Each individual situation is treated differently; however, in general, all other sport events under direct coverage of the AT will be chosen by the highest probability of needing immediate medical assistance under the AT's discretion.

- **AT Present** – In the event an injury occurs while the AT is present at either a home or away event, the following protocol exists:
  - The AT performs an immediate evaluation of the injury and determines the severity.
  - An evaluation or an impression is made which forms the basis of the immediate first aid and continued participation status.
  - The determination of the student-athlete's ability to continue is made solely by the AT in the absence of a physician
  - Should the injury warrant immediate medical attention, the AT will decide on the best means of transportation.
  - A student-athlete sustaining an injury but continuing to participate will undergo a comprehensive examination at the earliest possible moment, immediately following the practice or game in which the injury occurred.
  - Once a student-athlete is removed from play (by AT, coach, parents/guardians, administer, game official or bystander), only an AT or team physician may return student-athlete to play.
- **AT Not Present – Home – Event** – In the event of an injury at a home event, when the AT is not present, the following procedure exists:
  - If the AT is campus, but not immediately present, the coach should contact the AT by the quickest means, and the injury should be managed as discussed in the previous section.
  - The attending coach makes an immediate general determination of the severity of the injury and provides any indicated first aid (If practicing outside the coverage times of the AT please refer to Appendix #2 for instruction)
  - If there is any doubt as to the severity of the injury, medical referral is advised and, if deemed necessary, EMS should be activated.
  - Once a student-athlete is removed from play (by AT, coach, parents/guardians, administer, game official or bystander), only an AT or team physician may return student-athlete to play.
- **AT Not Present – Away – Event** – In the event of an injury at an away event, when AT is not present the following procedure should be followed:
  - The attending coach must adhere to the recommendations of the host AT or licensed medical professional.
  - Immediate first aid is the responsibility of the coach until such assistance can be obtained. The coach should work with the host school's medical personnel to ensure any necessary immediate medical attention is summoned. Please refer to the General Emergency Procedures for help with first aid protocol.
  - The injured student-athlete should be directed to see their school AT as soon as possible before the next practice or contest.

- **Physician Attendance/EMS Coverage**
  - Coverage of physician and/or EMS at home events will be prioritized to varsity football games.
  - This is based on the probability of catastrophic injury being significantly higher in this full-contact activity.

## **Relationships and Responsibilities**

---

- **AT and NAH**
  - NAH will provide medical direction and resources to the AT at member high schools within the contractual bounds of their partnership agreement.
- **AT and Student-Athletes**
  - The main concern of any and all ATs should be the health of the student-athlete.
  - The student-athlete is to report any and all health concerns, including injury, to the AT as soon as possible.
  - Only important and medically necessary information regarding the injury will be shared with the coach.
  - Parents/guardians of the injury student-athlete will be notified as soon as possible after the injury has occurred.
  - The student-athlete is responsible for follow-up treatment of his/her injury.
  - The student-athlete may be medical disqualified from play if treatment requirements and/or full clearance from a physician is not met.
- **AT and Secondary School Student Aides (SAs)**
  - The SA works under the direct supervision of the AT.
  - Under this direct supervision ONLY may a SA assist AT on taping, handling and care of supplies, and treatment of student-athletes.
  - Under NO circumstance may the SA perform any actions of the primary AT.
  - Under NO circumstances is the SA to communicate student-athlete information to anyone other than the AT.
  - The SA must NEVER be allowed to make medical decisions, analyze or diagnose injuries, or assist in the treatment of athletic injuries expect under the direct supervision of the AT.
  - ATs are also responsible for the athletic training education of specific duties assigned.
- **AT and Coach**
  - As previously stated, all medical decision will go through the AT.
  - The AT communicates with the coach about injured student-athletes.
  - Annually each Head Coach will receive an Introduction to Sports Medicine handout.
  - If the coach has questions regarding treatments rendered, they can come at any time to the AT.
- **AT and Visiting Coach/Team**
  - The home AT will introduce themselves to visiting coaches prior to the start of athletic competition. AT will communicate to visiting coaches about available athletic training services, supplies, equipment, facilities and supportive services.

- In the event of a visiting student-athlete sustaining an injury or illness, the visiting AT will be in charge of injury or illness with assistance of home AT. If the visiting team AT did not travel, the home AT will be in charge of any injury and illness. Visiting student-athlete will be treated as deemed medically necessary by AT. AT will communicate with visiting student-athlete, coach and parents/guardians regarding student-athlete status, treatment and plan of care.
- **AT and Physician**
  - The AT works under and in conjuncture with the team physician as well as any other physician of student-athlete choice.
  - The AT and physician should develop the treatment program necessary for the student-athlete's safe return to activity.
  - When a team and/or community physician is present at an athletic event, the final decision regarding the status of a student-athlete rests with the physician. If the physician is ready and will to take responsibility of the student-athlete. The physician should not be a family member of the student-athlete.
  - The AT, coaches, student-athletes, and parents/guardians work cooperatively with physicians to ensure quality healthcare.
- **AT and Parents/Guardians**
  - Annually, parents/guardians will receive and Intro to Sports Medicine handout.
  - It is the responsibility of the AT to contact the parents/guardians after the student-athlete is injured.
  - The AT will inform the parents/guardians about the injury and recommended care.
  - All parent/guardian questions shall be answered by the AT.
  - Ultimately parents/guardians have the final say on healthcare of their son/daughter, but the AT can medically disqualify a student-athlete until they are seen by a physician.
  - The AT and parents/guardians should work together to ensure a safe return to play for their student-athlete.

## Equipment

---

- **Medical Kit**
  - A medical kit will be provided to each team
  - The medical kit contains most supplies used by a coach during practices, home events, and when traveling to another site.
  - The coach is responsible for the care and maintenance of the supplies within the medical kit.
  - The coach is responsible for bringing the medical kit, home or away, where the AT will not be directly supervising the event.
  - If more specialized equipment is needed, the coach can request the extra supplies from the ATR.
  - Any non-consumable items lent to a team or team member must be returned to the ATR at either the conclusion of the season or when it is no longer needed.

- **Water Coolers**
  - Water coolers will be accessible to every team
  - The coach is responsible for the care, maintenance and cleaning of their team's water cooler
    - Water coolers and bottles need to be emptied daily
    - Cleaned according to manufacture guidelines
    - Rinsed thoroughly and placed upside down on proper drying/storage racks per facility.
  - Water Coolers are for water only
  - If team water bottles are used, the coach must emphasize proper hygiene
    - Do not allow the student-athlete to place the spout in contact with their mouths or remove lids to drink
- **Supplies**
  - If specialized equipment is needed for teams, it is the coach's responsibility to notify the AT of those needs as soon as possible
- **Rehabilitation Equipment**
  - ATR rehab equipment is available to the student-athletes only with AT supervision.
  - The AT is responsible for supervising the ATR and the coach is responsible for the supervision of the weight room.
- **Emergency Equipment**
  - Major emergency equipment (AED, splints, crutches, etc.) will generally be kept in the ATR.
  - The AT will review the location and use of each piece of equipment with the coach at the beginning of each sport's season if requested.
  - Local EMS may have specific requests regarding equipment that should or should not be used prior to their arrival. The AT is aware of specific requests and cooperates with these requests when deemed to be in the best health interests of the injured student-athlete.
- **Equipment and Supplies for Individual Use**
  - When equipment is taken from the ATR the AT will record the student-athlete's name and equipment issued.
  - The student-athlete is responsible for returning all equipment handed out.
- **Protective Equipment**
  - Issuing on-hand protective athletic equipment shall be based on the recommendation or advice of the AT and/or physician.
  - Issuance of special protective athletic equipment shall not be related to the student-athletes skill level.
  - If tape support is needed it will be on an individual basis and applied to support the student-athlete from further injury while allowing them to continue play.

**Appendix #5: Equipment Fitting**

# **Standard Operational Procedures for Specific Injuries or Illnesses**



# General Emergency Procedures Protocol

---

If an injury occurs, please take the following actions:

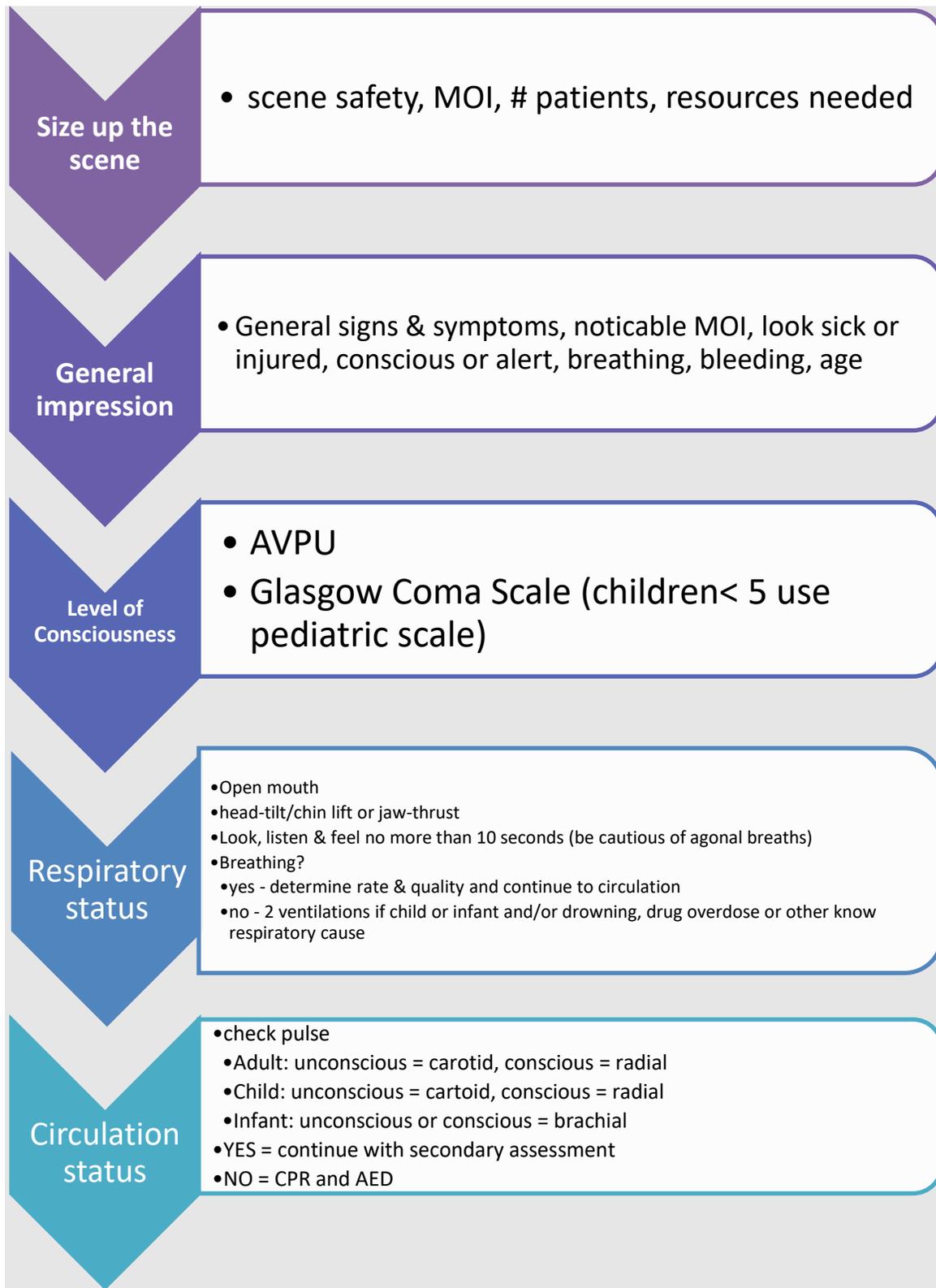
- Immediate actions to be taken:
  - Check scene for safety before entering. DO NOT enter the scene if it is unsafe to do so. If the scene is unsafe activate EMS immediately.
  - Call AT by phone or radio. Please use the following procedures when calling for the AT on the phone or radio:
    - Please state the location and nature of the injury as well as the urgency
    - Please make sure to tell the AT about any life-threatening conditions exhibited by the student-athlete (breathing difficulties, severe bleeding, consciousness, loss of pulse, etc.)
  - Administer first aid as needed.
    - Check for breathing and pulse (fast, slow, weak, strong, shallow, deep, regular, or irregular).
    - Check for severe bleeding
    - Check for deformities and dislocation and/or any other areas of pain.
  - Check for signs of life; if there are no signs of life or any of the following are present—activate EMS.
    - Unconscious or unresponsive
    - Unable to speak
    - Difficulty breathing
    - Chest pain
    - Severe bleeding that cannot be controlled by direct pressure
    - If a foreign object is imbedded, DO NOT REMOVE!
    - Activate EMS as soon as possible, if necessary.
  - **Activate EMS as soon as possible, if necessary.**
    - Refer to the Venue-Specific EAP for more information.
    - When calling the EMS on the phone, dispatch operators will want to know the following:
      - Your name and position (i.e. Coach).
      - Describe the nature of injury.
      - Give the location of the injured student-athlete, may need to state which outside field or building, east/west, north/south.
      - State the gender and age of the student-athlete.
      - Give the phone number of the phone you are using to activate EMS.
    - Contact another coach/administration to direct EMS to the injured student-athlete.
    - Have the emergency information on the student-athlete ready for EMS.
    - Contact the parents/guardians as soon as possible.
- AT will evaluate and determine the extent of the injury.
  - AT will use a general SOAP note format or district injury report for documentation.

- AT will also make a determination of the level of activity allowed by the student-athlete after the injury.
- General care of injury (POLICE):
  - Protect—protect the student-athlete and injury site from further injury.
  - Optimal Loading—progression over time from rest to passive range-of-motion (PROM) movement, active range-of-motion (AROM), and finally, strengthening exercises.
  - Ice—place ice on the injury site to decrease swelling and pain, this will also help jump-start the healing process (20min on/40min off).
  - Compression—use an ace wrap to help reduce the amount of swelling that is allowed to pool at the injury site. Generally, you should start wrapping below the injury, start tighter (DO NOT cut off circulation) and get looser as you work your way up to and over the injury site.
  - Elevate—elevate the injury site above the heart to help reduce the amount of swelling.

#### DO NOT FURTHER HARM

Avoid moving a student-athlete, even if the injury is not thought to be serious. Call for AT support and they will make the decision regarding the severity of the injury. One of the most serious threats to a seriously injured victim is the unnecessary movement.

## Primary Assessment



## SAMPLE History

- **Signs/symptoms**
- **Allergies**
- **Medications**
- **Past medical history**
- **Last oral intake**
- **Events leading to the injury/illness**

## Pain Assessment

- **Onset**
- **Provocation**
- **Quality**
- **Region/radiation**
- **Severity**
- **Time**

## Rapid Head-to-Toe Trauma Assessment

(DOTS &  
DCAP-BTLS)

- In addition to DOTS and DCAP-BTLS look for:
- **Head:** pupillary response, drainage or bleeding from ears or nose, and crepitation
- **Eyes:** foreign bodies and blood in anterior chamber
- **Mouth:** dislodged teeth, airway obstructions, swollen or lacerated tongue, odors, discoloration
- **Neck:** jugular vein distention and crepitation
- **Back:** Reaction to pain and movement while rolling over
- **Chest:** paradoxical motion, crepitation, breath sounds (presence, absence, equality)
- **Abdomen:** Rigidity/firmness, softness, and distention, rebound tenderness
- **Pelvis:** check for pelvic stability
- **Extremities:** distal pulses, sensation, motor function, medic alert tags

## Vital Signs

- **Respiratory rate**
- **pulse rate**
- **blood pressure**
- **pulse oximetry**
- **temperature**
- **skin color**
- **capillary refill**

## Secondary Assessment

### History:

**DOTS – Deformities, Open injuries, Tenderness, Swelling**

**DCAP – BTLS - Deformities, Contusions, Abrasions, Punctures/Penetrations, Burns, Tenderness, Lacerations, Swelling**

### Normal Vital Signs:

	<b>ADULT (12 and older)</b>	<b>CHILD (1 years to 12 years)</b>	<b>Infants (&lt; 1 year)</b>	
<b>Pulse (per minute)</b>	60-100 Carotid or radial	1-3 yr: 80-130 3-5yr: 80-120 6-10 yr: 70-110 Carotid or radial	Newborn 120-160 1-5 months 90-140 6-12 months 80-140 Brachial artery	
<b>Respirations (per minute)</b>	12-20	15-30	30-50	
<b>Systolic BP (mm Hg)</b> Amount of pressure blood against arterial walls when the heart beats	90-140	80-110 Formula: 90 + (2 x age)	70-95 Formula: 70 + (2 x age)	Newborn varies on days/gestation & weight
<b>Diastolic BP (mm Hg)</b> Amount of pressure blood against arterial walls when the heart is at rest b/t beats	60-90	2/3 of systolic value	2/3 of systolic value	
<b>Temperature</b>	~98.6 for all ages			
<b>Capillary refill</b>	<3 seconds for all ages			
<b>Pulse oximetry (for all ages)</b>	Normal	95% to 100%		
	Mild Hypoxia	91% to 94%		
	Moderate Hypoxia	86% to 90%		
	Severe Hypoxia	<85%		
<b>Skin Color</b>	Color, temperature, moisture			

## Assessing Vital Signs:

### Skill: Assessing level of consciousness (AVPU)

Description: Assess the patient's level of consciousness	
	Alert: oriented to time, place, person, event
	Verbal: responds only to verbal stimuli
	Painful: unresponsive and does not respond to verbal but does respond to pinching nail bed of thumb or sternal rub
	Unresponsive: unconscious and unresponsive to verbal and painful stimuli

### Skill: Vital Signs – Carotid Pulse (primarily used to determine if pulse exists)

Description: Assess the patient's carotid pulse	
	Locate carotid artery (side of neck)
	Palpate pulse using two fingers for 10 seconds
	Record findings to include: <ul style="list-style-type: none"><li>• Rate</li><li>• Quality – strong, weak, regular, irregular</li></ul>

### Skill: Vital Signs – Radial Pulse (primarily used to determine pulse rate and characteristics)

Description: Assess the patient's radial pulse rate	
	Locate radial artery (anterior thumb side of wrist)
	Palpate pulse using two fingers for 30 seconds and multiply by 2 or for 15 seconds and multiply by 4
	Record findings to include: <ul style="list-style-type: none"><li>• Rate</li><li>• Quality – strong, weak, regular, irregular</li></ul>

### Skill: Vital Signs – Respirations

Description: Monitor patient's respirations for rate and quality through observation.	
	Observe rise and fall of patient's chest for 30 seconds and multiply by 2
	Record findings to include: <ul style="list-style-type: none"><li>• Rate</li><li>• Quality – Normal, shallow, labored, noisy</li></ul>

## Skill: Vital Signs – Blood Pressure

Description: Take patient's blood pressure using a sphygmomanometer using the auscultation method.	
	Expose the arm, externally rotate it, palm up, and position appropriate size blood pressure cuff above the elbow, centering bladder over the brachial artery.
	Palpate brachial pulse at the crease of the elbow
	Position diaphragm of stethoscope directly over the brachial pulse
	With the valve closed, inflate the blood pressure cuff until you no longer hear the brachial pulse; inflate the blood pressure cuff another 20-30 mm Hg so you do not miss the first systolic pulse sound
	Slowly release air from the blood pressure cuff by opening the bulb valve allowing the pressure to fall smoothly at the rate of approximately 2-3 mm per second; observe dial return to zero
	When you hear the first tapping or clicking sound, note the reading on the gauge; this is the systolic pressure
	Continue to deflate the blood pressure cuff, listening for the point at which the distinctive sounds fade; when the sounds turn to dull, muffled thuds or when the sound disappears, the reading on the gauge is the diastolic pressure
	Record blood pressure as Systolic/Diastolic i.e., 130/80

## Abdominal and Other Related Injuries Protocol

- **Abdominal Contusion**
  - Discontinue play and rest
  - Refer to physician if:
    - Blood in urine
    - Vomiting due to contusion
    - Severe cramping or is in the fetal position – activate EMS
- **Kidney Injury**
  - MOI: a direct blow to the abdomen, side, or mid-to-low back which causes damage or a tear to the organ. This is frequently seen with high-contact sports such as football, rugby, ice hockey, soccer, horseback riding, gymnastics, boxing, sledding, and skiing. Possibility to happen spontaneously.
  - Signs or Symptoms: hematuria, muscle guarding, low back pain, abdominal bruising, swelling, pain, decreased urine output or inability to urinate, fever, shock: increased heart rate, pale, cool skin, signs of internal bleeding: decreased alertness, dizziness, fatigue, blurred vision, low blood pressure, vomiting
  - Treatment:
    - Discontinue play and rest

- Assess vital signs (blood pressure, pulse, respiratory rate)
  - Call 911 and activate EMS
    - If there is blood in the urine or pain persists and does not improve refer to emergency room.
- Return to Play: Depending if the kidney was repaired, excised (removed), or left to conservative treatment, return to play may vary case-by-case, but full recovery may take up to three weeks, providing there are no complications. A student-athlete is not typically allowed to return to play to contact sports with one organ that is normally paired, however some physicians or circumstances may allow it.
  - Conservatively managed student-athlete with renal contusions should be observed until hematuria clears and should be excluded from contact sports for 6 weeks. However, RTP is individualistic and depends on severity/intensity of the injury and the individual student-athlete.
  - More severe injuries may take 6-8 weeks to heal and return to contact/collision sports can be delayed 6 to 12 months with extensive renal injuries, where as some may not choose to return to his/her respective sport.
  - Student-athlete must have no red flags or signs or symptoms throughout course. Must be monitored by AT or medical professional.
- **Spleen Rupture**
  - MOI: sudden and direct blow to the abdomen but spontaneous rupture is possible. If the spleen is enlarged or has been enlarged in the past, due to mononucleosis, infection or chronic excessive consumption of alcohol
  - Signs and Symptoms: right quadrant/left abdominal pain, left shoulder pain, severe or mild pain, rebound tenderness, muscle guarding, nausea, profuse sweating, hot or cold sensations, abdominal distension or ecchymosis, light headedness or syncope, fatigue, low blood pressure
  - Treatment:
    - Check and monitor vital signs (blood pressure, pulse, respiratory rate)
    - Call 911 and activate EMS
  - Return to Play: Once released from the hospital, the student-athlete will need to follow a gradual 2-3 week return to play. Student-athlete must have no red flags or signs or symptoms throughout course. Must be monitored by AT or medical professional.
- **Appendicitis**
  - MOI: obstruction, foreign material, from twisting or spasm, fluid buildup, inflammation of appendicular wall, bacterial inflammation, abscess or local infection
  - Signs and Symptoms: general periumbilical pain, nausea, vomiting, lower right quadrant pain (McBurney's Point), low grade fever
    - If ruptured, pain usually subsides temporarily as the pressure is relieved
    - Signs indicating onset of peritonitis: rigid abdomen, tachycardia and hypotension
  - Treatment: refer to ED – surgical intervention needed
  - Return to Play: gradual return to play once cleared by physician for return to activity.

## Anaphylactic Shock Protocol

---

All student-athletes with allergies should inform the AT of the allergy and the severity. Anaphylactic shock is a potentially life-threatening emergency.

- Any student-athlete suffering from severe allergies should be carrying an Epinephrine pen (Epi-pen) with them at all times.
  - If the student-athlete is not severely allergic, remove the student-athlete from the allergen and wash the affected area well with soap and water.
  - If the student-athlete is severely allergic, locate Epi-pen and administer as soon as possible.
  - If an Epi-pen is administered, you MUST activate EMS and treat for shock.
  - Monitor the student-athlete's vital signs (heart rate, blood pressure, and breathing rate) while ensuring the student-athlete's airway and circulation are not compromised.
  - Do not administer any foods or fluids to the student-athlete for fear of choking.

Symptoms: Whole body: fainting, lightheadedness, low blood pressure, dizziness, or flushing

Respiratory: difficulty breathing, rapid breathing, shortness of breath, or wheezing.

Skin: hives, swelling under the skin, blue skin from poor circulation, or rashes.

Gastrointestinal: nausea or vomiting Also common: fast heart rate, feeling of impending doom, itching, tongue swelling, difficulty swallowing, facial swelling, mental confusion, nasal congestion, or impaired voice.

## Asthma Protocol

---

Illness Definition & Cause Presenting Symptoms: An asthma attack includes airway inflammation (narrowing and swelling), extra mucus production, and difficulty breathing.

Prior to athletic contest all student-athletes must note on their PPE their asthma status. Student-athletes with asthma will indicate their medication use. AT can prepare an individual asthma care plan and had on file for reference and implementation. Appendix #4

In the event a student-athlete suffers an asthma attack, remove the student-athlete from activity immediately. Encourage the student-athlete to relax and control their breathing. If necessary, coach the student-athlete in performing controlled breathing exercises and have the student-athlete administer their prescribed inhaler.

If the prescribed inhaler is not available, and the asthma attack is severe enough to warrant, activate EMS and contact the student-athlete's parents/guardians immediately. Allow the student-athlete to rehydrate while keeping their breathing under control.

If the student-athlete is struggling to control their breathing, or the prescribed inhaler is not effective, activate EMS and contact the student-athlete's parents/guardians immediately.

**Prevention:**

- Early recognition of condition
  - Noted on PPE
- Control of disease
- Rest breaks as needed
- Avoid aggravating activities

**Risk Factors:**

- Intrinsic:
  - Genetics
  - Family history of asthma
  - Obesity
  - Male gender
- Extrinsic:
  - Allergens (indoor and outdoor)
  - Respiratory illness (primarily viral)
  - Time of day
  - Poor asthma control
  - Medications – NSAID or Aspirin
  - Cold weather
  - Environmental factors (smoke, allergens, dust, mites, pollution)

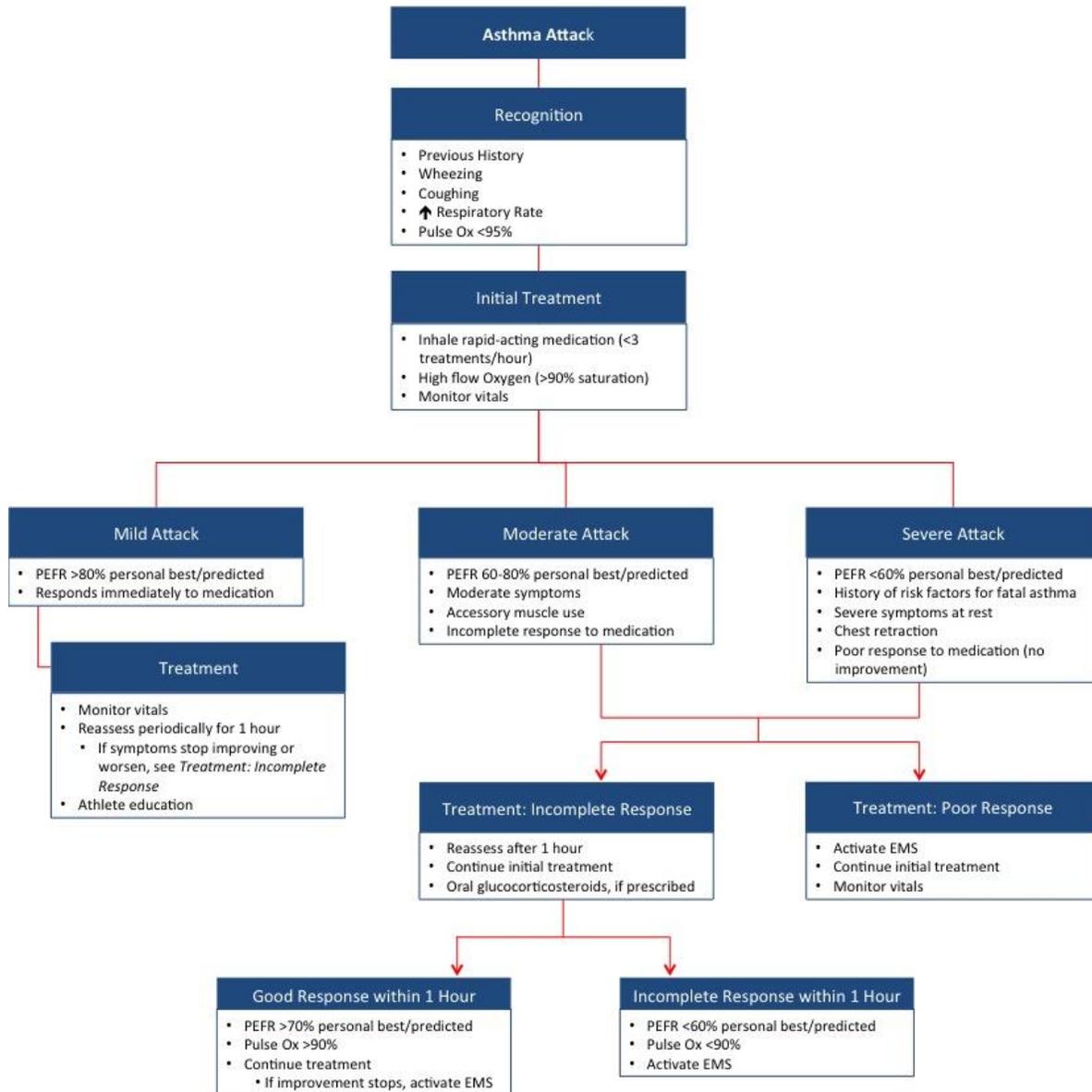
**Signs and Symptoms:**

- Episodic breathlessness
- Wheezing
- Coughing
- Chest tightness
- Difficulty speaking in complete sentences
- Shortness of breath
- Drowsiness
- Confusion
- Use of accessory muscles for breathing
- Measure Lung Function (Spirometry)

<b>Severity of Obstruction</b>	<b>% of FEV</b>
Mild	70-99%
Moderate	50-69%
Severe	35-49%
Very Severe	< 35%

- Peak Expiratory Flow Rate (PEFR)
  - May be used to diagnose (but not preferred) and monitor management of asthma
  - Because of large range of scores, PEF score can only be compared to the patient’s own best score

## Diagnosis and Treatment Algorithm:



<b>Severity of Asthma Exacerbations</b>				
	Mild	Moderate	Severe	Respiratory Arrest Imminent
Breathless	Walking	Talking	At rest	
Position	Can lie down	Prefers sitting	Hunched forward/ tripodding	
Talks in	Sentences	Phrases	Words	
Alertness	May be agitated	Usually agitated	Usually agitated	Drowsy/confused
Respiratory Rate*	Increased	Increased	> 30 breaths/min	
Accessory Muscles used and Suprasternal Retractions	Usually Not	Usually	Usually	Paradoxical thoraco-abdominal motion
Wheeze	Moderate, often only at the end of expiration	Loud	Usually Loud	Absence of wheeze
Pulse (beats/min)**	<100	100-120	>120	Bradycardia
PEFR after initial bronchodilator administration***	> 80%	60-80%	<60%	

**Appendix #6: Individualized Asthma Care Plan**

# Back Injuries Protocol

---

Back problems are usually either caused by congenital abnormalities or idiopathic conditions.

- **Lumbar Vertebrae**
  - Greatest concern is compression fractures of the lumbar spine.
  - Activate EMS, do not compromise the spinal cord.
  - May be put in an abdominal brace to support the spine.
- **Low Back Strains and Sprain**
  - POLICE. (Protect Optimal Loading Ice Compression Elevation)
  - Ice massage.
  - Gradual return to play with emphasis on increasing ROM and strength.
- **Back Contusion**
  - POLICE.
  - Ice massage.
  - Gradual return to play with emphasis on increasing ROM and strength.
- **Sciatica**
  - POLICE
  - Gradual return to play with emphasis on increasing ROM and strength.
  - May take NSAIDs.
- **Herniated Disk**
  - POLICE.
  - Manual traction.
  - Appropriate mechanics and posture.
  - Gradual return to play with emphasis on increasing ROM and strength.
- **Spondylitis, Spondylosis, Spondylolysis, and Spondylolisthesis**
  - POLICE.
  - Bracing of the low back.
  - Rehabilitation should focus on trunk strength and core synergistic.
  - Gradual return to play with emphasis on increasing ROM and strength.
  - May take NSAIDs.
- **Sacroiliac (SI) Joint Sprain**
  - POLICE.
  - May indicate use of back brace.
  - Rehabilitation should focus on trunk strength and core synergistic.
  - Gradual return to play with emphasis on increasing ROM and strength.
  - May take NSAIDs.

# Chest, Thoracic, and Lung Injuries Protocol

---

- **Rib Fracture**
  - Need confirmation x-rays.
  - POLICE.

- **Costochondral separation and dislocation**
  - POLICE.
  - NSAIDs.
- **Hyperventilation**
  - Breathe into cupped hands or paper bag. Breathe through nose and out through mouth.
- **Choking**
  - DO NOT interfere with the student-athlete if they are actively coughing and/or trying to dislodge object themselves, stand-by.
  - If the student-athlete CANNOT breathe, cough or speak, **activate EMS**.
  - Perform abdominal thrusts until object is dislodged.
  - If unconscious start CPR.
- **Heart Attack or SCA**
  - Activate EMS.
  - Treat for shock.
  - Administer CPR, acquire AED and apply to the student-athlete.
- **Comotio Cordis- Agitation of the Heart**
  - Activate EMS and administer CPR; acquire AED and apply to the student-athlete.

---

## Bites Protocol

- **Animal and Human Bites**
  - If needed **activate EMS** and administer any and all first aid needed.
  - Wash thoroughly with soap and water.
  - Apply antiseptic and sterile dressing.
  - Notify parents/guardians and police if necessary.
  - Should be referred to a physician for necessary antibiotics and blood borne pathogen contamination check, plus any booster shots needed.
- **Insect Bites**
  - If the student-athlete is allergic:
    - Locate Epi-pen and administer to the student-athlete.
    - Activate EMS.
  - If the student-athlete is not allergic:
    - Remove stinger if present.
    - Apply ice to the bite.
    - Apply sting relief pad or ointment.

---

## Bleeding and Other Wound Care Protocol

- **External Bleeding**
  - Minor Wound
    - Wash wound with soap and water thoroughly, or use tap water irrigation.
    - Apply triple antibiotic ointment to wound.
    - Apply sterile dressing and bandage.
    - Keep wound clean and covered until healed.
  - Major Wound

- Pack wound and apply direct pressure to the wound with sterile gauze pad.
  - If severe bleeding persists DO NOT remove the primary gauze pad from wound, pack secondary gauze over the primary gauze.
  - Apply pressure to main artery supplying blood to affected area.
  - **Activate EMS and treat for shock.**
- **Internal Bleeding**
  - **If any internal bleeding is suspected, activate EMS and treat for shock.**
- **Abrasions**
  - Clean wound with soap and water, or tap water irrigation.
  - Cover with triple antibiotic ointment.
  - Apply sterile dressing and bandage.
  - Keep wound clean and covered until wound is healed.
- **Blisters**
  - Clean affected area with soap and water, or tap water irrigation.
  - Blisters smaller than 5cm should not be unroofed or drained.
  - Apply blister protection to area.
  - Blisters larger than 5cm, clean the skin, drain the blister in a sterile environment along the periphery – DO NOT UNROOF the blister unless the roof is torn.
  - Cover the area with anti-bacterial ointment.
- **Burns**
  - First stop burning.
  - Cool and flush the burned area with large amounts of cool water.
  - Apply burn cream if available.
  - Cover with loose, dry, sterile dressing.
  - Do not ice, do not break blister.
  - Large deep burns must be referred to a physician.
- **Incisions and Lacerations**
  - Wash wound with tap water irrigation.
  - If wound is deep may need to apply wound closure strips (Steri-Strips).
  - Refer for stitches if necessary.
- **Splinters**
  - If superficial, remove with sterile tweezers or forceps.
  - If deep, and/or unable to be removed easily refer to a physician.
  - Clean with soap and water, or tap water irrigation.
  - Apply with triple antibiotic ointment.
  - Cover with Sterile dressing and bandage.
  - May advise to check last Tetanus booster date.

## **Bloodborne Pathogen Exposure Plan**

---

Protection and precaution should be taken whenever dealing with blood or bodily fluids. Gloves should be worn at all times and soiled gauze, bandages, and other soiled material should always be disposed of in a biohazard bag. The following is the procedure when dealing with bodily fluids:

- AT and/or SA should always wear gloves to protect themselves from bloodborne pathogens.
  - After gloves are put on, the gloved hands should not come into contact with other surfaces that cannot be properly disposed of as they will contaminate the surface.

- If there is exposure to blood borne pathogen AT and/or SA should immediately irrigate the affected area with soap and water, may also wash out with hydrogen peroxide.
  - The affected person should immediately notify their supervisor of the situation.
  - Supervisor will notify appropriate personnel and make accommodations for the affected person to receive all medical attention needed following the exposure.
- Bodily fluids that are spilled on the floor or other cleanable areas should be cleaned immediately after patient is appropriately bandaged.
  - All soiled gauze pads, paper towels, towels, etc. should be disposed of in a biohazard container.
- Personal Protective Equipment
  - By order of OSHA and the county health department, all health care personnel must wear personal protection equipment whenever possible exposure situations present themselves. The following protective equipment is strongly recommended when addressing bodily fluid situations.
  - Non-latex, nitrile, or vinyl gloves.
  - Safety glasses (clear).
  - Mouth and nose mask.
  - Disposable gowns (if needed).
  - One-way valve CPR mask.
- It is further recommended that all athletic training personnel engage in proper post-treatment sanitation practices (such as personal protective equipment disposal, and antibacterial hand and forearm scrubbing).
- Training on equipment is available and proper use of and repair/replacement procedures are provided. Student aides are provided personal protective equipment as outlined in the Bloodborne Pathogens Exposure Control Plan.

## Universal Precautions

---

Hands should always be washed:

- Before and after contact with each patient.
- After removal of gloves and other protective equipment.
- With soap and warm water for a minimum of twenty seconds or with antibacterial gel.

Non-latex gloves are provided to all coaches and Student Aides. Glove use is indicated for:

- All patient care which involves potential exposure to blood or body fluids
- Cleaning of obvious or suspected blood or body fluids and decontamination procedures of work areas.
- When cleaning instruments contaminated with blood or body fluids prior to sterilization and which are capable of causing puncture or cut wounds.
- If the staff member has cuts, abraded skin, chapped hands, dermatitis, or other non-intact skin.
- Gowns or plastic aprons are indicated if blood and/or body fluid splattering are likely.
- Masks and protective goggles should be worn if splattering is likely to occur.

- To minimize the need for mouth-to-mouth resuscitation, CPR masks, face shields, other ventilation devices are strategically located in the athletic training room and in each athletic training kit.
- All personal protective equipment must be removed and placed in the appropriate disposal site prior to leaving the work area.
- Approved and labeled sharps disposal containers and hazardous waste containers are to be used for all contaminated supplies.
- All equipment and work surfaces must be cleaned with a solution capable of killing bacteria, viruses such as MRSA and HIV, and fungus after contact with blood or other potentially infectious material and also at the end of the workday.
- Towels contaminated with blood or body fluid should be placed and sealed in a red hazardous waste bag and taken directly to the laundry room where they are washed separately in a hot cycle.

Other regulated waste includes:

- Liquid or semi-liquid blood or other potentially infectious materials.
- Contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed.
- Items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling.
- Pathological and microbiological wastes containing blood, or other potentially infectious materials.

Such regulated waste must be placed in the hazardous waste container or in a sealed red hazardous waste bag.

Causative Factors and Health Consequence

- HIV, HBV, and HCV are transmitted through direct contact with infected blood or blood components, direct sexual contact, and prenatal mother to baby contact. High-risk behaviors such as sexual intercourse and sharing needles with persons who are infected have been identified as the most common sources of transmission of the viruses.

These policies are developed to accomplish the following:

- Minimize contact with blood and body fluids by staff and student.
- Minimize likelihood of transmission of specific organisms, such as: hepatitis B virus, HIV, tuberculosis, staphylococcus, and streptococcus.
- Consistently practice appropriate sharp disposal procedures.
- Increase confidence for patients by using the same precautions for all patients. Consistent practice appropriate infection control procedures.

Accidental Exposure - Any athletic training personnel that feels they have been exposed to a patient's bodily fluids should do the following immediately:

- Do not panic! If the exposure involved a wound, it should be cleaned thoroughly for at least five minutes.

- Report the possible exposure to the athletic trainer. An incident report must be filled out.
- The exposed individual should report to a nearby hospital for testing, and treatment (if needed).
- If possible, the patient should be tested for hepatitis A, hepatitis B, hepatitis C, tuberculosis, and HIV.
- The confidentiality rule will be in effect for any cases involving possible exposure situations.

The best advice to all athletic department personnel is safety first. Remember that non-puncture exposures carry the lowest chance contracting diseases.

## **Sudden Cardiac Arrest (SCA) Protocol**

---

### **What is Sudden Cardiac Arrest (SCA)?**

Sudden Cardiac Arrest (SCA) is a condition in which the heart stops beating, suddenly and unexpectedly, due to a malfunction in the heart's electrical system. When this occurs, the heart cannot contract properly to maintain adequate blood flow to the brain and throughout the body. SCA is not a heart attack. The underlying cause of SCA is typically due to a congenital or genetic structural abnormality of the heart, or an abnormal heart rhythm. In 2% of student-athletes who suffer from SCA, a postmortem examination fails to identify an abnormality. SCA is the leading cause of death in exercising young athletes, with an occurrence in high school athletes of 1:100000 to 1:200000, which may be grossly underestimated. However, with proper prevention, recognition, and management it is highly possible to avoid incidents of SCA.

### **Prevention for Student-Athletes and Parents/Guardians**

On an annual basis, each student-athlete and their parents/guardians will be given, in writing or digital form, the Sudden Cardiac Arrest Information Sheet to review.

On an annual basis, the pre-participation physical examination will include the completion of a standardized history form and attention to episodes of exertional syncope or pre-syncope, chest pain, a personal or family history of SCA or a family history of sudden death, and exercise intolerance.

### **Coaches and other Athletic Department Personnel**

While not mandatory, it is highly advised that all coaches and other athletic department personnel complete the free NFHS course on Sudden Cardiac Arrest. With content developed by Simon's Fund, this course will help you learn and recognize the warning signs and symptoms of Sudden Cardiac Arrest. Also included are tips for what to do in the critical moments after an individual suddenly collapses in order to save their life. The course can be found at <https://nfhslearn.com/courses/61032>

### **Recognition**

Sudden Cardiac Arrest (SCA) should be suspected in any student-athlete who has collapsed and is unresponsive. A patient's airway, breathing, and circulation should be assessed. 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.

### **Potential Indicators That SCA May Occur**

- Fainting or seizure, especially during or right after exercise.
- Fainting repeatedly or with excitement or startle.
- Excessive shortness of breath during exercise.
- Racing or fluttering heart palpitations or irregular heartbeat.
- Repeated dizziness or lightheadedness.
- Chest pain or discomfort with exercise.
- Excessive, unexpected fatigue during or after exercise.

### **Factors That Increase the Risk of SCA**

- Family history of known heart abnormalities or sudden death before age 50.
- Specific family history of Long QT Syndrome, Brugada Syndrome, Hypertrophic Cardiomyopathy, or arrhythmogenic Right Ventricular Dysplasia (ARVD).
- Family members with unexplained fainting, seizures, drowning or near drowning or car accidents.
- Known structural heart abnormality, repaired or unrepaired.
- Use of drugs, such as cocaine, inhalants, “recreational” drugs, excessive energy drinks or performance enhancing supplements.

Preparation is the key to survival once SCA has occurred. Established EAPs specific to each athletic venue, including an effective communication system, training of likely first responders in CPR and AED use, acquisition of the necessary emergency equipment, a coordinated and practiced response plan, and access to early response will be in place.

In any student-athlete who has collapsed and is unresponsive, SCA should be suspected. If normal breathing and pulse are absent, CPR should be started immediately and EMS activated. The CPR should be performed in the order of CAB (chest compressions, airway, breathing) by medical professionals (hands-only CPR is now recommended for lay responders) while waiting for arrival of the AED and stopped only for rhythm analysis and defibrillation. This should continue until either EMS take over or the victim starts to move.

### **Sudden Cardiac Arrest Algorithm**

- 1) SCA suspected • Unexpected collapsed or is unresponsive**
- 2) Check that the scene is safe**
- 3) Activate EMS • Have a bystander call 911 and retrieve AED (if available)**
- 4) Assess pulse & breathing (CABs) • Check carotid pulse and watch for visible chest rise**
- 5) If either pulse or regular breathing are absent, begin CPR • Hands-only CPR is ok if not certified in CPR**
- 6) 30 Chest Compressions • Center of the chest at the nipple line; push hard, push fast—at least 2” deep**
- 7) Open the airway • Head-tilt, chin-lift**
- 8) 2 rescue breaths • 1 second/breath; if unsuccessful, readjust airway (take no longer than 10 seconds)**
- 9) Repeat CPR cycle continuously • Only stop when EMS arrives and takes over care**

# Dermatological Problems & Other Infectious Diseases Protocol

---

## Bacterial Skin Infections

- **Folliculitis**
  - Moist heat can be applied intermittently to increase circulation.
  - Triple antibiotic ointment can also be applied to combat further infection.
  - Furuncles and Carbuncles-complications from Folliculitis
  - Referral to physician.
  - DO NOT try to squeeze pustule as this may cause infection to spread to other areas of the skin.
- **Impetigo**
  - May clear on its own if washed thoroughly and kept clean and covered.
  - Apply antibiotic if provided by a physician, no over the counter antibiotics.
  - Impetigo is contagious and caution should be taken so the student-athlete does not infect others.
- **MRSA (Methicillin Resistant Staphylococcus Aureus)**
  - Must be seen by a physician and put on antibiotics.
  - May require surgical draining of the lesion.
  - Prevention is key, DO NOT share personal hygiene products, take showers right after each practice, and clean athletic equipment daily.

## Fungal Skin Infections

- **Tinea (Ringworm) Infections**
  - Topical Antifungals.
  - Keep skin clean and dry.
  - DO NOT itch the area in question.
  - Prevention is key.

## Viral Skin Infections

- **Herpes Gladiatorum**
  - Refer to a physician.
  - May be put on antiviral.
- **Herpes Simplex (Cold Sore)**
  - Herpes simplex usually clears on its own within 10-14 days.
  - May use over the counter medication to aid in symptoms.

**Per AIA Wrestling regulations, AT's must have a doctor's clearance for ANY skin infection. The student-athlete will be given the NFHS Skin Lesion Form to bring to their healthcare provider and return the completed form to the AT.**

***Appendix #2: Medical Release Form for Wrestler to Participate With Skin Lesion(s)***

***Appendix #7: Skin Lesion Chart***

## Other Infectious Diseases

The athletic trainer and school personnel will follow AIA recommendations and guidelines for infectious diseases (such as COVID-19).

## Exertional Heat Illness Policy & Procedures

---

Activity in hot or humid environments can easily cause a number of heat-related illnesses. Heat illness can occur in anyone at any time. The signs and symptoms listed below usually do not occur in a stepwise manner and can change rapidly dependent on the person, situation, and activity. All signs and symptoms should be treated as serious and help sought in a timely manner. Categories of heat illness include:

- **Heat Syncope** – generally referred to as fainting because of exposure to high environmental temperatures, vasodilatation, reduced cardiac output, and dehydration. This can occur due to long periods of standing, cessation of activity, or movement from a seated to standing position. A person who has suffered syncope will usually be dizzy, pale, and have cool, damp skin.
- **Heat Cramps** – painful muscle cramping of the body usually localized to lower or upper legs, abdomen, or upper extremities. A person suffering from heat cramps will be sweating and thirsty.
- **Heat Exhaustion** – A person suffering from heat exhaustion will have an elevated body temperature but cool damp skin and will continue to sweat. They will be weak, dizzy, and may feel as if they will faint. Other symptoms include nausea, headache, chills, hyperventilation, and thirst.
- **Heat Stroke** – **Emergency help is needed immediately!** A person suffering from heat stroke will be hot to the touch with dry or non-sweating skin. Due to central nervous system changes they may be disoriented, hysterical, delirious, or unconscious. Heart rate and respiration will be elevated with a decrease in blood pressure. Core body temperature will be 104 F or above.
- **Hyponatremia** – Signs and symptoms of hyponatremia include nausea and vomiting, swelling of hands and feet, headache, confusion, apathy and lethargy, and altered consciousness. In severe cases seizures, pulmonary edema, and coma could occur.

**Preventing heat illness is a team responsibility. The student-athlete, coach, and athletic trainer must all do their part to keep each student-athlete safe.**

- **Student-Athletes** – must complete the pre-participation physical examination prior to any practice, conditioning session, weightlifting, or competition; are encouraged to attend all workouts, wear the proper clothing and equipment, hydrate their body prior to physical activity, and be aware of how they are feeling while participating in hot weather.
- **Coaches** – should design their pre-season workouts to acclimatize student-athletes properly so that their bodies can handle the demands of performing in hot weather; are encouraged to constantly monitor student-athletes during all practices, games, conditioning sessions, and weightlifting sessions.
- **Athletic Trainer** – will monitor the environmental conditions at specific venues prior to the start of practice/games (see Severe Weather Protocol).
- **Best practice guidelines** - call for the determination of environmental conditions at the specific practice/contest site using school implemented weather system: WBGT (ideally), Weather Bug, Accurweather, EarthNetworks etc.

# Heat and Cold Injuries Protocol

---

- **Heat Cramps**
  - Remove student-athlete from heat source and rest.
  - Increase water intake and electrolyte intake.
  - Stretch and massage to release cramp.
  - Activity which produces heat cramps for two consistent days should be altered.
- **Heat Syncope**
  - Remove student-athlete from heat source and rest.
  - Increase water intake and electrolyte intake.
  - Elevate Legs above the level of the head.
  - Record blood pressure and core temp.
  - Cognitive function and vital signs will be assessed.
- **Heat Exhaustion (core temperature generally 99-104 degrees)**
  - Remove student-athlete from heat source to cool dry place.
  - Remove any unneeded equipment.
  - Core body temperature will be measured using oral or axillary temperature.
  - Oral/axillary temperatures can be inaccurate, off by 1-4 degrees. Take into account when reading temperature results\*.
  - **Lower body temperature Immediately** -Ice Bath (**35-59 degrees F**) & Cold wet towels or ice bags to the back of the neck, under arms and groin.
  - Cognitive function and vital signs will be assessed.
  - Refer to physician before returning to the next practice or competition.
  - If symptoms do not improve, **activate EMS**.
  - \*Rectal temperature is still the most accurate method for monitoring temperature.
- **Heat Stroke (core temperature at or above 104 degrees)**
  - Remove the student-athlete from the heat source, **lower body temperature Immediately-immense in Ice bath (35-59 degrees F)**, cold towels around neck, remove access clothing/equipment, Core body temperature will be measured using oral or axillary thermometers.
  - **Initiate EAP-activate EMS.**
  - Oral/axillary temperatures can be inaccurate, off by 1-4 degrees. Take into consideration when reading temperature results\*.
  - Cover as much of the body with cold water as possible.
  - Keep the student-athlete's head and neck from going under water, an assistant
  - May hold him or her under the axillae with a towel or sheet wrapped across the chest under the arms.
  - During cooling, water should be continuously circulated or stirred to enhance the water-to-skin temperature gradient, which optimizes cooling.
  - Cognitive function and vital signs will be assessed.
  - Do not give fluid by mouth, be prepared for seizure.
  - Notify parents/guardians, coach, and administrator.
  - \*Rectal temperature is the most accurate method for monitoring temperature.
  - Student-athlete must have written physician approval to return to practice or competition.
- **Frostbite**
  - Move to warm area indoors as soon as possible.

- Warm with moderately warm water (**104-108 degrees F**) for 30-45min.
- Should be referred to hospital.
- **Hypothermia**
  - If student-athlete is suspected to have hypothermia they should be taken to warm indoors place.
  - Warm body by wrapping in warm blankets and if needed putting on dry clothing.
  - If body temp is lower than 96 degrees Fahrenheit EMS should be activated.
- **Hyponatremia**
  - The student-athlete will be assessed for differentiation between hyponatremia and heat stroke.
  - If hyponatremia is suspected, immediate activation of EMS will occur per the guidelines of the Emergency Action Plan.
  - The student-athlete with suspected hyponatremia should not be administered fluids until a physician is consulted.

## Diabetes Protocol

---

Diabetes is characterized by the increase of blood glucose over (fasting) 140mg/dL. There are three types of diabetes, type I, type II and gestational.

- **Type I, Type II and Gestational**
  - Follow student-athletes Diabetes Care Plan provided by physician, student-athlete, or parents/guardians.
  - There are also conditions that may or may not include insulin injections:
- **Insulin Reaction-rapid onset-excessively low blood glucose**
  - Get the student-athlete to eat sugar or a high sugar food.
  - Drink a high sugar drink, orange juice.
  - If the student-athlete is unconscious, activate EMS, may rub honey cake frosting or syrup on inside of mouth, this will melt and be swallowed by the student-athlete.
- **Diabetic Coma-slow onset**
  - If the student-athlete is suspected of being in a diabetic coma activate EMS.

***Appendix #8: Individualized Diabetic Care Plan***

***Appendix #9: Strategies to Prevent Hypoglycemia***

***Appendix #10: Treatment Guidelines for Mild and Severe Hypoglycemia***

***Appendix #11: American Diabetes Association Guidelines Concerning Hyperglycemia and Exercise***

## Eye Problems Protocol

---

- **Periorbital Ecchymosis (Black Eye)**
  - Rule out orbital fracture, abrasions/lacerations of the cornea.
  - Ice affected area.
- **Foreign Bodies**
  - If not embedded in cornea, foreign body should be removed.
  - Inspect the eye and eyelid.

- Use saline to wash out the eye.
- If unable to remove in this method, patch both eyes and refer to physician. If necessary, **activate EMS**.
- DO NOT allow the student-athlete to rub eyes.
- **Stye**
  - Hot, moist compress.
  - Physician referral is needed if not resolved in 1-2 weeks.
- **Conjunctivitis (Pinkeye)**
  - DO NOT allow the student-athlete to rub eye.
  - Referral to a physician is necessary.
- **Corneal Abrasion (Suspected)**
  - DO NOT allow the student-athlete to rub eye.
  - Refer to optometrist.

**Activate EMS and ask for optometrist on call:**

- **Corneal Laceration (suspected)**
  - DO NOT allow the student-athlete to rub eye.
  - Pupil should be inspected for symmetry.
  - Eye should be covered; intense pressure should be avoided as this may cause intraocular contents to extrude.

**Activate EMS and ask for optometrist on call.**

- **Subconjunctival Hemorrhage**
  - Requires no treatment.
  - Condition will clear itself in 1-3 weeks.
  - If there is blurred vision, pain, or blood in the anterior chamber of the eye **EMS should be activated**.
- **Hyphemia**
  - **Activate EMS** and ask for the optometrist on call.
  - Both eyes should be patched.
  - Student-athlete should remain seated or in a semi reclined position.
- **Detached Retina (suspected)**
  - Patch both eyes.
  - Activate EMS.
  - Referral to ophthalmologist.
- **Orbital Blowout Fracture**
  - Apply ice to area carefully.
  - Patch both eyes.
  - **Activate EMS** and ask for the ophthalmologist on duty.
  - Student-athlete should be transported in a seated position.

## General Illnesses Protocol

---

- **Fever**
  - Discontinue activity.
  - Notify parents/guardians of presence of fever if necessary.
  - Refer to physician if needed.

- **Sore Throat, Head Cold, Cough, GI Issues**
  - Discontinue activity if needed.
  - Refer to physician if needed.
- **Headache**
  - Rule out concussion.
  - Discontinue activity if necessary.
  - If diagnosed with migraines:
    - Follow Migraine Care Plan as prescribed by physician.
- **Fainting**
  - Keep student-athlete lying down and support head and neck.
  - Loosen tight clothing.
  - If vomiting, turn or roll the student-athlete to side and clear all liquid from mouth (use Universal Precautions).
  - Notify parents/guardians of episode.

## Head Injuries Protocol

---

ALL suspected head injuries MUST be referred to the AT immediately. At no time may a coach make a decision about a student-athlete's playing ability after a head injury.

- **Concussion**
  - Remove from participation.
  - Evaluate using [SCAT6](#) or [SAC](#).
  - Monitor vital signs and symptoms—If worsen, activate EMS.
  - Contact parents/guardians.
  - Follow Stepwise Return to Play Protocol.
  - Student-athlete must be cleared by an appropriate healthcare professional (LAT, MD, DO, NP, PA) prior to returning to full contact per AZ Law and AIA policy.
- **Post-Traumatic Headache**
  - Discontinue play and rest.
  - Refer to physician if necessary.
- **Post-Concussion Syndrome**
  - May have to have a CT or MRI to clear student-athlete of any bleeding of the brain.
  - Follow protocol for management of a concussion.
- **Second Impact Syndrome**
  - Activate EMS.
  - Notify emergency contact person.
  - Notify AD.
  - The biggest key is prevention, if a student-athlete is complaining of any concussion symptoms (no matter what the cause), they should see the AT before being allowed to return to play.

# Concussion Policy and Protocol

---

## **Concussion Education:**

All student-athletes shall complete the Brainbook online concussion education course. All student-athletes shall complete the course prior to participation in practice or competition. Note: The Brainbook online concussion education course must be completed by a student-athlete only once.

All student-athletes and parents/guardians must read and sign the AIA Mild Traumatic Brain Injury (MTBI)/Concussion Annual Statement and Acknowledgement Form prior to participation in practice or competition.

Any individual coaching at a school within the AIA must take and pass the “Concussion in Sports” education course through the National Federation of State High School Associations (NFHS). A coach must only complete this course once.

## **Baseline Testing:**

All student-athletes playing contact or collision sports will be baseline tested via Sway Medical at the beginning of their season. It is recommended that student-athletes complete a new baseline test each school year. After a student-athlete sustains a concussion, their original baseline test can continue to be used for subsequent concussions sustained that school year until a new baseline test is taken during the next school year.

Student-athletes may also be baseline tested using the VOMS (Vestibular Ocular Motor Screening) test.

Sports completing baseline testing: football, flag football, soccer, volleyball, swim & dive, basketball, wrestling, baseball, softball, lacrosse, hockey, rugby, track (jumpers, vaulters, hurdlers, throwers), cheerleading

## **Recognition:**

Signs and symptoms of a concussion may include, but are not limited to:

- Symptoms: somatic (headache, dizziness, nausea), cognitive (blurred vision, sensitivity to light/noise, feeling like in a fog), and/or emotion (lability)
- Physical signs: loss of consciousness, amnesia, neurological deficit
- Balance impairments: gait unsteadiness, (+) Romberg sign
- Behavioral changes: increased irritability, sadness
- Cognitive impairment: slowed reaction times, decreased recall abilities
- Sleep/wake disturbances: drowsiness, somnolence

The athletic trainer will use best practice and clinical judgement when recognizing a possible concussion.

## **Removal from Play:**

A student-athlete, coach, licensed athletic trainer, team physician, official or parent/guardian can remove a student-athlete from play. Regardless of who removes the student-athlete and when, all suspected concussions should be reported to the athletic trainer and the head coach.

Only an appropriate healthcare professional can refute the diagnosis of a concussion. A student-athlete may return to play on the same day if an appropriate healthcare professional rules out a suspected concussion at the time the student-athlete is removed from play. No student-athlete should return to play or practice on the same day of a concussion.

On a subsequent day, the student-athlete may return to play if the student-athlete has been evaluated by and received written clearance to resume participation in athletic activity from an appropriate healthcare professional who has been trained in the evaluation and management of concussions and head injuries.

An appropriate healthcare professional for return to play is defined as the following: Licensed Athletic Trainer, Physician (MD/DO), Licensed Nurse Practitioner, Physician's Assistant. The appropriate healthcare professional should not be a family member of the student-athlete.

**Management:**

Any student-athlete suspected of having a concussion should be evaluated by an appropriate healthcare professional that day. The athletic trainer will evaluate and track the student-athlete's concussion using the following documentation and evaluation tools at their discretion:

- Sway Medical (symptoms, balance and reaction time testing)
- SCAT6/SAC (within 72 hours)
- VOMS
- Cranial Nerve Assessment
- ***Symptom Tracking Form (Appendix #14)***

The athletic trainer will inform parents/guardians of the concussion and include the ***Post-Concussion Home Care Instructions (Appendix #15)***.

This concussion policy has been vetted and approved by the NAH Supervising Physician(s). The athletic trainer will act autonomously to recognize, manage, and treat concussions within their scope of practice. The athletic trainer will inform and ask for guidance from their Supervising Physician on a case-by-case basis.

It is recommended that a Concussion Management Team (CMT) be in place at the school. This is to ensure clear communication regarding the athletic and academic management of the student-athlete's concussion. Members of the CMT typically include the athletic trainer, school nurse/health aide, counselors, and administration (athletic director, principals, etc.).

**Referral:**

If a student-athlete has any red flags noted after a direct or indirect blow to the head, the student-athlete should be immediately and safely removed from participation and evaluated by an appropriate healthcare professional. Consideration of transportation to a medical facility will be at the discretion of the appropriate healthcare professional.

### Red flags:

- Neck pain/tenderness, neurological symptoms
- Amnesia (before or after event)
- Severe or increasing headache
- Seizure , “fits,” or convulsion
- Loss of consciousness
- Ataxia (loss of coordination)
- Confusion
- Repeated vomiting
- Behavioral changes
- Tonic posturing

If a student-athlete sustains more than one concussion in a given school year or has a previous history of concussion(s), it is recommended that they be evaluated for this subsequent concussion by an appropriate healthcare professional other than the Licensed Athletic Trainer. The athletic trainer will remain involved in the recognition and management of the student-athlete’s concussion and supervise the return to play progression once medically cleared.

### ***Appendix #16: Physician Referral Form***

#### **Return to Academics:**

Relative Cognitive rest should be recommended for symptomatic student-athletes. This may include limiting activities such as reading, texting and computer usage. In some instances, this may also involve school absences and/or the use of academic adjustments or accommodations as prescribed by the appropriate healthcare professional and school academic team (school nurse, school counselor, administration, etc.).

### ***Appendix #17: Academic Accommodation Considerations***

#### **Return to Play:**

No student-athlete should return to play or practice on the same day as of a concussion. Any student-athlete with a concussion should be medically cleared by an appropriate healthcare professional prior to resuming participation in any practice or competition. After medical clearance, return to play shall follow a step-wise protocol with provisions for delayed return to play based as directed by an appropriate healthcare professional. The athletic trainer will supervise the return to play progression. Return to play should only occur after a student-athlete has returned to full school attendance without academic accommodations (see Return to Academics).

Before the return to play progression (Stage 2-6) can be initiated, the student-athlete must be asymptomatic through a full school day, have a normal clinical examination, and perform at or above preinjury levels of functioning on all objective concussion assessments (i.e. Sway Medical, SCAT6/SAC, VOMS). It is permissible for the student-athlete to perform symptom-limited activity (Stage 1) before symptom resolution as outlined in the progression below.

The following return to play progression will be used:

Step	Exercise strategy	Activity at each step	Goal
1	Symptom-limited activity	Daily activities that do not exacerbate symptoms (eg, walking).	Gradual reintroduction of works/school
2	Aerobic exercise 2A—Light (up to approximately 55% maxHR) then 2B—Moderate (up to approximately 70% maxHR)	Stationary cycling or walking at slow to medium pace May start light resistance training that does not result in more than mild and brief exacerbation* of concussion symptoms.	Increase heart rate
3	Individual sport-specific exercise Note: If sport-specific training involves any risk of re-injury head impact, medical clearance should occur prior to Step 3	Sport-specific training away from the team environment (eg, running, change of direction and/or individual training drills away from the team environment). No activities at risk of head impact.	Add movement, change of direction
Steps 4-6 should begin after the resolution of any symptoms, abnormalities in cognitive function and any other clinical findings related to the current concussion, including with and after physical exertion.			
4	Non-contact training drills	Exercise to high intensity including more challenging training drills (eg, passing drills, multiplayer training) can integrate into a team environment.	Resume usual intensity of exercise, coordination and increased thinking
5	Full contact practice	Participate in normal training activities.	Restore confidence and assess functional skills by coaching staff
6	Return to sport	Normal game play.	

\*Mild and brief exacerbation of symptoms (ie, an increase of no more than 2 points on a 0-10 point scale for less than an hour when compared with the baseline value reported prior to physical activity). Athletes may begin Step 1 (ie, symptom limited activity) within 24 hours of injury, with progression through each subsequent step typically taking a minimum of 24 hours. If more than mild exacerbation of symptoms (ie, more than 2 points on a 0-10 scale) occurs during Steps 1-3, the athlete should stop and attempt to exercise the next day. Athletes experiencing concussion-related symptoms during Steps 4-6 should return to Step 3 to establish full resolution of symptoms with exertion before engaging in at-risk activities. Written determination of readiness to RTS should be provided by an HCP before unrestricted RTS as directed by local laws and/or sporting regulations.  
HCP, healthcare professional; maxHR, predicted maximal heart rate according to age (ie, 220-age).

## Appendix #18: Return to Play Progression Chart

### Other:

At the beginning of a game, the coach must certify to the official that the equipment is in compliance with safety regulations and properly fitted. If a helmet comes off or becomes dislodged during play, the student-athlete must remain out for one play or call a time out to have the equipment reassessed.

The athletic trainer will follow best practice for the evaluation of a concussion sustained by a student-athlete on a visiting team, the general population, or game officials. If EMS is called for a serious head injury, the athletic trainer will report the incident to NAH through the Safety Reporting Protocol.

Student-athletes who are participating in off-season sports are still required to follow the same concussion protocol as in-season student-athletes. Those who sustain a concussion during the season that do not recover before the season's end are still required to go through the same return to play guidelines. Assistance and oversight will still be provided by the athletic trainer.

## Spinal and Nerve Injuries Protocol

- **Muscle Strain**
  - POLICE.
  - Stretch and strengthen the muscle.
  - May need training of synergistic muscle groups to aid in proper mechanics.
- **Brachial Plexus Injury (Stinger or Burner)**
  - Discontinue play.
  - POLICE.
  - Notify parents/guardians if necessary.
  - May need to refer to physician if no improvement in 24 hours.
  - Increase motor strength.
  - Use extra padding/bracing if able (i.e. football-collar).
- **Fracture**
  - Stabilize head and neck.
  - Activate EMS.
  - If unconscious, check CABs and start CPR if needed. Locate and use AED if necessary.

- Do not allow the student-athlete to move. If necessary, use log roll or 6-man lift technique with enough trained individuals.
- Notify parents/guardians.
- **Suspected Spinal Cord Disruption**
  - Stabilize head and neck.
  - Activate EMS.
  - If unconscious, check CABs and start CPR if needed. Locate and use AED if necessary.
  - Do not allow the student-athlete to move. If necessary, use log roll or 6-man lift technique with enough trained individuals.
  - Notify parents/guardians.
  - If student-athlete is wearing protective equipment (helmet, shoulder pads, etc.), see below.

---

### ***Suspected Spinal Cord Injury for a Student-Athlete with Protective Equipment***

- Always activate EMS first.
- When a potential spine injury is suspected, athletic trainers should ensure that the cervical spine is in a neutral position and should immediately apply manual cervical spine stabilization.
- Athletic trainers should immediately attempt to expose the airway, removing any existing barriers (e.g. protective face masks).
- During airway management, athletic trainers should cause as little motion as possible.
- Manual stabilization should be converted to immobilization using a combination of external devices (e.g. cervical collars, foam blocks, long spine board, or other full-body immobilization device) or in conjunction with EMS personnel.
- EMS protocols may vary from NATA standards. Utilize “Medical Time Out” Prior to the event to streamline communication during emergency.
- Do not remove helmet or shoulder pads prior to transport unless they are interfering with the management of acute life-threatening injuries.
- Try to immobilize and transport with helmet/shoulder pads in place.
- The helmet and shoulder pads should be considered ONE unit; therefore, if one is removed then the other must be removed as well to assure neutral spine alignment.

---

## **Dental and Oral Conditions Protocol**

- **Toothache**
  - Apply ice if there is localized swelling.
  - If an abscess is suspected, take body temperature.
  - Refer to dentist.

- **Loose Tooth**
  - If the tooth is twisted, displaced, or extruded, try to place the tooth back into normal position without forcing it.
  - If the tooth is intruded, do not try to relocate the tooth.
  - Refer to a dentist immediately.
- **Chipped or Fractured Tooth**
  - If just the enamel is affected, the tooth can be “patched” with dental wax and referred to a dentist.
  - If a tooth fracture has occurred that causes pain, refer to a dentist immediately.
- **Dislocated or Traumatically Extracted Tooth**
  - Locate dislocated tooth. DO NOT touch the root of the tooth.
  - Place tooth in emergency tooth saver solution (Save-a-Tooth or EMT ToothSaver) if available. If not, place tooth in cow’s milk, saline, or student-athlete’s saliva.
  - The student-athlete should bite down on gauze to stop bleeding.
  - DO NOT allow the student-athlete to take anything by mouth.
  - Refer to a dentist immediately. Re-implantation of tooth within 30 minutes is ideal.
  - If after normal business hours and the student-athlete cannot get into a dentist, refer to the ER and ask for the dentist on-call to meet the student-athlete there.
- **Orthodontic Problem**
  - If the wire is too long or the bracket is cutting the mouth, cover with dental wax and if needed have the student-athlete see an orthodontist.
  - DO NOT attempt to remove a wire that is imbedded in the cheek, tongue or gum. Refer to an orthodontist immediately.
  - If appliance breaks, place in envelope, refer to an orthodontist.
- **Facial Fracture**
  - If the mandible or maxilla is fractured, maintain airway and activate EMS.
  - If able and necessary, splint suspected fracture.
  - The student-athlete must be referred for x-rays of any suspected fractures.
  - Notify parents/guardians if necessary.

## Nasal and Ear Conditions Protocol

---

- **Epistaxis (Nosebleed)**
  - Stop the bleeding by utilizing gauze/nasal sponges.
  - Have the student-athlete keep head slightly tilted forward.
  - Rule out fracture and concussion.
    - If fracture is suspected, refer for x-rays.
    - If concussion is suspected, refer to concussion policy.
  - If bleeding is severe or does not slow/stop quickly, apply ice to the bridge of nose/neck. Have the student-athlete rest and hydrate until bleeding slows or stops.

- If bleeding continues, refer to a physician.
- **Nasal Fracture**
  - Control bleeding without disrupting the fracture.
  - Apply ice to the nose if not too painful.
  - Refer the student-athlete for x-rays and further treatment.
- **Auricular Hematoma (Cauliflower Ear)**
  - Ice can be applied to reduce the amount of swelling.
  - If swelling is still present after icing, the hematoma needs to be aspirated and ear packed/compressed.
- **Earache**
  - Take the student-athlete's body temperature.
  - Refer to physician if necessary.
- **Swimmer's Ear**
  - Custom ear plugs must be made and worn while in the water.
  - Use eye drops to dry ear canal.
  - Refer to a physician if symptoms persist.

## Orthopedic Problems Protocol

---

This section is intended to give a general outline of managing acute orthopedic conditions often sustained by student-athletes. Each case is different and each student-athlete will be evaluated for the extent of their injury and treated accordingly.

This section does not go through every joint individually. While there are some different conditions associated with specific joints and parts of the body, this section is a general overview and will only address common conditions suffered all over the body.

- **Contusion (Bruise)**
  - If unable to perform sport, discontinue play.
  - POLICE.
  - Return to sport when the student-athlete is able.
- **Sprain (Ligament Injury)**
  - POLICE.
  - Decrease pain.
  - Increase ROM and strength with rehabilitation program.
  - Refer to a physician if needed.
- **Strain (Muscle or Tendon Injury)**
  - POLICE.
  - Decrease pain.
  - Increase ROM and strength with rehabilitation program.
  - Refer to a physician if needed.

- **Subluxation**
  - If any numbness, tingling, or diminished or loss of pulse—activate EMS.
  - Splint joint if possible.
  - Refer to a physician.
  - Must have physician clearance to return to play.
- **Dislocation**
  - If any numbness, tingling, or diminished or loss of pulse—activate EMS.
  - If comfortable, relocate. If not, splint and refer to ER or Urgent Care.
  - Refer to physician.
  - Must have physician clearance to return to play.
- **Fracture**
  - Splint fracture.
    - Check for movement, capillary refill, and pulse distal to the fracture site before and after splinting.
  - Check for numbness, tingling and loss of pulse; if any—activate EMS.
  - Treat student-athlete for shock.
    - If the student-athlete is going into shock—activate EMS.
  - Refer for x-rays.
  - If open fracture—activate EMS.
    - Brace fracture above and below.
    - Control bleeding.
  - Must have physician clearance to return to play.
    - May play with cast if appropriately padded according to NFHS rules.

---

## Reproductive Organ Problems Protocol

- **Male Genital Injuries**
  - **Testicular Spasm**
    - Have student-athlete palpate testicles to make sure they are of the same size and consistency.
    - Have student-athlete squat and instruct them to breathe.
    - Place ice on the groin to help relieve pain.
  - **Hydrocele**
    - Refer to a physician for possible surgical aspiration.
  - **Varicocele**
    - Refer to a physician if necessary, but condition may not need to be corrected.
  - **Hematocele**
    - Refer to a physician for possible surgical aspiration.
  - **Spermatic Cord Torsion**
    - Medical Emergency.

- Contact parents/guardians; if unable to take the student-athlete immediately to hospital—activate EMS.
  - Surgical intervention is needed in order to return blood supply to the testicle.
- **Female Genital Injuries**
  - **Oligomenorrhea**
    - Must rule out endometriosis.
    - The student-athlete should be seen by a physician to rule out any underlying conditions.
    - May participate fully in athletics as tolerated.
  - **Amenorrhea**
    - The student-athlete should be evaluated for pregnancy.
    - Decrease training.
    - Increase food intake.
    - Refer to a physician for possible iron testing or hormonal therapy.
    - Talk to student-athlete about possible underlying eating disorder.
- **Corresponding Injuries and Illnesses for Both Males and Females**
  - **Inguinal Hernia**
    - Refer to a physician for possible surgical intervention.
    - Discontinue play until the student-athlete is released to play by a physician.

## Seizures Protocol

---

- **General Management for Coaches**
  - If possible, cushion fall and protect the student-athlete from injury-producing objects.
  - Allow the student-athlete to continue seizure, DO NOT try to control or restrain.
  - DO NOT place anything in the student-athlete's mouth.
  - Allow the student-athlete to awaken normally after seizure.
  - Activate EMS if athletic trainer is not present.
  - Notify athletic trainer and parents/guardians.
- **General Management for Athletic Trainers**
  - Be aware of and make known to the coach of any student-athletes with a known seizure disorder.
  - Allow the student-athlete to continue seizure.
    - If the student-athlete does not have a known seizure disorder—activate EMS.
  - DO NOT place anything in the student-athlete's mouth.
  - Allow the student-athlete to awaken normally; if the student-athlete does not awaken right away, roll the student-athlete on side to allow saliva to drain from mouth.
  - Notify parents/guardians and discuss immediate care of the student-athlete.
  - If severity or duration of seizure exceeds norm for that student-athlete—activate EMS.

## Shock Protocol

---

- Place the student-athlete in a supine position and elevate the feet if it is safe to do so.
- Activate EMS.
- Keep the student-athlete calm.
- Control any bleeding if present.
- Monitor vital signs.
- Notify parents/guardians.

## Sickle Cell Trait Protocol

---

The student-athlete must self-report Sickle Cell Trait on the pre-participation physical evaluation. The athletic trainer should be aware of any known cases and ensure the coach is aware as well.

- Exertional Sickling
  - Medical emergency—Activate EMS.
  - Increase fluids.
  - Immediate withdrawal from activity.
  - Monitor vital signs.
  - Notify parents/guardians.

## Water Safety as it Pertains to the Athletic Trainer

---

Unless the athletic trainer is certified as a lifeguard, under no circumstances should the athletic trainer enter the water to rescue a drowning victim. Below are the policies and procedures to follow if the athletic trainer is NOT a certified lifeguard, and the victim is drowning.

- Call for a lifeguard.
- Take all directions from the lifeguard and only assist if asked by the lifeguard.
- If asked to assist the lifeguard do just that, ASSIST.
- Activate EMS, if not already done by the lifeguard.
- Notify parents/guardians.



# General Principles of Therapeutic Modalities

---

NAH and its partners realize the need to provide quality health care for the student-athlete. To accomplish this, the athletic trainer is authorized to utilize modalities such as heat, cold, light, sound, and electrical stimulation.

The following outline is taken from Chad Starkey's book, "Therapeutic Modalities" and should be used whenever an AT wants to implement the use of a modality.

- Recognition of the Problem
  - Identify the type and depth of the tissue involved.
  - Identify the nature of the pathology.
  - Determine the stage of healing.
  - Recognize the indications for the use of modalities and exercise.
  - Recognize any contraindications to the use of modalities or exercises.
  - Recognize the demands a patient's activity level places upon the tissue.
- Prioritization of the problem
  - Develop the logical treatment order based on the cause-and-effect relationship between the pathology and the signs and symptoms.
- Goal Setting
  - Develop structure and sequence in the treatment plan.
  - Establish benchmarks to determine efficacy of the treatment plan.
- Treatment Planning
  - Determine the modalities and exercises to be used and their sequence based on the patient's problems and treatment goals.
- Re-evaluation
  - Evaluation of the patient's current physical status.
    - Reassessment of previously identified problems.
    - Evaluation techniques that are no longer contraindicated.
    - Unfamiliar problems that have developed since the previous examination.
  - The findings are used to:
    - Assess the effectiveness of the current treatment protocol.
    - Reassess the short-term and long-term goals.
    - Determine changes that are needed in the treatment plan.

It must be noted that for some of the modalities described in this section, a note from a physician will be needed. If a note is needed, the student-athlete will be informed of this, and the physician will then need to indicate the parameters of the treatment. At no time while the student-athlete is under the care of a physician will the AT deviate from the treatment parameters set forth by the physician.

# Cryotherapy Protocol

---

Cold therapy can be delivered through the application of ice bags, reusable cold packs, cold compression therapy units, instant cold packs, ice massage, and ice immersion. Can be used to treat acute and chronic injuries, pain, and muscle spasm.

## Indications

- Acute injury or inflammation.
- Acute or chronic pain.
- Postsurgical pain and edema.

## Contraindications

- Cardiac or respiratory involvement.
- Uncovered open wounds.
- Circulatory insufficiency.
- Cold allergy and/or hypersensitivity.
- Anesthetized skin.

## Precautions

- Applying too much pressure with elastic bandage.
- Be careful using reusable cold packs—they get colder than ice bags and are more likely to give the student-athlete frostbite.
- Application of ice to large superficial nerve can cause neuropathy; check the student-athlete regularly if applying over superficial nerves.
- Content of instant cold packs can burn the skin; if there is a break in the packaging DO NOT use.

## Treatment Techniques:

### Ice Bags

- Fill bag with enough ice to cover area being treated.
- Remove excess air to ensure close contact between the ice and skin.
- Apply ice directly to the skin; if hypersensitivity occurs there may be a wet towel place
- In-between the ice and skin.
- If warranted wrap elastic bandage around the ice to apply compression to the area.
- Treatment should last about 20 minutes, but can be extended to 30 minutes if there is a
- Wet towel or clothing between the ice and skin.
- Treatment should be repeated in an interval of 20 minutes on and 1 hour off.

### Reusable Ice Packs

- The treatment is the same as above but there should always be a wet towel between the
- Skin and ice.
- The student-athlete should be checked regularly for signs of frostbite.

- Duration can be extended to 30 minutes.
- Treatment can be repeated at an interval of 30 minutes on and 1 hour off.

#### **Instant Cold Packs (ONLY AS A LAST RESORT!)**

- Shake bag to make sure all contents are evenly distributed throughout the bag.
- Squeeze the bag to break the inner pouch.
- Shake to mix the contents of the bag.
- Place the bag on injury.
- Be sure to monitor the student-athlete for indications the bag has broken. If this happens, immediately remove the bag and rinse with saline. Watch for chemical burns.

#### **Cold Compression Therapy Units**

- Fill the cooling unit with ice and water to the FILL mark.
- Allow water to chill for about 10 minutes.
- Apply appropriate appliance to the body part being treated.
- Follow appropriate procedures based on individual unit.
- Treatment time is approximately 20 minutes.

#### **Ice Massage**

- Paper or plastic ice massage cups filled  $\frac{3}{4}$  with water and frozen.
- The treatment area should be no bigger than 2 or 3 times the size of the cup.
- Surround the treatment area with a towel to collect water runoff.
- Slowly massage the treatment area with an ice cup.
- Treatment duration is between 5-15 minutes or until ice runs out.

#### **Ice Immersion**

- Fill a bucket or tub with water and ice, temperature range should be between 50-60 degrees Fahrenheit.
- Have the student-athlete immerse the body part being treated into the water.
- Note: Do not let the student-athlete continuously “dunk” the treatment area in and out of the water, this is an ineffective treatment.
- Treatment duration should be between 10-15 minutes-treatment time should increase as the amount of adipose tissue increases.

#### **Cryokinetics**

- Cryokinetics is a form of cryotherapy that utilizes ice to numb the treatment area and then allows the AT to take the patient through full passive range of motion.
- All indications and contraindications for cold still apply as well as the treatment duration for each technique. The only difference here is that instead of the ice treatment being last in the order of the rehabilitation program it is the first and is followed by the rest of the treatment for that day.
- The cryotherapy and rehabilitation cycle can be repeated within one session if needed

# Hot and Cold Whirlpools Protocol

---

## Indications

- Decreased ROM.
- Subacute or chronic inflammatory conditions.
- Peripheral vascular disease.
- Peripheral nerve injuries.

## Contraindications

- Acute conditions in which the water turbulence will further aggravate injury.
- Fever (in hot water).
- Student-athletes requiring postural support.
- Infectious skin conditions.
- General contraindications for hot and cold therapies.

## Precautions

- Whirlpool MUST be connected to ground fault interrupter.
- Student-athlete is not to touch the turbine motor.
- Student-athletes receiving treatment should never do so alone, must always have supervision.
- Keep in mind that the body is placed in a gravity dependent position which could cause an increase in swelling.
- DO NOT run the turbine dry.
- Student-athletes with seizure conditions should not use this form of therapy.

## Treatment Techniques

- Instruct the student-athlete not to touch the turbine at any time during the treatment.
- Fill whirlpool to appropriate depth, enough to fully cover treatment area.
- Add whirlpool disinfectant according to directions.
- Hot maximum temperature 110 degrees, Cold minimum temperature of 45 degrees.
- Turn on turbine before the student-athlete enters the whirlpool.
- Place the student-athlete in a comfortable position to treat affected area.
- If injury is to the foot or ankle in a cold whirlpool, a student-athlete may use toe caps to keep toes warm.
- Make sure the student-athlete is out of the whirlpool before turning off the turbine.

## Cleaning Procedure

- All whirlpools must be drained and cleaned daily.
- Follow cleaning product instructions.

# Moist Heat Packs Protocol

---

## Indications

- Subacute or chronic inflammatory conditions.
- Reduction of subacute or chronic pain.
- Subacute or chronic muscle spasm.
- Decrease ROM.
- Hematoma resolution.
- Reduction of joint contractures.
- Infection.

## Contraindications

- Acute conditions.
- Peripheral vascular disease.
- Impaired circulation.
- Poor thermal regulation.

## Precautions

- Do not allow moist heat pack to come in direct contact with the treatment area.
- Do not allow the student-athlete to lie down or sit on moist heat packs.

## Treatment Techniques

- Cover moist heat pack with either commercial covering or 4 layers of terry cloth towel.
- Place pack on treatment area.
- Check the student-athlete after 5 minutes to ensure there is no burning of the skin.
- After the treatment, return the moist heat pack to the hydrocollator for re-warming.
- Treatment duration can last anywhere from 20-30 minutes.
- Best practice guidelines call for the hydrocollator water to be 160-165 degrees F.

# Contrast Therapy Protocol

---

Consists of alternating between hot and cold treatments. Can be used with two whirlpools or with reusable hot and cold packs.

## Indications

- Ecchymosis removal.
- Edema reduction.
- Subacute or chronic inflammatory conditions.
- Impaired circulation.
- Pain reduction.

- Increase ROM.

### **Contraindications**

- Acute injuries.
- Hypersensitivity to cold.
- Relative contraindications of cold application.
- Relative contraindications of heat application.
- Relative contraindications of whirlpool use.

### **Treatment Techniques**

- Immersion
- Make sure there are two tubs available for use and that you can position them close together.
- Fill one bath with water temperature at 50-60 degrees Fahrenheit and the other 105-110 degrees Fahrenheit.
- Instruct the student-athlete to start with either hot or cold application with timed intervals of 1-2 minutes in cold and 3-4 minutes in hot.
- Total treatment duration is 20-30 minutes.

### **Hot/Cold Packs**

Make sure packs are within reach of the student-athlete and will be able to remain hot and cold throughout the treatment.

Instruct the student-athlete to start with either hot or cold application with timed intervals or 1-2 minutes for cold and 3-4 minutes for hot.

## **Therapeutic Ultrasound Protocol**

---

A deep heating modality, which uses high frequency sound waves to generate thermal and non-thermal effects to the injured area.

### **Indications**

- Joint contractures.
- Muscle spasm.
- Neuroma.
- Scar tissue.
- Sympathetic nervous system disorders.
- Trigger points.
- Warts.
- Spasticity.
- Post-acute reduction of myositis ossificans.
- Acute Inflammatory conditions (pulse output).

- Chronic inflammatory conditions (continuous output).

### **Contraindications**

- Acute conditions with a continuous output.
- Ischemic areas.
- Over area of deep vein thrombosis.
- Anesthetic areas.
- Over cancerous tumors.
- Over areas of active infections or sepsis.
- Over spinal cord or areas of large nerve plexus in high doses.
- Exposed metal that penetrates the skin.
- Areas around the eyes, heart, skull, or genitals.
- Over the thorax in the presence of a pacemaker.
- Pregnancy when used over the abdominal region of a woman.
- Over the pelvic or lumbar region of a menstruating woman.
- Stress fracture sites and sites over osteoporosis.

### **Precautions**

- Symptoms may increase after the application of ultrasound due to an increase in inflammation.
- If symptoms do not resolve within the third or fourth application discontinue use of ultrasound.
- Use caution when applying ultrasound to an area close to the spinal cord.
- Use caution when applying ultrasound to an area with metal plating.
- Use of ultrasound on or around growth plates is not contraindicated but should be used with extreme caution.

### **Treatment Techniques**

- Determine the method and mode of application.
- Clean the treatment area and remove any dirt, oil, or grime.
- Determine the type of coupling method.
- Direct coupling can be achieved by using an ultrasound gel applied directly to the skin and the ultrasound head on top of that.
- Immersion coupling involves immersing the treatment area in a tub of water and applying the ultrasound head under the water about 1 inch away from the treatment area.
- Pad or bladder method involves either getting a commercially made pad or filling a plastic bag with either water or ultrasound gel that is coated with the ultrasound gel.
- Make sure to explain sensations the student-athlete may feel during the treatment, advise the student-athlete to report any adverse sensations right away.
- Follow appropriate steps to perform ultrasound treatment.
- If the heating of the tissue is felt, move the sound head faster. If this sensation does not diminish-discontinue treatment.

### **Machine Upkeep**

- The Ultrasound machine must be checked every year.
- Must be certified and calibrated by a licensed practitioner yearly to ensure proper delivery of the sound waves.

## **Electrical Stimulation Protocol**

---

Electric Stimulation is the use of electric currents to treat neuromuscular conditions most commonly, enhance local circulation and tissue healing, decrease pain, and increase range of motion.

### **General Indications**

- Control of acute or chronic pain.
- Management of postsurgical pain.
- Reduction of edema.
- Maintaining or Restoring ROM.
- Reduces muscle spasm.
- Inhibition spasticity.
- Re-education of partially denervated muscle.
- Facilitation of voluntary motor function.
- Increase local blood flow.
- Delay of denervation and atrophy.
- Muscle and peripheral nerve re-education.
- Prevention of joint contractures.

### **General Contraindications**

- Cardiac disability.
- Demand-type pacemakers.
- Pregnancy.
- Menstruation.
- Cancerous lesions.
- Sites of infection.
- Exposed metal implants.
- Areas of nerve sensitivity.
- Severe Obesity.
- Epilepsy.
- Electronic monitoring equipment.

### **Precautions**

- Muscle fatigue can set in if treatment intensity is too high.

- Improper use or storage of the electrodes can cause damage and may lead to skin irritation or electrode burns.
- Intense, prolonged muscle contractions can lead to muscle spasm or muscle soreness.
- Can mask the pain and not actually address the underlying condition that causes the pain.

#### **Treatment Techniques**

- Select type of Electric Stimulation (i.e. high volt, Russian, pre-mod, IFC, etc.).
- Apply appropriate number of pads in appropriate treatment locations.
- Explain to the student-athlete what kind of sensation they should feel and have them notify you if any other sensation takes place during treatment.
- Follow appropriate electric stimulation procedures.

## **Ultrasound and Electrical Muscle Stimulation Combo Protocol**

---

Combination of electrical muscle stimulation and ultrasound to produce the effects of both on the muscle. It can also be used to tire out muscles through the heating and contracting of the muscles.

#### **Indications**

- Trigger points.
- Muscle Spasm.
- Decrease the adherence of scar tissue.

#### **Contraindications**

- Any contraindications to ultrasound.
- Any contraindications to electrical stimulation.
- Any contraindications to contraction of the muscle.

#### **Precautions**

- Increased contraction of the muscle may increase muscle spasm or soreness.

#### **Treatment Techniques**

- Follow appropriate procedures for Combination Treatment.

## **Dry Cupping Therapy Protocol**

---

Procedure: The following guidelines are to be used as the policy for dry cupping therapy treatments.

#### **Indications**

- Muscle spasm

- Myofascial adhesions
- Musculoskeletal pain.

Treatments will be intended to provide a de-compression effect, treat musculoskeletal pain, breakup scar tissue and myofascial adhesions, improve range of motion, and relieve tension migraines when used on the neck region.

### **Contraindications**

- Pregnancy
- Cancer
- Bone fracture
- Deep vein thrombosis
- Arteries or areas where the pulse can be felt
- An area where the skin is injured or compromised such as a sunburn, abrasion, rash, or contusion.
- Student-athletes must return the informed consent form signed by a parent/guardian.
- Student-athletes will receive the first treatment for 5 minutes. Each session following will be 5-10 minutes depending on the amount of muscular tension.
- Student-athletes will receive a minimum of five treatments with no more than one treatment per week to achieve noteworthy results.
- Student-athletes will be reminded of the potential adverse effects prior to the first treatment.
- The most common adverse effect that typically will occur with any treatment session is the development of bruises in the location of the cups due to the rupture of small capillaries which allows increased blood flow to the area. These bruises typically will resolve within several days but may take several weeks to completely resolve. It is also possible for mild edema in the area treated to occur that will resolve within a few hours to days.
- Student-athletes will be reminded at each treatment session to hydrate following treatment to help minimize muscle soreness.

### ***Appendix #19: Dry Cupping Therapy Informed Consent***

## **Massage Protocol**

---

When performing any type of massage, AT MUST have permission from the student-athlete – general consent has already been given via the signed Consent to Treat Form. AT should NEVER perform a massage without a witness to the massage.

Massage uses touch to produce muscular, nervous, and cardiovascular changes. It is used to break up adhesions within the muscles or myofascial adhesions.

**Indications**

- Relieve fibrosis.
- Increase venous return.
- Reduction of lymphatic or venous edema.
- Break the pain-spasm-pain cycle.
- Evoke systemic relaxation.
- Improve or stimulate local blood flow.
- Increase range of motion.

**Contraindications**

- Acute sprains or strains.
- Area of active inflammation.
- Site of nonunion fractures.
- Skin conditions in area of treatment.
- Open wounds.
- Infection causing lymphangitis.
- Phlebitis or Thrombophlebitis.
- Varicose veins.
- Arteriosclerosis.
- Cellulitis.
- Abscess or other forms of infection.

**Precautions**

- May increase inflammatory response.

# Severe Weather Protocols



## Lightning Protocol

---

- The athletic trainer and/or school athletic director makes the call to remove individuals from the field of play. This person has recognized and unchallengeable authority to suspend activity.
- The athletic trainer is the designated weather watcher (A person who actively looks for the signs of threatening weather and notifies the chain of command if severe weather becomes dangerous).
- When lightning is detected within 15 miles, the athletic trainer will give the “heads up” and notify the on-site administrator and coaches.
- When lightning is detected within 6-10 miles, “begin safety procedures” by immediately removing all participants from the field of play and seeking shelter. Spectators will also be instructed to vacate the venue.
  - The athletic trainer and school administration will determine at the beginning of the season which distance (6-10 miles) they will follow based on the geographical and topographical location of the school. Some lightning can be seen from far away before it arrives, while in some places with mountains and hills surrounding the venue, it is harder to determine. Coaches, student-athletes, and officials will be notified by the athletic trainer and/or administrator what the plan and details will be for evacuation.
- Use of weather monitoring apps (WeatherBug) with lightning tracking features is recommended. Consider subscribing to a commercial, real-time lightning detection service that has been independently and objectively verified.
- Use the Flash-to-Bang Method to determine when to go seek shelter if the monitoring system fails or is unavailable. If the Flash-to-Bang count is 50 seconds or less, all individuals should already be inside a safe structure.
  - Flash-to-Bang Method: Begin counting when sighting a lightning flash. Counting stops when the associated bang (thunder) is heard. Divide this count by five to determine the distance of the lightning strike (in miles). 50 second count = 10 miles away.
  - When in doubt, “if you hear it, clear it; if you see it, flee it.”
- Student-athletes, coaches, and administrators will be sent to the designated safe shelter.
- Spectators will seek shelter in their vehicles until it is determined safe to return.
- When lightning is detected within 6 miles, all participants and spectators should be in their respective safe shelters; “you are now in danger and safety procedures should be complete.”
- Once activities have been suspended, wait at least 30 minutes following the last sound of thunder or lightning flash within 10-15 miles prior to resuming an activity or returning outdoors. The 30-minute “all clear” clock restarts every time thunder is heard or lightning flashes within 10-15 miles.

**Table 4. Common Alerts for Real-Time Notification of Lightning**

Alert	Meaning
“Heads up”	Lightning within 15 mi (13 nmi)
“Begin safety procedures”	Lightning within 10 mi (8.68 nmi)
“You are now in danger; safety procedures should be complete”	Lightning within 6 mi (5.2 nmi)
“All clear”	Lightning has not been detected at 15 mi (13 nmi) for 30 min

Abbreviation: nmi, nautical mile.

- Avoid being the highest point in an open field, in contact with, or proximity to the highest point, as well as being on open water. Do not take shelter under or near trees, flagpoles, or light poles.
- Assume the lightning safe position (crouched on the ground, weight on the balls of the feet, feet together, head lowered, and ears covered) for individuals who feel their hair stand on end, skin tingle, or hear “crackling” noises. Do not lie flat on the ground.
- Observe the following basic first aid procedures in managing victims of lightning strike:
  - Survey the scene for safety.
  - Activate EMS.
  - Lightning victims do not ‘carry a charge’ and are safe to touch.
  - If necessary, move the victim with care to a safer location.
  - If unconscious, check CABs and start CPR if needed. Locate and use AED if necessary.
  - Evaluate and treat for hypothermia, shock, fractures and/or burns.

\*All individuals have the right to leave an athletic site in order to seek a safe structure if the person feels in danger of impending lightning activity, without fear or repercussions or penalty from anyone.

### Safe Shelter

- A safe location is any substantial, frequently habited building. The building should have four solid walls (not a dugout), electrical and telephone wiring, as well as plumbing, all of which aid in grounding the structure.
- The secondary choice is a fully enclosed vehicle with a metal roof and the windows completely closed. It is important to not touch any part of the metal framework of the vehicle while inside it during the ongoing thunderstorm.
- It is not safe to shower, bathe, or talk on a landline phone while inside of a safe shelter during thunderstorms (cell phones are ok).

# Heat Protocol

---

Heat-related illnesses are 100% PREVENTABLE!

Prevention includes educating student-athletes and coaches about:

- Recognition and management of exertional heat illness;
- The risks associated with exercising in hot, humid environmental conditions;
- The need for gradual acclimatization over a 14-day period;
- Guidelines for proper hydration;
- Implementing practice/competition modifications according to local temperature and relative humidity readings;
- Management/treatment guidelines for cases of heat illness including heat stroke;
- Appropriate guidelines for Return to Play after Heat Illness;
- Student-athletes should monitor their weight before and after practice; any change in bodyweight of greater than 6% needs to be documented and investigated;
- Encourage football players to remove helmets periodically;
- Encourage the student-athletes to immerse themselves in water below body temperature during their free time;
- No practicing when WBGT is 92.0 or above (for acclimatized student-athletes).

**Heat Acclimatization Protocol** (A team may not choose to train in a less severe climate)

Days 1-5:

- Days 1 through 5 of the heat-acclimatization period consist of the first 5 days of formal practice. During this time, student-athletes may not participate in more than 1 practice per day.
- If a practice is interrupted by inclement weather or heat restrictions, the practice should recommence once conditions are deemed safe. Total practice time should not exceed 3 hours in any 1 day. In addition to practice, a 1-hour maximum walk-through is permitted during days 1-5 of the heat acclimatization period. However, a 3-hour recovery period should be inserted between the practice and walk-through (or vice versa). (Note: a walk-through is defined as no contact with other individuals, dummies, sleds or shields).
- During days 1-3 of the heat-acclimatization period, in sports requiring helmets or shoulder pads, a helmet is the only protective equipment permitted. The use of shields and dummies during this time is permissible as a non-contact teaching tool.
- During days 4-6, only helmets and shoulder pads may be worn.
- Football only: on days 4-6, contact with blocking sleds and tackling dummies may be initiated.

Days 6-14:

- Beginning 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, 1 walk-through is permitted, separated from the practice by at least 3 hours of continuous rest. When a double-practice day is followed by a rest day, another double-practice day is permitted after the rest day.
- On a double-practice day, neither practice should exceed 3 hours in duration, nor should student-athletes participate in more than 5 total hours of practice. Warm-up, stretching, cool-down, walkthrough, conditioning and weight-room activities are included as part of practice time. The two practices should be separated by at least 3 continuous hours in a cool environment.
- Beginning on day 7, all protective equipment may be worn and full contact may begin.
- Full-contact sports may begin 100% live contact drills no earlier than day 7.
- Because the risk of exertional heat illnesses during the preseason heat-acclimatization period is high, we strongly recommend that an athletic trainer be on site before, during and after all practices.

### Hydration Strategies

- Sufficient, sanitary and appropriate fluid should be readily accessible and consumed at regular intervals before, during and after all sports participation and other physical activities to offset sweat loss and maintain adequate hydration while avoiding overdrinking.
- Generally, 100 to 250 mL (approximately 3-8oz) up to 1.0 to 1.5 L (approximately 34-50oz) per hour for adolescent boys and girls is enough to sufficiently minimize sweating-induced body-water deficits during exercise and other physical activity as long as their pre-activity hydration status is good.
- Pre-activity to post-activity body-weight changes can provide more specific insight to a person's hydration status and rehydration needs. Student-athletes should be well hydrated before commencing all activities.
- The following guidelines are suggested:

Condition	% Body Weight Change
Well Hydrated	+1 to -1
Minimal dehydration	-1 to -3
Significant dehydration	-3 to -5
Serious dehydration	>-5

% Body weight change = [(pre-exercise body weight – post-exercise body weight) / pre-exercise body weight] x 100

## Prevention

### Pre-participation History and Physical Exam

- A thorough medical history will be gathered (history of heat illness, sickle cell trait/disease, etc.)
- Individuals with risk factors will be identified and counseled (see table below):

<b>Risk Factors for Heat Illness</b>	
<i>Intrinsic</i>	<i>Strategies to Minimize Risk</i>
High intensity exercise	Gradually phase in exercise and conditioning
Fever or illness	Monitor and remove at risk athletes as necessary
Dehydration	Educate coaches/athletes on proper hydration Provide adequate access to water
Overweight/obesity	Gradually phase in exercise and conditioning
Lack of heat acclimatization	Follow heat acclimatization program
Medications (antihistamines, diuretics, ADHD drugs)	Monitor and remove at risk athletes as necessary
Skin disorder (sunburn or malaria rubra)	Monitor athletes closely
Predisposing medical conditions	Monitor and remove at risk athletes as necessary
<i>Extrinsic</i>	<i>Strategies to Minimize Risk</i>
High ambient temperature, solar radiation or humidity	Avoid exercise in hotter parts of the day
Heavy gear or equipment	Gradually introduce equipment
Poor practice design	Educate coaches regarding strategies to minimize risk

- When applicable the athletic trainer or persons responsible will be notified of individuals with pre-existing conditions that place the individual at risk of exertional heat illness.
- As necessary, coaches are notified of individuals at higher risk.

### Environmental Monitoring and Activity Modifications/Cancellation

- It is recommended environmental monitoring occur utilizing a WBGT device equivalent to Kestrel 5400.
- It is recommended that environmental monitoring occur any time it is warm outside (i.e. over 80°F)
- Environmental monitoring and activity modifications may be necessary for certain indoor facilities.
- Recommend monitoring of WBGT to occur every 30 minutes beginning 15 minutes prior to the scheduled practice time.
  - If school designee/athletic trainer is present, they will monitor WBGT and recommend appropriate modification of activity. If the school designee/athletic trainer is not present, the head coach or athletic director will monitor WBGT to recommend appropriate modification of activity. WBGT will be measured at the practice/event venue on the playing surface.
  - All environmental monitoring should be documented and stored by the school.
- Modifications will be made in accordance with the best practice guidelines for the region. Arizona is located in WBGT Region 3, therefore follow the activity guidelines for that region after the 14-day acclimatization period.

- To find what region/category a school is in, read the Grundstein et al. Regional heat safety thresholds for student-athletes in the contiguous United States. Applied Geography, 2015 manuscript ([https://ksi.uconn.edu/wpcontent/uploads/sites/1222/2018/08/RegionalWBGT\\_2015\\_AppliedGeography.pdf](https://ksi.uconn.edu/wpcontent/uploads/sites/1222/2018/08/RegionalWBGT_2015_AppliedGeography.pdf))

- Modifications should change based on real-time environmental conditions. Therefore, if the environment changes to a higher or lower WBGT that falls in a different category than the activity, modifications should reflect the recommendations in the new category.

During Acclimatization Period (Day 1 – Day 14)	Acclimatized Athletes (Day 15+)	Activity Guidelines
<79.7	< 82.0	Normal Activities – Provide at least three separate rest breaks each hour with a minimum duration of 3 minutes each during the workout.
79.8 - 84.6	82.1- 86.9	Use discretion for intense or prolonged exercise; Provide at least three separate rest breaks each hour with a minimum duration of 4 minutes each. Make equipment modifications as necessary.
84.7 - 87.6	87.0 - 90.0	Maximum practice time is 2 hours. <u>For Football</u> : players are restricted to helmet, shoulder pads, and shorts during practice. If the WBGT rises to this level during practice, players may continue to work out wearing football pants without changing to shorts. Make additional equipment modifications as indicated. Including not beginning practice with equipment on for warmups etc. <u>For All Sports</u> : Provide at least four separate rest breaks each hour with a minimum duration of 4 minutes each. Make equipment modifications as indicated.
87.7 – 89.6	90.1 - 91.9	Maximum practice time is 1 hour. <u>For Football</u> : No protective equipment may be worn during practice, and there may be no conditioning activities. <u>For All Sports</u> : There must be 20 minutes of rest breaks distributed throughout the hour of practice. Provide at least four separate rest breaks (every 15 minutes) each hour with a minimum duration of 5 minutes each. Off-Campus sports, (such as Cross Country) practices and games should remain on campus unless dedicated healthcare providers are immediately accessible in case of heat illness. Reduce or eliminate conditioning drills.
≥ 89.7	≥ 92.0	No outdoor workouts. Delay practice until a cooler WBGT is reached.

### Equipment Considerations

- Wear loose-fitting, light colored and absorbent/moister wicking clothing
- During hot or humid conditions minimize the amount of equipment and clothing worn. (Football: reduce the amount of equipment worn, i.e. helmet and/or shoulder pads)

### Practice Structure and Time Considerations

- Direct sunlight and high temperatures are most common between the hours of 10 am and 5 pm. When conditions indicate practices should be moved from this time window.
- As temperatures rise the ability of the student-athlete to compensate for prolonged activity at high temperatures decreases. Practices should be shortened when indicated by current environmental conditions.
- High intensity and long duration bouts of exercise (sprints, conditioning, etc.) should not be completed when conditions indicate.

## Education

- Schools will ensure education of medical staff, student-athletes, coaches, emergency personnel, and parents/guardians about EHI and proper hydration has been completed.
- Encourage student-athletes to sleep at least 6–8 hours and eat a well-balanced diet (Reference: Korey Stringer Institute; <https://ksi.uconn.edu/emergency-conditions/heatillnesses/exertional-heat-stroke/heat-stroke-prevention/>)

## Management

- Monitoring of student-athlete safety will be continuous during any physical activity.
- Athletic trainers, coaches, administrators and other athletics personnel will be educated on the signs and symptoms of exertional heat illness.
  - Rectal temperature greater than 105 (40°C) at time of incident
  - Headache
  - Confusion or just look “out of it”
  - Disorientation or dizziness
  - Altered consciousness, coma
  - Nausea or vomiting
  - Diarrhea
  - Rapid pulse, low blood pressure, quick breathing
  - Dehydration, dry mouth, thirst
  - Decreasing performance or weakness
  - Profuse sweating
  - Collapse, staggering or sluggish feeling
  - Muscle cramps, loss of muscle function/balance, inability to walk
  - Irrational behavior, irritability, emotional instability

## **Treatment In the Event of Exertional Heat Stroke (medical emergency)**

### Recognition

- Any student-athlete with signs of central nervous system dysfunction during exercise in the heat should be suspected to be suffering from EHS.
- It is important to emphasize that during and following intense exercise in the heat, temporal, aural, oral, skin, axillary and tympanic temperature are not valid and should never be utilized in evaluating a potential exertional heat stroke.

### Cooling

- The patient must be moved to a cooling zone, begin appropriate treatment and continuously monitor the patient.
- Excess clothing shall be removed to aid cooling.
  - If removal of clothing and/or equipment would cause delays of 5+ minutes, do not remove clothing and equipment, simply initiate cooling.
- Place patient in a cold-water immersion (35-59°F) tub up to the neck if possible.
  - Wrap a towel across the chest and beneath both arms to prevent the student-athlete from sliding into the tub.

- Ice shall cover the surface of the water at all times.
- Water shall be continuously and vigorously stirred to maximize cooling.
- An ice-cold towel will be placed over the head/neck and rewet and replaced every 2 minutes.
- Cooling shall cease when core body temperature (best measured rectally) reaches ~102°F or when signs and symptoms indicate.
- Cold Water Immersion (CWI) Tub
  - Must be present at the site and readily accessible when practices and games begin.
  - Recommended set-up includes:
    - A tub filled with water. (Or a tub with water ready to be filled. Water temps may climb to over 100°F if pre-filled in the sun.)
    - Two or more chests filled with ice next to the tub ready for treatment.
    - Available bed sheet or large towels.
    - Towels for placement over the head and neck.
- Cool First, Transport Second
  - When a patient is diagnosed with EHS, the principle of Cool First, Transport Second should be used.
    - Note: EMS should not transport the patient until they reach ~102°F due to the inability to continue vigorous cooling in the ambulance.

### Vital Sign Monitoring

- The QHP will monitor vital signs.
- Vital Signs will be monitored in the unstable patient every 5 minutes.

### EMS

- EMS must be called immediately if a patient is suspected of EHS.
  - HOWEVER, any patient with EHS must be cooled FIRST and then transported via EMS.
  - This cool first transport second EAP protocol will be communicated/shared with EMS annually PRIOR to the first official sport practice at the school in accordance with the EAP policy and procedures.

### **Return to Play Following Exertional Heat Stroke**

The following is the protocol for return to play following heat stroke:

- Refrain from exercise for at least 7 days following the acute event.
- Follow up in about 1 week for physical exam by licensed physician (MD,DO)
- When cleared for activity by a licensed physician, begin exercise in a cool environment and gradually increase the duration, intensity, and heat exposure for 2 weeks to acclimatize and demonstrate heat tolerance under the direction of a licensed healthcare professional.
- If return to activity is difficult, consider a laboratory exercise-heat tolerance test about one month post incident.

- Student-athlete may be cleared for full competition if heat tolerance exists after 2-4 weeks of training.

The AIA also recommends that any student-athlete suspected of having suffered exertional heat exhaustion be referred to a licensed physician for follow-up medical examination and clearance.

## **Cold Temperature Protocol**

---

Cold environments can cause injury as well. In contrast to heat illnesses, prolonged exposure to moderate or extreme cold temperatures combined with the wind chill factor, can cause severe and permanent tissue damage. The athletic trainer is the designated weather watcher and if they are not present the responsibility will fall to the coach to fulfill that role.

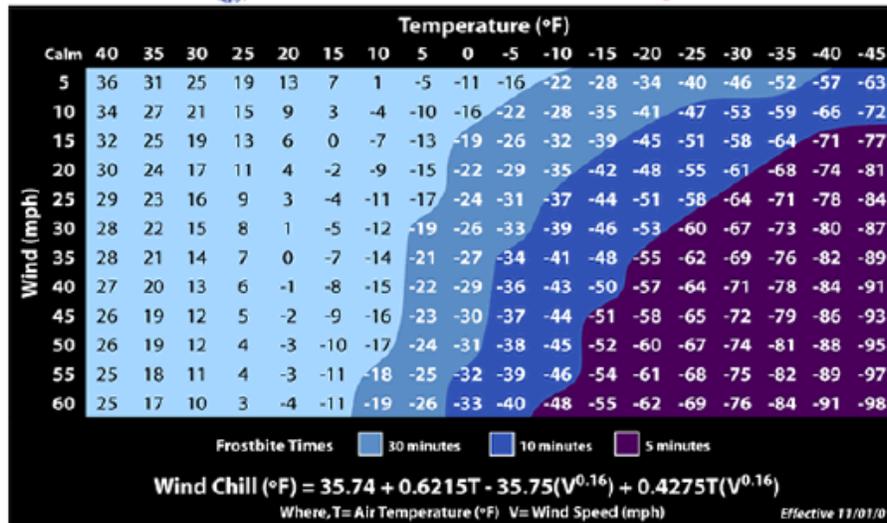
Cold injuries can range from frostnip to three different varieties of frostbite. These are chilblains (swelling, redness, tingling, stinging sensation in fingers and toes), superficial frostbite (skin appears hard, pale, and waxy to the touch), and deep frostbite (this is an extreme medical emergency, permanent tissue damage is possible, victim may exhibit signs similar to chilblain and superficial frostbite).

Athletic department personnel and student-athletes should do the following when there are cold conditions:

- Cover the head, neck, and hands.
- Dress in dry layers that can be discarded as the student-athlete's body temperature increases.
- Encourage fluid consumption during activity. Dehydration can still occur in cold temperatures.
- Discourage warm liquid consumption during activity. Warm liquids can increase the perspiration level even in cold temperatures. This also increases the possibility of dehydration and frostbite.
- Discourage activity during freezing rain or snowfall. Doing so could intensify cold related injuries.



## Wind Chill Chart



### Real Feel Temperature Protocol

- Low Risk: 30° F & above – outside participation allowed with appropriate clothing.
- Moderate Risk: 30° F – 20° F – mandate additional protective clothing (hat, gloves), provide access to re-warming facilities.
- High Risk: 19° F – 10° F – outside participation limited to 45 minutes.
  - All participants must have appropriate clothing.
  - Provide access to re-warming facilities.
- Extreme Risk: 9° F or below – termination of all outside activities.

## Air Quality Protocol

Exercising in poor quality air can have adverse effects on the heart, blood vessels, and lungs. Air pollution has also been shown to not only worsen asthma symptoms but cause new cases of asthma in student-athletes exercising in poor air quality. The Air Quality Index (AQI) for Ozone for the Northern Arizona area will be determined using the AirNow program's website ([www.airnow.gov](http://www.airnow.gov)). The guidelines for practices and games will be determined by the recommendations for that Ozone AQI as documented by Spare the Air's "Recommendations for Schools and Others on Poor Air Quality Days Air Quality Index (AQI) Chart for Ozone" chart (below).

School personnel should locate the air monitors closest to practice and competition venues. Not all schools and venues will have a nearby monitor, and weather variation (wind) and geographic features (hills and valleys) can account for large differences between relatively close locations. Therefore, anyone assessing air quality must be familiar with the 5-3-1 Visibility Index Method. Based on previous air pollution research, we know that there is a correlation between air quality and visibility.

The 5-3-1 Visibility Index Method is a simple way to use visibility to estimate air quality and health effects and is particularly useful with rapidly changing weather conditions, like smoke from wildfires. The key to successful use is preparation, as it requires knowledge of large landmarks visible from the venue. Using an online satellite map, locate three landmarks that can be seen from a specific venue. The landmarks chosen should be 1 mile away, 3 miles away and 5 miles away. If a school uses multiple venues, do this for each separate location. Standing with the sun behind, look at the three objects and when the outline of the landmark can no longer be seen, then the visibility range is less than the distance marker. When the air is smoky and hazy, monitoring the AQI or the Visibility Index should be done at least hourly during competitions and practices as conditions can change quickly.

**Recommendations for Schools and Others on Poor Air Quality Days\*  
Air Quality Index (AQI) Chart for Ozone (8-hr standard)**

ACTIVITY	0 to 50 GOOD	51 to 100 MODERATE	101 to 150 UNHEALTHY FOR SENSITIVE GROUPS	151 to 200 UNHEALTHY	201 to 300 VERY UNHEALTHY
<b>Recess (15 min)</b>	No Restrictions	No Restrictions	Make indoor space available for children with asthma or other respiratory problems.	Children with asthma or other respiratory problems should be allowed to play indoors. Children complaining of breathing difficulties should play indoors.	Restrict outdoor activities to light to moderate exercise.
<b>P.E. (1 hr)</b>	No Restrictions	No Restrictions	Make indoor space available for children with asthma or other respiratory problems.	Children with asthma or other respiratory problems should be allowed to play indoors. Children complaining of breathing difficulties should play indoors.	Restrict outdoor activities to light to moderate exercise not to exceed one hour.
<b>Athletic Practice and Training (2 to 4 hrs)</b>	No Restrictions	Exceptionally sensitive individuals should limit intense activities.	Individuals with asthma should be medically managing their asthma.	Activities over 2 hours should decrease intensity and duration. Add rest breaks or substitutions to lower breathing rates.	Sustained rigorous (outdoor) exercise for more than one hour must be discontinued.**
<b>Scheduled Sporting Events</b>	No Restrictions	No Restrictions	No Restrictions	Increase rest periods and substitutions to lower breathing rates.	Consideration should be given to canceling event.

In the event of poor air quality (i.e. pollution, fires, etc.), the athletic trainer will make a recommendation to the athletic director, who will determine if practices and/or games will continue, be modified, or cancelled. In the event the athletic director is not available, the athletic trainer will make the decision.

Some students may be more susceptible to the health effects of poor air quality. The Preparticipation Physical Examination helps to identify those students with underlying ailments that make them more affected by poor air quality. Conditions that put students at risk include asthma, recent respiratory infection, and chronic heart or lung disease.

All schools must have an Emergency Action Plan (EAP) in place for every practice and competition venue in case of respiratory or other medical emergencies. Students diagnosed with asthma should have an Asthma Action Plan that they follow if symptoms occur during or after exercise. If poor air quality persists over several days, at risk students will have symptoms triggered more easily than those without pre-existing conditions.

If the health effect category is in a zone where the state or local health department discourages outdoor activity, all practices and contests should be moved indoors or cancelled. If activities are moved indoors, you must check with the maintenance staff to ensure existing HVAC systems provide properly filtered indoor air. If the HVAC system cannot appropriately manage the burden of pollutants in the air, indoor air quality may be worse than the outdoor air and it is not appropriate to practice or workout indoors. Furthermore, when moving indoors, Heat and Hydration Guidelines must be followed as temperatures may be hotter inside a gymnasium on a hot summer day than outside. If indoor practices are not an option, practices may be held earlier in the day to avoid warmer temperatures or moved to a location with better air quality.

## **Medication Policy**

---

The athletic trainer does not carry medication. However, the athletic trainer will assist the student-athlete in the administration of medication if necessary.

In the event of an emergency (i.e., anaphylactic or insulin shock, diabetic coma) the athletic trainer will respond and begin the Emergency Action Plan protocol.

## **Psychological Concerns of the Student-Athlete**

---

The following protocol exists to assist the AT, athletic department, and administration in recognizing potential psychological concerns in student-athletes and to establish an effective mechanism for referring the student-athlete into the mental health care system for assessment and treatment by a credentialed mental health care professional. The focus of this protocol is recognition and referral, not treatment; treatment is left to the credentialed mental health care professional.

References, statistics, and data adapted from: [Interassociation Recommendations for Developing a Plan to Recognize and Refer Student-Athletes With Psychological Concerns at the Secondary School Level: A Consensus Statement](#)

### **Recognition of Psychological Concerns in Student-Athletes**

Many student-athletes report higher levels of negative emotional states than non-student-athlete adolescents and have been identified as having higher incidence rates for sleep disturbances, loss of appetite, mood disturbances, short tempers, decreased interest in training and competition, decreased self-confidence, and inability to concentrate.

The stressors of being a student-athlete can trigger new psychological concerns, exacerbate an existing concern, or cause a past concern to resurface. Stressors may include:

- Overtraining – year-round participation, training with multiple teams, training multiple times each week; often without time for rest and recovery.

- Sport Identity Foreclosure – being cut from a team, dealing with injury, performance challenges, mistakes in play, dealing with success, pressure to overspecialize or over train, and early termination from sport.
- Physical, Mental, and Academic Demands – conditioning, injuries, meeting coaches’ expectations, time spent in sport, study time, attaining and maintaining the required grade point average to remain on the team.
- Peer Pressure – portrayed as superhuman or larger than life by their peers.

### **Special Considerations that may Affect the Psychological Health of the Student-Athlete**

- Response to Injury or the Sudden End of the Playing Career
- Injuries that are time limiting, season ending, or career ending may be a significant source of stress and may force the student-athlete to display a learning curve for handling the physical and emotional responses to pain and disabilities.
- Detecting any symptoms of psychological concern should be the focus of the care plan for the student-athlete.
- A fear of re-injury upon their return to participation is another source of stress for the student-athlete. The AT should monitor the student-athlete for any symptoms that might indicate a developing psychological problem.

### **Concussions**

- A student-athlete who sustains a concussion should be monitored for any changes in behavior or self-reported psychological difficulties. Please see the Concussion Management Plan for more details.

### **Substance Abuse**

- 86% of US high school students indicate that some classmates drink, smoke, or use drugs during the school day. Despite state laws, student-athletes are exposed to alcohol use in high school. Of collegiate student-athletes who experienced psychological concerns, particularly depression, 21% reported high alcohol-abuse rates while in high school. Correlations have been found between reported alcohol abuse and self-reported depression and psychiatric symptoms associated with it.
- Health care providers should be alert to the possibility of substance and alcohol use among student-athletes to avoid enabling them. Having an untreated mental illness makes it more likely that student-athletes will use substances or alcohol.

### **Eating Disorders**

- A student-athlete can be faced with the paradox of eating for health and performance but eating to maintain weight or body fat. Emphasis on body weight or body fat may benefit performance if the guidelines for proper weight are based on sound and reasonable principles.

- Recognizing a student-athlete struggling with an eating disorder is not easy and often the AT will rely on other student-athletes notifying us concerning a troubled student-athlete. It must be noted that not all victims of an eating disorder are female.
- Some but not all, of the warning signs for eating disorders are:
  - o Binge eating and vomiting
  - o Use of laxatives and/or diuretics
  - o Obsession with weight or body image
  - o Severe weight loss or continual weight loss
  - o Not eating in public
  - o Exercising in response to eating
  - o Yellowing teeth
  - o Poor gum health
  - o Foul breath
  - o Decrease in performance
  - o Strict diets

### **Bullying and Hazing**

- Bullying is defined as any unwanted aggressive behavior(s) by another youth or group of youths who are not siblings or current dating partners that involved an observed or perceived power imbalance and is repeated multiple times or is highly likely to be repeated.
- Bullying may inflict harm or distress on the targeted youth, including physical, psychological, social, or educational harm. A young person can be a bully, victim, or both. Bullying can take place via physical, verbal, or social methods of aggression and can occur in person or through technology (cyberbullying).
- Best practices: If the AT suspects a student-athlete is either bullying or being bullied they should first contact the Head Coach and then the LC. The AT is not expected to directly address the problem with the student-athlete but ensure that a school professional has been notified and will address the concern appropriately.
- Hazing is defined as any humiliating or dangerous activity expected of a student-athlete who wants to belong to a group, regardless of his or her willingness to participate. Hazing rituals may lead student-athletes to have feelings of apathy, mistrust, anxiety, depression and isolation, loss of self-esteem and self-confidence, increase in stress levels, and risk of posttraumatic stress disorder.

### **Behaviors to Monitor**

Since the AT, athletic department personnel, and administration are in positions to observe and interact with student-athletes daily, it is essential that student-athlete behavior is monitored for any stressors that may be affecting mental health.

- Changes in eating and sleeping habits
- Unexplained weight loss or weight gain
- Drug or alcohol abuse
- Gambling issues
- Withdrawal from social contact
- Decreased interest in activities that have been enjoyable or taking up risky behavior
- Talking about death, dying, or “going away”
- Loss of emotion or sudden changes of emotion within a brief period.
- Problems concentrating, focusing, or remembering

- Frequent complaints of fatigue, illness, or being injured that prevent participation
- Unexplained wounds or deliberate self-harm
- Becoming more irritable or having problems managing anger
- Irresponsible, lying
- Legal concerns, fighting, difficulty with authority
- All-or-nothing thinking
- Negative self-talk
- Feeling out of control
- Mood swings
- Excessive worry or fear
- Agitation or irritability
- Shaking, trembling
- Gastrointestinal complaints, headaches
- Overuse, unresolved, or frequent injuries

## **Referral of the Student-Athlete for Psychological Evaluation and Care**

### **Team Approach**

- The team should include the student-athlete's physician, AT, school nurse, the student athlete's LC, and community-based mental health care professionals.
- The AT and LCs should meet at the beginning of the school year to discuss information to best serve the student-athletes.
- In the case of emergent referrals for mental health problems, the AT can obtain the contact information for the local crisis intervention specialists.
- The school nurse and LCs can advise the AT regarding legal limitations, confidentiality considerations, and the school's current plan of action.
- Approaching the student-athlete with a potential psychological concern
- Approaching a student-athlete with a concern about mental well-being can be an uncomfortable experience.
- Prior to arranging a meeting, it is important to have accurate facts, with context, relative to the behavior of concern.
- Focus on the student-athlete as a person, not as an athlete. Listen empathetically and encourage the student-athlete to talk about what is happening.

Questions to ask to encourage discussion:

- "How are things going for you?"
- "Tell me what is going on."
- "Your behavior [mention the incident or incidents] has me concerned for you. Can you tell me what is going on, or is there something I need to know to understand why this incident happened?"
- "Tell me more [about the incident]."
- "How do you feel about this [the incident or the facts presented]?"
- "Tell me how those cuts [or other wounds] got there."

- “Perhaps you would like to talk to someone about this issue?”
- “I want to help you, but this type of issue is beyond my scope as [coach, athletic trainer, and administrator]. I know how to refer you to someone who can help.”

#### Confidentiality

- It is important to notify student-athletes of the limits of confidentiality.
- Mandated Reporting – If the student-athlete discusses a personal concern that becomes an emergent psychological concern, then the AT is mandated by state law to report the issue by following the procedures set forth by the school district.
- Contacting parents/guardians – The AT should emphasize that parents/guardians and the coach are concerned about the welfare of the student-athlete and that informing them about psychological health is no different than informing them about physical health.

### ***Mental Health Emergency Action Plan (EAP)***

---

Mental health issues in secondary schools are a growing concern. In the event of a psychological or mental health crisis on campus, safety is the highest priority. Whenever possible, defer to school personnel (i.e., school counselor/nurse, school administrator, etc.) in such an emergency.

If a mental health crisis were to occur after school hours, when school administrators, counselors or nurses may not be available, the athletic trainer (AT) may be central in managing the situation.

Intervention and reporting must be managed appropriately, without further risk of harm or escalation. It is equally important that the AT stay within their scope of practice outlined by the Board of Certification and/or applicable state practice act.

The Inter-Association Recommendations for Developing a Plan to Recognize and Refer Student-Athletes with Psychological Concerns at the Secondary School Level Consensus Statement (2015) provides in-depth recommendations for recognizing and referring student-athletes with psychological concerns.

These guidelines are specific to creating a mental health emergency action plan. Federal, state, and local protocols, including those of the school, must be followed in all cases.

**Confidentiality:** Student-athletes often trust their AT with personal information or concerns. While in most situations, utmost confidentiality is afforded to the student-athlete, state and federal laws require the AT to report certain situations involving minors. Cases in which an individual poses a risk to themselves or others, or where the individual is being abused in any way must be reported. While state laws vary, it is imperative that the AT understand the mandatory reporting laws on both state and federal levels, as well as the policies of the ASD20 in which they work. The expectation must be made clear to the student-athlete, especially those under the age of eighteen, that even if they do not want the information shared, the AT is obligated to notify school officials and/or local authorities of these situations.

#### **EMERGENCY SITUATION – POTENTIAL VIOLENCE**

## RECOGNITION:

Any 'yes' answer should be considered an emergency:

- Am I concerned the student-athlete may harm himself/herself?
- Am I concerned the student-athlete may harm others?
- Am I concerned the student-athlete is being harmed by someone else?
- Did the student-athlete make verbal or physical threats?
- Is the student-athlete exhibiting unusual ideation or thought disturbance that may or may not be due to substance use?
- Does the student-athlete have access to a weapon?
- Is there potential for danger or harm in the future?

## MANAGEMENT

If immediate risk to safety:

- Remain calm – maintain calm body language and tone of voice.
- Listen to the student-athlete. Allow him/her to express his/her thoughts. Provide him/her the opportunity to be heard. It is OK to have a moment of silence between you and the student athlete.
- Avoid judging the student-athlete; provide positive support.
- Keep yourself safe – do not attempt to intervene if there is an eminent threat of harm or violence.
- Keep others safe – try to keep a safe distance between the student-athlete in distress and others in the area.
- Alert designated school officials and/or colleagues available at that time of day (i.e., school counselor/nurse, school administrator, etc.). Have the school contact the student-athlete's parents/guardians or emergency contact.
- If the student-athlete seems volatile or disruptive, get help from a co-worker or other adult. Do not leave the student-athlete alone, but do not put yourself in harm's way if he/she tries to leave. Follow campus and department protocols and policies.
- If you call 911, provide the following information: Student-athlete's name and contact information. Physical description of the student-athlete (i.e., height, weight, hair and eye color, clothing, etc.). Description of the situation and assistance needed. Exact location of the student-athlete. If a student-athlete leaves the area or refuses assistance, note the direction in which he/she leaves.

## EMERGENCY SITUATION- NON-VIOLENT

- Offer a quiet and secure place to talk.
- Show your genuine concern.
- Avoid judging the student-athlete; provide positive support.
- Provide support and a positive tone. Do not try to solve his or her problem; it is not within your scope as an AT.
- Help the student-athlete understand that he or she is not alone - others have been through this too.

- Listen to the student-athlete. Allow him/her to express his/her thoughts. Provide him/her the opportunity to be heard. It is OK to have a moment of silence between you and the student athlete.
- Ask questions that encourage conversation.
- Asking these important questions will NOT plant the idea in his/her head:
  - Can you tell me what is troubling you?
  - Are you thinking of hurting yourself?
  - Is someone hurting you?
  - Have you thought about suicide? \*(see Table A)
- If the student-athlete is expressing suicidal ideation:
  - Determine if he or she has formulated a plan.
  - Emphasize ensuring the student-athlete's safety, while being aware of your own.
  - Do NOT leave the person alone.
- Alert designated school officials and/or colleagues available at that time of day (i.e., school counselor/nurse, school administrator, etc.). Have the school call the student-athlete's parents/guardians or emergency contact.
- You may offer a positive reinforcement, such as: "It took courage for you to disclose this information to me. And, by telling me, it says you want to do something about what is going on. Let us get you in contact with someone who specializes in this type of situation, so you can get the care you need."
- Document and communicate your concerns and refer to the school counselor. School staff may be aware of past or current circumstances that you are not privy to, including abusive home environment, emerging psychological condition/mental illness, etc.

## **Venue-Specific Emergency Action Plans (EAPs)**

---

The purpose of the Emergency Action Plan (EAP) is to provide instructions on steps involved in the event of a medical emergency regarding student-athletes. An emergency is any sudden life-threatening injury or illness that requires immediate medical attention or activation of Emergency Medical Services (EMS). Emergency situations can occur at any time during athletic participation. Expedient action must be taken in order to provide the best possible treatment. The Emergency Action Plan will help ensure the best care is provided.

Medical emergency situations when EMS should be activated are:

- A student-athlete is not breathing/asthma complications.
- A student-athlete has lost consciousness.
- Sudden Cardiac Arrest is suspected.
- It is suspected that a student-athlete may have a neck or back injury.
- A student-athlete has an open fracture (bone has punctured through the skin).
- Severe heat exhaustion or suspected heat stroke.
- Severe bleeding that cannot be stopped.
- Signs of a severe allergic (anaphylactic) reaction.

Sports-related injuries will happen, and it is incumbent on everyone who interacts with student-athletes to familiarize themselves with all venue-specific EAPs at their school sites. All athletic personnel should review the school's EAPs at the beginning of each academic year and specifically just prior to the start of their specific individual sports season. Legal liability is very important; thus, each coach/athletic staff member should be aware of the EAPs contents and understand them.

Chain of Command:

- Team Physician
- Athletic Trainer
- Athletic Director
- Administrator
- Head Coach
- Assistant Coach
- Secondary School Student Aide
- Event/Game Manager
- Officials
- Others

The highest person in the chain of command, who is present at a scene, will be the designated person in charge. That person is responsible for deciding whether to activate EMS, instructing others how they may be of help and will be the person who stays with the student-athlete until EMS arrives.

The emergency action plan should be comprehensive and practical, yet flexible enough to adapt to any emergency situation.

All EAPs should contain the following information and/or components:

- Emergency plans must be written documents and should be developed in concert with the member schools' certified athletic trainer(s).
- Emergency plans must be written documents and should be distributed to team and attending physicians, athletic training students, institutional and organizational safety personnel, institutional and organizational administrators, and coaches.
- The emergency plan should be developed in consultation with local emergency medical services personnel.
- An emergency plan for athletics identifies the personnel involved in carrying out the emergency plan and outlines the qualifications of those executing the plan.
- Sports medicine professionals, officials, and coaches should be trained in automatic external defibrillation, cardiopulmonary resuscitation, first aid, and prevention of disease transmission.
- The emergency plan should specify the equipment needed to carry out the tasks required in the event of an emergency. In addition, the emergency plan should outline the location of the emergency equipment. Further, the equipment available should be appropriate to the level of training of the personnel involved.
- Establishment of a clear mechanism for communication to appropriate emergency care service providers and identification of the mode of transportation for the injured participant are critical elements of an emergency plan.

- The emergency plan should be specific to the activity venue. That is, each activity site should have a defined emergency plan that is derived from the overall institutional or organizational policies on emergency planning.
- Emergency plans should incorporate the emergency care facilities to which the injured individual will be taken. Emergency receiving facilities should be notified in advance of scheduled events and contests. Personnel from the emergency receiving facilities should be included in the development of the emergency plan for the institution or organization.
- The emergency plan specifies the necessary documentation supporting the implementation and evaluation of the emergency plan. This documentation should identify responsibility for documenting actions taken during the emergency, evaluation of the emergency response, and institutional personnel training.
- The emergency plan should be reviewed and rehearsed annually, although more frequent review and rehearsal may be necessary. The results of these reviews and rehearsals should be documented and should indicate whether the emergency plan was modified, with further documentation reflecting how the plan was changed.
- All personnel involved with the organization and sponsorship of athletic activities share a professional responsibility to provide for the emergency care of an injured person, including the development, implementation and regular, periodic evaluation of an EAP.

A template for creating a new EAP can be found on the AIA website.

Each high school will have venue specific EAPs for each site where athletics may take place per AIA regulations. These will be kept on file and available to view on each individual school's website. Copies of the EAP will also be posted at each venue.

# Direction of a Licensed Physician–Medical Director Agreement

## \_\_\_\_\_ HIGH SCHOOL ATHLETIC TRAINING

Athletic Trainer – \_\_\_\_\_  
Contact information – \_\_\_\_\_

### **Standard written protocol for common athletic training activities and post-injury guidelines as provided in the Policies and Procedures Manual.**

The certified athletic trainer employed or contracted by Northern Arizona Healthcare will practice athletic training under the direction of \_\_\_\_\_ as prescribed by A.R.S. Title 32, Chapter 41 pursuant to section 32-4101 (3, 6 & 7) and section 32-4103 (B); and Administrative Codes Title 4, Chapter 49 pursuant to section R4-49-405 (1 & 2). Said Physician has met the requirements of "Licensed Physician" pursuant to Title 32, Chapter 13 or 17.

Physician recommendations, instructions, standard written protocol, post-injury guidelines and standing orders as set forth in the state practice act will be utilized in the day-to-day activities in which the certified athletic trainer engages related to all aspects of the practice of athletic training. Additional physician written protocols may be used as treatment and rehabilitation guidelines in specific cases.

As a volunteer team physician for \_\_\_\_\_ High School athletics programs, I understand that the certified athletic trainer shall execute said protocols, guidelines, instructions for immediate evaluation, treatment, functional testing, post-injury care of athletic injuries, therapeutic modalities, universal precautions and return to play protocol within the guidelines set forth by the Arizona Revised Statutes, Arizona Administrative Codes and in written protocol, guidelines, instructions and standing orders. It is also understood that \_\_\_\_\_ is not subject to civil liability for providing this direction.

Signed on \_\_\_\_\_ (date) with continuance until revoked, or withdrawn, or a new agreement is signed.

Physician Name: \_\_\_\_\_ AZ License # \_\_\_\_\_

Physician Signature: \_\_\_\_\_

Certified Athletic Trainer Name: \_\_\_\_\_ AZ License # \_\_\_\_\_

Certified Athletic Trainer Signature: \_\_\_\_\_

## Final Sign-Off of Understanding & Physician Agreement

---

I, \_\_\_\_\_ agree to bear the responsibility of directing the total health care of the student-athletes who participate in \_\_\_\_\_ High School athletics programs. The certified athletic trainer will be under my guided supervision but will be given flexibility to function within their scope of practice, within the defined written protocols, as outlined in this Policies and Procedures Manual. A certified athletic trainer's scope of practice is defined by (1) [Board of Certification \(BOC\) Standards of Professional Practice](#); (2) [BOC Practice Analysis-7th edition](#); (3) [Arizona's State Practice Act](#), rules and regulations; and (4) the NATA Position Statements. I possess the authority in determining the health status of student-athletes who participate in \_\_\_\_\_ High School athletics programs and will work with the certified athletic trainer to ensure that the appropriate quality of care is provided. Finally, I approve of these written protocols and will work directly with the certified athletic trainer to ensure proper implementation.

Signed on \_\_\_\_\_ (date) with continuance until revoked, or withdrawn, or a new agreement is signed.

Physician Name: \_\_\_\_\_ AZ License # \_\_\_\_\_

Physician Signature: \_\_\_\_\_

Certified Athletic Trainer Name: \_\_\_\_\_ AZ License # \_\_\_\_\_

Certified Athletic Trainer Signature: \_\_\_\_\_

School Administrator Name: \_\_\_\_\_

School Administrator Signature: \_\_\_\_\_

Legal Counsel Name: \_\_\_\_\_

Legal Counsel Signature: \_\_\_\_\_

# Appendices

## **Appendix #1: NATA Position/Official Statements**

---

[Management of Asthma in Athletes](#)

[Lightning Safety for Athletics and Recreation](#)

[Preventing Sudden Death in Sports](#)

[Exertional Heat Illnesses](#)

[Sickle Cell Trait and the Athlete](#)

[Acute Management of the Cervical Spine– Injured Athlete](#)

[Management of Sport Concussion](#)

[Psychological Concerns](#)

[Prevention of Pediatric Overuse Injuries](#)

[Management of Acute Skin Trauma](#)

[Best Practices for Sports Medicine Management for Secondary Schools and Colleges](#)

[Official Statement from the National Athletic Trainers' Association on Communicable and Infectious Diseases in Secondary School Sports](#)

[Official Statement on Proper Supervision of Secondary School Student Aides](#)

## **Appendix #2: NFHS Position Statements**

---

[Medical Release Form for Wrestler to Participate with Skin Lesion\(s\)](#)

[Guidelines on Handling Practices and Contests During Lightning or Thunder Disturbances](#)

[Heat Acclimatization and Heat Illness Prevention](#)

[Physical Activity, Air Quality, and Wildfires](#)

## Appendix #3: Arizona Interscholastic Association (AIA)

---

[Sports Medicine Policies and Procedures](#)

[Concussion Policy](#)

[Heat Illness Management Policy](#)

## Appendix #4: Secondary School Student Aides (SAs)

---

### Secondary School Student Aides Q&A

The NATA Official Statement on Proper Supervision of Secondary School Student Aides (SAs) reflects NATA's recommendations for the role of SAs. Bottom line: ATs, not aides, are the appropriate individuals to be providing AT services, specifically injury evaluations, treatments, rehab and RTP decisions. An aide can be an extra "hand" but should never be the "head" when providing appropriate medical care. ATs are encouraged to give thought as to the line between what is an AT service and what is first aid. While it is appropriate for students certified in first aid to provide first aid, ATs should work hard to define that line for their coaches and SAs. This Q&A document is designed to assist secondary school ATs in drawing those lines. Additionally, each AT should review his/her state's practice act for limitations specific to the state on each of the points within the statement.

- **Can student aides tape an injured athlete?** It may be appropriate for students to practice taping skills on non-injured individuals and classmates for the purposes of a learning experience, but should not provide protective taping to injured athletes for the management of an injury, nor should they tape non-injured athletes for preventative measures prior to or during athletic activity.
- **May student aides participate in athletic training facility activities?** It is appropriate for student aides to observe an athletic trainer in the athletic training facility; however, activities must not include patient care. Student aides may assist with the educational practice activities listed in the NATA Official Statement such as stocking supplies, cleaning duties, making ice bags and performing inventories. Other suggested activities may include assisting with enforcing athlete sign-in procedures, setting up/breaking down sideline equipment, and acting as "extra eyes and ears" for the certified/regulated athletic trainer.
- **Can student aides assist with injury evaluation, treatment or rehabilitation?** Student aides may be involved in learning and practice evaluation, treatment and rehabilitation techniques on non-injured individuals for a learning experience, but it is professionally unethical and irresponsible for student aides to provide these services or patient care for injured athletes.
- **Can a student aide assist with filing of patient records or entering injury data into an electronic record system?** Due to privacy issues, the athletic trainer should check with the school district administration to determine if this activity is permissible.

- **If a student aide is certified in first aid, can s/he provide this service to injured athletes?** In the secondary school setting, student aides may practice first aid activities. First aid is not a protected skill. However, first aid does not include return to play. A student may perform first aid, but cannot determine whether that athlete may return to play.
- **Can a student be “stationed” at an athletic event or venue with a walkie-talkie to communicate emergency or injury care needs to the certified athletic trainer located at another site?** While student aides may act as “eyes and ears” for the athletic trainer, they should be under the direct supervision of the athletic trainer at all times. Communication to the AT regarding emergencies and on field injuries should take place through a coach or school staff member.
- **Can student aides travel with a team?** Student aides may travel with a team; however, this should only occur under the supervision of the athletic trainer. The student aide may observe the athletic trainer, but it is inappropriate for the student aides to participate in patient care, return to play/activity decisions or perform athletic training services.
- **Can a student aide apply an ice pack?** This is considered first aid so this may be an appropriate activity.
- **Can a student aide provide stretching exercises to an injured/non---injured athlete?** It may be appropriate for the AT to set the patient up, and then have students watch/monitor the patient for compliance and provide feedback on form, etc. The AT is prescribing the exercise, not the student aide.
- **If certified in CPR/AED can a student aide provide emergency care to an athlete, staff member, official or spectator?** Absolutely, they are trained, they are there, and this is first aid.

[Student Aide Letter 2014](#)

## Appendix #5: Equipment Fitting

---

No single piece of equipment can 100 % protect any student-athlete from injury. However, with proper fitting and inspection, sports protective equipment can be an invaluable part of sports safety with our student-athletes. The following are links to recommended best practices for fitting and use of protective equipment commonly worn in interscholastic sports.

[Proper Helmet Fitting: Catchers](#)

[Proper Helmet Fitting: Football](#)

[Proper Helmet Fitting: Batting Helmet](#)

[Football Helmet Fitting \(Riddell\)](#)

[Proper Helmet Fitting: Hockey](#)

[Football Helmet Fitting \(Schutt\)](#)

[Proper Helmet Fitting: Hockey Goalie](#)

[Shoulder Pad Fitting Instructions: Riddell](#)

[Proper Helmet Fitting: Lacrosse](#)

[Proper Shoulder Pad Fitting-USA Football](#)

## Appendix #6: Individualized Asthma Care Plan

---

Name: \_\_\_\_\_ DOB: \_\_\_\_\_ Date: \_\_\_\_\_

Academic Year: \_\_\_\_\_ Grade: \_\_\_\_\_ Sport: \_\_\_\_\_

### Emergency Contact:

Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Physician: \_\_\_\_\_ Phone: \_\_\_\_\_

### Emergency Care Plan:

Emergency action is necessary when the student-athlete has symptoms such as:

---

### Asthma Triggers:

---

### Steps to take during an asthma episode:

1. Check peak flow. Normal Range:  
\_\_\_\_\_
2. Give medications as listed below. Student should respond to treatment within 15-20 minutes.
3. Contact emergency contact if  
\_\_\_\_\_
4. Re-check peak flow.
5. Seek emergency medical care if the student has any of the following:
  - a. Constant cough
  - b. No improvement within 15-20 minutes after initial treatment with medication.
  - c. Peak flow of \_\_\_\_\_.
  - d. Difficulty breathing: RR >25; Wheezing, lips or fingernails are blue.
  - e. Trouble walking or talking.
  - f. Stops playing and cannot start activity again.

### Emergency Asthma Medication:

Name: \_\_\_\_\_ Amount: \_\_\_\_\_ When to use: \_\_\_\_\_

Name: \_\_\_\_\_ Amount: \_\_\_\_\_ When to use: \_\_\_\_\_

### Additional Comments:

---

## Appendix #7: Skin Lesion Chart

Type of Lesion	Treatment(s)	Cover (Y / N)	RTP Timeline	Prophylactics	Incubation Period
Tinea Capitis	Terbinafine (250mg, 1/d, x2-4wks)	Yes	Oral treatment for 14 days		10-14 days
	Ketoconazole (200mg, 1/d, 2-4 wks)				
	Itraconazole (200mg, 1/d, 2-4 wks)				
	Fluconazole (6mg/kg, 1/d, x3-6wks)				
Tinea Corporis/Cruris	Terbinafine 1% cream (BID)	Yes	Oral or topical treatment for 72 hours		4-10 days
	Ketoconazole 2% cream				
	Clotrimazole 1% cream				
	Naftifine 1% cream (BID)				
	Oxiconazole 1% (BID)				
	Ciclopirox 0.77% cream (BID)				
	Fluconazole (150mg, 1/d, x2-4wks)				
	Itraconazole (100mg, 1/d, x2wks)				
	Terbinafine (250mg, 1/d, x2wks)				
Tinea Pedis	Ketoconazole 2% cream (1/d)	Yes	Oral or topical treatment for 72 hours		Unknown
	Clotrimazole 1% cream (1/d)				
	Fluconazole (150mg, 1/d, x2-4wks)				
	Itraconazole (100mg, 1/d, x4wks)				
	Terbinafine (250mg, 1/d, x4wks)				
Herpes Simplex (Primary)	Valacyclovir (1g, TID, 7-10 days)	No	No new lesions for 72 hours, antivirals for 120 hours	Acyclovir (400mg, BID, duration of season)	5-20 days
Herpes Simplex (Recurrent)	Valacyclovir (1g, BID, 1 wk)	No	No new lesions for 72 hours, antivirals for 120 hours	Acyclovir (400mg, BID, duration of season)	5-20 days
	Acyclovir (800mg, 5/day, 1 wk)				

Impetigo	Keflex (500mg 2 tabs BID x 10 days)	No	No new lesions for 48 hours, antibiotics for 72 hours		1-3 days
	Mupirocin 2% ointment (BID)				
	Fusidic acid 2% cream, hydrocortisone (BID)				
	Retapamulin 1% ointment (BID)				
Folliculitis	1. Rifanoin (DIB) 2. Doxycycline (BID) 3. Bactoban (cream) in nose (BID) 4. Hibiclens bath (daily) *Repeat steps 1-4 every day for 5 days	No	No new lesions for 48 hours, antibiotics for 72 hours		Unknown
MRSA	5. Rifanoin (DIB) 6. Doxycycline (BID) 7. Bactoban (cream) in nose (BID) 8. Hibiclens bath (daily) *Repeat steps 1-4 every day for 5 days	No	No new lesions for 48 hours, antibiotics for 72 hours		1-10 days
Staph	Antibiotic of choice	Yes	No new lesions for 48 hours, antibiotics for 72 hours		4-10 days
Molluscum Contagiosum	Physical destruction of lesions	Yes	Lesions removed and area covered		2-7 weeks
Verrucae		Yes	Must be adequately covered in order to participate		N/A
Hidradenitis Suppurativa		No	DQ if extensive or purulent draining		N/A
Pediculosis	Appropriate Pediculicide	No	Based on exam		N/A
Scabies	Ellimite Cream	No	Negative scabies prep on site		N/A

## Appendix #8: Individualized Diabetic Care Plan

---

Name: \_\_\_\_\_ DOB: \_\_\_\_\_ Date: \_\_\_\_\_

Academic Year: \_\_\_\_\_ Grade: \_\_\_\_\_ Sport: \_\_\_\_\_

### Emergency Contact:

Name: \_\_\_\_\_ Phone: \_\_\_\_\_

### Blood Glucose Monitoring Guidelines:

#### When is BG measured:

- First thing in the morning
- Before bedtime
- Before meals
- After meals
- Before practice/games
- During practice/games

#### Normal BG range:

#### Insulin Administration Guidelines:

**Method of administration:** MDI vs insulin pump

**Administration site:** abdomen vs triceps vs thigh

Type of insulin given:

- |                 |           |                      |
|-----------------|-----------|----------------------|
| - Long acting:  | - dosage: | - when administered: |
| - Short acting: | - dosage: | - when administered: |

#### Glucose Administration Guidelines:

When BG < 70 mg/dL ☐ glucagon tablet or quick carbohydrate

When BG is < 50 mg/dL ☐ glucagon tablet or glucagon injection

#### Types of quick carbohydrates:

---

**Additional Comments:**

---

## Appendix #9. Strategies to Prevent Hypoglycemia

Strategy	Comment
Blood glucose monitoring	<p>Athletes should measure blood glucose levels before, during, and after exercise.</p> <p>Athletes who exercise in extreme heat or cold or at high altitude or experience post exercise late-onset hypoglycemia, which may lead to nighttime hypoglycemia, require additional monitoring.</p> <ol style="list-style-type: none"> <li>1. Measure blood glucose levels 2 to 3 times before exercise at 30-min intervals to determine directional glucose movement.</li> <li>2. Measure glucose levels every 30 min during exercise if possible.</li> <li>3. Athletes who experience post exercise late-onset hypoglycemia should measure glucose levels every 2 h up to 4 h postexercise. Athletes who experience nighttime hypoglycemia should measure blood glucose values before going to sleep, once during the night, and immediately upon waking.</li> </ol>
Carbohydrate supplementation (Note: The athlete Before exercise should discuss specific carbohydrate quantities and types with his or her physician.)	<p><b>Before Exercise</b></p> <p>Consumption of carbohydrates before exercise depends on the prevailing blood glucose level. In general, when the blood glucose level is 100 mg/dL (5.5 mmol/L), carbohydrates should be consumed.</p> <p><b>During exercise</b></p> <ol style="list-style-type: none"> <li>1. Additional carbohydrate supplementation may be needed for practices or games lasting 60 min when the pre-exercise insulin dosage has not been reduced by at least 50%.</li> <li>2. Athletes who are exercising at the peak of insulin activity may require additional carbohydrates.</li> </ol> <p><b>Postexercise</b></p> <p>Athletes should eat a snack and/or meal shortly after exercise.</p>
Insulin adjustments (Note: These are very important for moderate-intensity to high-intensity exercise sessions of 30 min.)	<p>Physician determines insulin reduction strategies.</p> <ol style="list-style-type: none"> <li>1. Insulin pump (may use one or more of the following strategies)             <ol style="list-style-type: none"> <li>a. Reduce basal rate by 20% to 50% 1 to 2 h before exercise.</li> <li>b. Reduce bolus dose up to 50% at the meal preceding exercise.</li> <li>c. Suspend or disconnect the insulin pump at the start of exercise. Note: Athletes should not suspend or disconnect from pump longer than 60 min without supplemental insulin.</li> </ol> </li> <li>2. Multiple daily injection             <p>Reduce bolus dose up to 50% at the meal preceding exercise.</p> </li> <li>3. Nighttime hypoglycemia             <p>Reduce evening meal bolus insulin by 50%.</p> </li> </ol>

## Appendix #10: Treatment Guidelines for Mild and Severe Hypoglycemia

---

### **Mild Hypoglycemia: (Student-athlete is conscious and able to follow directions and swallow.)**

1. Administer 10 g to 15 g of fast-acting carbohydrate: eg, 4 to 8 glucose tablets, 2 T honey.
2. Measure blood glucose level.
3. Wait approximately 15 min and remeasure blood glucose.
4. If blood glucose level remains low, administer another 10 g to 15 g of fast-acting carbohydrate.
5. Recheck blood glucose level in approximately 15 min.
6. If blood glucose level does not return to the normal range after second dosage of carbohydrate, activate emergency medical system.
7. Once blood glucose level is in the normal range, student-athlete may wish to consume a snack (eg, sandwich, bagel)

\*Athletic trainers should be trained in the mixing and administration of glucagon. The student-athlete or student-athlete's family can provide training.

### **Severe Hypoglycemia: (Student-athlete is unconscious or unable to follow directions or swallow.)**

1. Activate emergency medical system.
2. Prepare glucagon for injection following directions in glucagon kit. The glucagon kit has either (1) a fluid-filled syringe and a vial of glucagon powder, or (2) a syringe, 1 vial of glucagon powder, and 1 vial of fluid.
  - Inject the fluid into the vial of glucagon. Note: If the vial of fluid is separate, draw the fluid into the syringe and inject it into the vial of glucagon powder.
  - Gently shake the vial until the glucagon powder dissolves and the solution is clear.
  - Draw fluid back into the syringe and then inject glucagon into the arm, thigh, or buttock.\*
  - Glucagon administration may cause nausea and/or vomiting when the student-athlete awakens. Place the student-athlete on his or her side to prevent aspiration.
  - The student-athlete should become conscious within 15 min of administration.
3. Once the student-athlete is conscious and able to swallow, provide food.

## Appendix #11: American Diabetes Association (ADA) Guidelines Concerning Hyperglycemia and Exercise

Blood Glucose Level	Comment
Fasting* blood glucose level is 250 mg/dL (13.9 mmol/L).	Test urine and/or blood for ketones. If ketones present, exercise is contraindicated. If ketones not present, exercise is not contraindicated.
Blood glucose value is 300 mg/dL (16.7 mmol/L) and without ketones.	Exercise with caution, and continue to monitor blood glucose levels.

\*Fasting is defined as 4 h or more after eating a meal.

## Appendix #12: Nutrition

[Nutrition for Injury Recovery](#)

[Healthy Hydration for Young Athletes](#)

[Nutrition for Concussion Recovery](#)

[Cutting Weight](#)

[Clocking Nutrition](#)

[Nutrition for Tendon and Ligament Recovery](#)

[Nutrition for Fractures and Bone Health](#)

[Dietary Supplement Safety](#)

[Metabolic Syndrome](#)

## Appendix #13: Concussions

[Arizona Senate Bill 1521 \(2011\)](#)

[2023 Consensus Statement on Concussion in Sport \(6<sup>th</sup> International Conference, Amsterdam 2022\)](#)

## Appendix #14: Symptom Tracking Form

Name: \_\_\_\_\_ Sport: \_\_\_\_\_ Grade: \_\_\_\_\_ Date of Concussion: \_\_\_\_\_

Scale 0—6                      0 = none                      1-2 = mild                      3-4 = moderate                      5-6 = severe

Date and Time Evaluated:														
Headache														
“Pressure in head”														
Neck pain														
Nausea/vomiting														
Dizziness														
Blurred/double vision														
Balance problems														
Sensitivity to light														
Sensitivity to noise														
Feeling slowed down														
Feeling like “in a fog”														
“Don’t feel right”														
Difficulty concentrating														
Difficulty remembering														
Fatigue or low energy														
Confusion														
Drowsiness														
More emotional														
Irritability														
Sadness														
Nervous or anxious														
Trouble falling/staying asleep														
Sleeping more/less														
<b>TOTAL NUMBER OF SYMPTOMS</b>														
<b>SYMPTOM SEVERITY SCORE</b>														

**Sway Medical:**

Date	Balance (mBESS)	Reaction Time (ms)	Comments
<i>Baseline</i>			

# Appendix #15: Post-Concussion Home Care Instructions

*These instructions are based on and in compliance with Arizona Senate Bill 1521 (2011), the Arizona Interscholastic Association (AIA) Concussion Policy, and the 2023 Consensus Statement on Concussion in Sport (6<sup>th</sup> International Conference, Amsterdam 2022).*

Your student-athlete (name) \_\_\_\_\_ has a suspected head injury (possibly a concussion) that happened on (date) \_\_\_\_\_. Since a concussion is a disturbance in brain function caused by a direct or indirect force to the head, it can result in a variety of nonspecific symptoms (like those listed below) and often does not involve loss of consciousness. A careful assessment of symptoms has been carried out and no sign of any serious complications has been found. However, should you have any doubt or uncertainty, or should symptoms increase in severity or number, then you should seek treatment in the nearest emergency room.

**Symptoms noted on (date) \_\_\_\_\_:**

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Headache              | <input type="checkbox"/> Sensitivity to Noise     | <input type="checkbox"/> Drowsiness                     |
| <input type="checkbox"/> "Pressure in Head"    | <input type="checkbox"/> Feeling Slowed Down      | <input type="checkbox"/> More emotional                 |
| <input type="checkbox"/> Neck Pain             | <input type="checkbox"/> Feeling Like In a "Fog"  | <input type="checkbox"/> Irritability                   |
| <input type="checkbox"/> Nausea/Vomiting       | <input type="checkbox"/> "Don't Feel Right"       | <input type="checkbox"/> Sadness                        |
| <input type="checkbox"/> Dizziness             | <input type="checkbox"/> Difficulty Concentrating | <input type="checkbox"/> Nervous or Anxious             |
| <input type="checkbox"/> Blurred/Double Vision | <input type="checkbox"/> Difficulty Remembering   | <input type="checkbox"/> Trouble Falling/Staying Asleep |
| <input type="checkbox"/> Balance Problems      | <input type="checkbox"/> Fatigue or Low Energy    | <input type="checkbox"/> Sleeping More/Less             |
| <input type="checkbox"/> Sensitivity to Light  | <input type="checkbox"/> Confusion                |   |

**Symptoms that warrant immediate physician/emergency evaluation:**

- Decreasing level of consciousness
- Seizures
- Repeated vomiting
- Severely worsening headache
- Very drowsy or cannot be awakened
- Behaving unusually or increasing confusion
- Extreme irritability
- Weakness or numbness in arms or legs
- Slurred speech or inability to speak
- Cannot recognize people or places
- Difficulty remembering recent events or meaningful facts
- Are unsteady on their feet or become uncoordinated

**It is OK to:**

- Rest (avoid exercise, noisy/stimulating environments, digital screens within the first 24-48 hours)
- USE acetaminophen (Tylenol) for headaches
- Use an ice pack on head/neck as needed for comfort
- Eat a light diet, stay hydrated
- Sleep as needed

**There is NO need to:**

- Check eyes with flashlight
- Wake up every hour (unless otherwise instructed)
- Test reflexes
- Stay in bed in a dark room

**Do NOT:**

- Engage in physical activity (anything that elevates heart rate) that provokes symptoms
- Engage in mental activity (digital screens, prolonged reading) that provokes symptoms
- Drive a car or operate machinery
- Use ibuprofen (Advil, or other NSAIDs)
- Drink alcohol or use recreational drug

**How long can your student-athlete expect to be out of sports participation/physical activity?**

Head injuries are healed best by rest and are individual in their healing. Some will heal within several days, and others may take several months. Most young student-athletes recover within 2 weeks.

**What Happens Now?**

- Contact your desired appropriate healthcare provider\* and schedule an initial evaluation appointment within one week.
- Follow up with the school nurse/health aide during the school day & the athletic trainer (AT) after school EVERY DAY for testing and symptom assessment.
- Your student-athlete’s teachers will be informed about the injury as directed by the healthcare provider.
- Coaches will be informed and under no circumstance will your student-athlete participate in practice/games. Depending on symptom severity and provocation, they may or may not observe practice/games.
- When your student-athlete is symptom free for at least 24 hours through a full school day, schedule a follow-up appointment with your healthcare provider.
- Obtain a written medical clearance from the appropriate healthcare provider\* allowing the student-athlete to begin the return to play progression.
  - **\*An appropriate healthcare professional for return to play is defined as the following: Licensed Athletic Trainer, Physician (MD/DO), Licensed Nurse Practitioner, Physician’s Assistant.**
- Ensure copies of medical clearance notes or other medical forms are given to the athletic trainer.

**When a student-athlete has passed all concussion tests AND has WRITTEN clearance from an appropriate healthcare provider, the student-athlete may begin the return to play progression.**

**Return to Play Progression:**

Step	Exercise strategy	Activity at each step	Goal
1	Symptom-limited activity	Daily activities that do not exacerbate symptoms (eg, walking).	Gradual reintroduction of work/school
2	Aerobic exercise 2A—Light (up to approximately 55% maxHR) then 2B—Moderate (up to approximately 70% maxHR)	Stationary cycling or walking at slow to medium pace. May start light resistance training that does not result in more than mild and brief exacerbation* of concussion symptoms.	Increase heart rate
3	Individual sport-specific exercise Note: If sport-specific training involves any risk of inadvertent head impact, medical clearance should occur prior to Step 3	Sport-specific training away from the team environment (eg, running, change of direction and/or individual training drills away from the team environment). No activities at risk of head impact.	Add movement, change of direction
Steps 4–6 should begin after the resolution of any symptoms, abnormalities in cognitive function and any other clinical findings related to the current concussion, including with and after physical exertion.			
4	Non-contact training drills	Exercise to high intensity including more challenging training drills (eg, passing drills, multiplayer training) can integrate into a team environment.	Resume usual intensity of exercise, coordination and increased thinking
5	Full contact practice	Participate in normal training activities.	Restore confidence and assess functional skills by coaching staff
6	Return to sport	Normal game play.	

\*Mild and brief exacerbation of symptoms (ie, an increase of no more than 2 points on a 0–10 point scale for less than an hour when compared with the baseline value reported prior to physical activity). Athletes may begin Step 1 (ie, symptom limited activity) within 24 hours of injury, with progression through each subsequent step typically taking a minimum of 24 hours. If more than mild exacerbation of symptoms (ie, more than 2 points on a 0–10 scale) occur during Steps 1–3, the athlete should stop and attempt to exercise the next day. Athletes experiencing concussion-related symptoms during Steps 4–6 should return to Step 3 to establish full resolution of symptoms with exertion before engaging in at-risk activities. Written determination of readiness to RTS should be provided by an HCP before unrestricted RTS as directed by local laws and/or sporting regulations.  
HCP: healthcare professional, maxHR, predicted maximal heart rate according to age (ie, 220-age).

A student-athlete must remain symptom-free to progress to the next level. If symptoms recur, the student-athlete must return to the previous level. Each step generally requires 1 day/24 hours but could take longer.

Please feel free to contact the athletic trainer if you have any questions or concerns.

**Athletic Trainer Contact Information:**

Name: \_\_\_\_\_ Phone: \_\_\_\_\_ Email: \_\_\_\_\_

# Appendix #16: Physician Referral Form

Dear Healthcare Provider,

The following student-athlete \_\_\_\_\_ has suffered a head injury and we wish you to understand the protocols we use regarding return to athletic participation.

To ensure that all student-athletes return to their sport safely, \_\_\_\_\_ High School adheres to the following graduated return to athletic participation recommendations of the National Athletic Trainers' Association, the Arizona Interscholastic Association (AIA) Concussion Policy, Arizona Senate Bill 1521 (2011), and the guidelines outlined in the 2023 Consensus Statement on Concussion in Sport (6<sup>th</sup> International Conference, Amsterdam 2022).

**Per the AIA Concussion Policy and Arizona Senate Bill 1521, a student-athlete must obtain written clearance from an appropriate healthcare professional (LAT, MD, DO, NP, PA) before beginning the return to play protocol.**

The following assessment/documentation for this situation & student-athlete is on file:

Sway Medical     SCAT6/SAC     VOMS     Neurocognitive Test     Other: \_\_\_\_\_

**High School adheres to the following step-wise return to play progression:**

Step	Exercise strategy	Activity at each step	Goal
1	Symptom-limited activity	Daily activities that do not exacerbate symptoms (eg, walking).	Gradual reintroduction of work/school
2	Aerobic exercise 2A—Light (up to approximately 55% maxHR) then 2B—Moderate (up to approximately 70% maxHR)	Stationary cycling or walking at slow to medium pace. May start light resistance training that does not result in more than mild and brief exacerbation* of concussion symptoms.	Increase heart rate
3	Individual sport-specific exercise Note: If sport-specific training involves any risk of inadvertent head impact, medical clearance should occur prior to Step 3	Sport-specific training away from the team environment (eg, running, change of direction and/or individual training drills away from the team environment). No activities at risk of head impact.	Add movement, change of direction
Steps 4–6 should begin after the resolution of any symptoms, abnormalities in cognitive function and any other clinical findings related to the current concussion, including with and after physical exertion.			
4	Non-contact training drills	Exercise to high intensity including more challenging training drills (eg, passing drills, multiplayer training) can integrate into a team environment.	Resume usual intensity of exercise, coordination and increased thinking
5	Full contact practice	Participate in normal training activities.	Restore confidence and assess functional skills by coaching staff
6	Return to sport	Normal game play.	

\*Mild and brief exacerbation of symptoms (ie, an increase of no more than 2 points on a 0–10 point scale for less than an hour when compared with the baseline value reported prior to physical activity). Athletes may begin Step 1 (ie, symptom limited activity) within 24 hours of injury, with progression through each subsequent step typically taking a minimum of 24 hours. If more than mild exacerbation of symptoms (ie, more than 2 points on a 0–10 scale) occurs during Steps 1–3, the athlete should stop and attempt to exercise the next day. Athletes experiencing concussion-related symptoms during Steps 4–6 should return to Step 3 to establish full resolution of symptoms with exertion before engaging in at-risk activities. Written determination of readiness to RTS should be provided by an HCP before unrestricted RTS as directed by local laws and/or sporting regulations.  
HCP, healthcare professional; maxHR, predicted maximal heart rate according to age (6). (2023-agg).

A student-athlete must remain symptom-free to progress to the next level. If symptoms recur, the student-athlete must return to the previous level. Each step generally requires 1 day/24 hours but could take longer.

Please feel free to contact the athletic trainer if you have any questions or concerns.

**Athletic Trainer Contact Information:**

Name: \_\_\_\_\_ Phone: \_\_\_\_\_ Email: \_\_\_\_\_

**Healthcare Provider's Return to Athletic Participation Statement**

**Please check the appropriate statement for this student-athlete to return to athletic competition.**

\_\_\_ This student-athlete must be seen again by a health care provider in order to be cleared for competition.

\_\_\_ This student-athlete may return to competition when he/she has completed the graduated return to play criteria outlined above and has remained symptom free through it all.

\_\_\_ Other protocol/instructions to student-athlete/AT (please explain): \_\_\_\_\_

Health Care Provider's Signature \_\_\_\_\_ Date \_\_\_\_\_

Health Care Provider's Name (printed)/Stamp \_\_\_\_\_

# Appendix #17: Academic Accommodation Considerations

Patient Name: \_\_\_\_\_ Date of Birth: \_\_\_\_\_  
 Date of Evaluation: \_\_\_\_\_ Referred by: \_\_\_\_\_  
 Duration of Recommendations: 1 week      2 weeks      4 weeks      Until further notice

The patient will be reassessed for revision of these recommendations in \_\_\_\_\_ weeks.

This patient has been diagnosed with a concussion (a brain injury) and is currently under our care. Please excuse the patient from school today due to the medical appointment. Flexibility and additional supports are needed during recovery. The following are suggestions for academic adjustments to be individualized for the student as deemed appropriate in the school setting. Feel free to apply/remove adjustments as needed as the student's symptoms improve/worsen.

**Attendance**

- \_\_\_\_\_ No school for \_\_\_\_\_ school day(s)
- \_\_\_\_\_ Attendance at school \_\_\_\_\_ days per week
- \_\_\_\_\_ Full school days as tolerated by the student
- \_\_\_\_\_ Partial days as tolerated by the student

**Breaks**

- \_\_\_\_\_ Allow the student to go to the nurse's office if symptoms increase
- \_\_\_\_\_ Allow student to go home if symptoms do not subside
- \_\_\_\_\_ Allow other breaks during school day as deemed necessary and appropriate by school personnel

**Visual Stimulus**

- \_\_\_\_\_ Allow student to wear sunglasses/hat in school
- \_\_\_\_\_ Pre-printed notes for class material or note taker \_\_\_\_\_
- Limited computer, TV screen, bright screen use \_\_\_\_\_ Reduce brightness on monitors/screens
- \_\_\_\_\_ Change classroom seating as necessary

**Audible Stimulus**

- \_\_\_\_\_ Lunch in a quiet place with a friend
- \_\_\_\_\_ Avoid music or shop classes
- \_\_\_\_\_ Allow to wear earplugs as needed
- \_\_\_\_\_ Allow class transitions before bell

**Workload/Multi-Tasking**

- \_\_\_\_\_ Reduce overall amount of make-up work, class
- \_\_\_\_\_ Prorate workload when possible
- \_\_\_\_\_ Reduce amount of homework given each night

**Testing**

- \_\_\_\_\_ Additional time to complete tests work and homework
- \_\_\_\_\_ No more than one test a day
- \_\_\_\_\_ No standardized testing until \_\_\_\_\_
- \_\_\_\_\_ Allow for scribe, oral response, and oral delivery of questions, if available

**Physical Exertion**

- \_\_\_\_\_ No physical exertion/athletics/gym/recess
- \_\_\_\_\_ Walking in gym class only
- \_\_\_\_\_ Begin return to play protocol as outlined by return to activity form

**Additional Recommendations**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Current Symptoms List** (the student is noting these today)

- \_\_\_\_\_ Headache    \_\_\_\_\_ Visual problems    \_\_\_\_\_ Sensitivity to noise    \_\_\_\_\_ Memory issues    \_\_\_\_\_ Nausea    \_\_\_\_\_ Fatigue
- \_\_\_\_\_ Dizziness    \_\_\_\_\_ Sensitivity to light    \_\_\_\_\_ Difficulty concentrating    \_\_\_\_\_ Irritability    \_\_\_\_\_ Feeling foggy
- \_\_\_\_\_ Balance problems

**Student is reporting most difficulty with/in**

- \_\_\_\_\_ All subjects      \_\_\_\_\_ Reading/Language arts      \_\_\_\_\_ Foreign Language      \_\_\_\_\_ Math      \_\_\_\_\_ Science
  - \_\_\_\_\_ Music      \_\_\_\_\_ Using Computers      \_\_\_\_\_ History      \_\_\_\_\_ Focusing      \_\_\_\_\_ Listening
- Other: \_\_\_\_\_

**Athletic Trainer Contact Information:**

Name: \_\_\_\_\_ Phone: \_\_\_\_\_ Email: \_\_\_\_\_

I, \_\_\_\_\_, give permission for the athletic trainer to share the following information with my child's school and for communication to occur between the school and the athletic trainer for changes to this plan.

\_\_\_\_\_ (Parent/Guardian's Signature) \_\_\_\_\_ (Date)

## Appendix #18: Return to Play Progression Chart

Name: \_\_\_\_\_ Sport: \_\_\_\_\_ Grade: \_\_\_\_\_ Date of Concussion: \_\_\_\_\_

Step	Date(s)	Aim	Activity	Notes
1		<b>Symptom-limited activity</b>	Daily activities that do not exacerbate symptoms	
2		<b>Aerobic exercise</b> <b>2a—Light</b> <b>2b—Moderate</b>	Walking/stationary cycling at slow-medium pace (<55-70% HR <sub>max</sub> ),  light resistance training	
3		<b>Individual sport-specific exercise</b>	Sport-specific training away from team environment (without pads),  NO head impact activities	
4		<b>Non-contact training drills;</b>  <b>High intensity</b>	More challenging training drills, can integrate into team environment	
5		<b>Full contact practice</b>	Participate in normal training activities	
6		<b>Return to sport, full contact game</b>	Normal game play	

Health Care Provider's Signature \_\_\_\_\_ Date \_\_\_\_\_

Health Care Provider's Name (printed)/Stamp \_\_\_\_\_

## Appendix #19: Dry Cupping Therapy Informed Consent

---

Your student-athlete has a musculoskeletal injury that may benefit from dry cupping therapy. Dry cupping therapy is a rehabilitation technique that involves applying silicone cups in an acupoint or area of pain using a vacuum apparatus. The cups are left in place for 5-10 minutes before being removed.

The main theory behind dry cupping therapy is that it increases the circulation surrounding the treated area which allows toxins that are trapped deep in the soft tissue layers to rise to the body surface. In some cases, dry cupping has a greater analgesic effect (pain relief) than many other forms of soft tissue therapies.

For maximum benefit from treatment, at least five sessions are recommended. An average of three to four days will be between each treatment.

While dry cupping therapy is considered to be both a safe and effective treatment for musculoskeletal pain, there are side effects that can occur because of treatment. The most common side effect that typically will occur with any treatment session is the development of bruises in the location of the cups due to the rupture of small capillaries which allows increased blood flow to the area. These bruises typically will resolve within several days but may take several weeks to completely resolve. It is also possible for mild edema (swelling) in the area treated to occur that will resolve within a few hours to days.

Dry cupping should not be performed on individual with certain conditions, include pregnancy, cancer, bone fracture, deep vein thrombosis, arteries, or areas where the pulse can be felt, or an area where the skin is injured or compromised such as a sunburn, abrasion, rash, or contusion. Following each dry cupping therapy session, it is important to hydrate by drinking plenty of water. This will help decrease muscle soreness the day following treatment due to the increased blood flow to the area.

I understand the application and treatment of dry cupping therapy and the associated side effects that may result due to treatments.

I \_\_\_\_\_ (parent/guardian) agree to allow \_\_\_\_\_, Athletic Trainer at \_\_\_\_\_, to perform dry cupping therapy on my student-athlete, \_\_\_\_\_. I also acknowledge that I have read, understand, and will follow all the information stated above. I will not hold the athletic trainer responsible for any adverse effects as a result of the treatments my student-athlete received. In addition, I understand it is necessary for my student-athlete to communicate with the athletic trainer if the pressure is too deep, too fast, or causes high pain or discomfort.

Student-Athlete's Name (Printed) \_\_\_\_\_

Parent/Guardian's Name (Printed) \_\_\_\_\_ Date \_\_\_\_\_

Parent/Guardian's Signature \_\_\_\_\_