

# MSHSAA

Missouri State High School Activities Association



# Sports Medicine Manual 2010-11

# 2009-10 Sports Medicine Manual

## MISSOURI STATE HIGH SCHOOL ACTIVITIES ASSOCIATION

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## INTRODUCTION

This manual contains details on items with medical ramifications for which the MSHSAA has approved specific policies and/or procedures.

All of these items have been recommended by the MSHSAA Sports Medicine Advisory Committee which is made up of physicians and certified athletic trainers. You will note that some of the items are identified as "policy" while others are recommendations. All items included have been developed with the best interest of athletes in mind. Member schools are urged to know, understand, and use all of the outlined policies and procedures.

Keep in mind there are MSHSAA regulations that have medical implications that do not appear in this booklet, e.g., required days of practice before first competition in a given sport, baseball pitching regulations, weight control program for wrestlers, etc. Such regulations can be found in the various sections of the MSHSAA HANDBOOK as well as sport manuals. Athletic directors and coaches should be thoroughly familiar with all such regulations.

There are National rules in several sports which deal with health and safety. Examples are the football player that must leave the game for at least one play following injury and the wrestler that is prohibited from continuing without a physician's approval if he has been rendered unconscious. Each coach and game official should be thoroughly familiar with all such rules for their sport.

Acknowledgement: The MSHSAA would like to thank the Wisconsin Interscholastic Athletic Association for its assistance in providing materials that have been adapted for use by the member schools in Missouri.

## SECTION 1: PHYSICAL EXAMINATION AND INSURANCE REQUIREMENTS

The specific standards for both physical examination and insurance are contained in By-Law 275 for Cheerleaders; By-Law 283 for Pom Poms and By-Law 309 for athletics.

The school shall require of each student participating in cheerleading, pom pom or athletics, a physician's certificate stating that the individual is physically able to participate in the said activity at her/his school. (The physician's certificate may be signed by an advanced nurse practitioner or a certified physician's assistant in a written collaborative practice with a physician provided that the name of the physician with whom there is a collaborative practice also appears on the certificate.)

The medical certificate valid for the purpose of this rule is issued on or after February 1 of the previous year.

FOR THE PURPOSES OF THESE BY-LAWS, IT IS INTERPRETED THAT BEFORE A STUDENT TRIES OUT OR PRACTICES (SPORT ACTIVITIES, CHEERLEADERS AND POM PONS), THEY MUST HAVE PHYSICAL AND INSURANCE VERIFICATION ON FILE.

**CONDITIONING STANDARD BY-LAW 310**

Each squad must have 14 days practice and each individual must have participated in 14 school practices on 14 different days prior to the first interscholastic contest in all sports except golf, fall softball, and tennis. For the sports of golf, fall softball, and tennis each squad must have a minimum of 10 days practice and each individual must have participated in 10 school practices on 10 different days prior to the first interscholastic contest. This requirement shall be waived if a student has been a member of another school sports squad immediately preceding the sport season and has had 14 days conditioning.

## SECTION 2: GUIDE FOR INTERSCHOLASTIC ATHLETIC DISQUALIFICATION

**Prepared by the Sports Medicine Advisory Committee**

A physician examining athletes in junior and senior high schools must use good judgment in deciding whether or not to restrict a student from competition. The purpose of this presentation is to summarize some of the important factors to help physicians arrive at a logical conclusion so a student is not unnecessarily prohibited from competing or allowed to compete when he/she should be disqualified.

There are two major considerations for restricting persons from participation in athletics:

1. Is there a disease or condition which prevents the individual from competing fairly with normal persons?
2. Is there a disease or condition which might be aggravated by athletic competition?

Both of these are relative and circumstances alter decisions. It is the examining physician's responsibility to determine qualification or disqualification for athletic participation.

## SECTION 3: MEDICAL PROCEDURES WHEN NO PHYSICIAN IS PRESENT

The host school athletic director should assume responsibility for the following items. In some situations, the athletic director may wish to have each head coach assume this responsibility for their home contests.

**I. TELEPHONE**

- A. Be certain a telephone is accessible.
- B. Have the following numbers on hand:
  1. Where local physician can be reached.
  2. Hospital.
  3. Ambulance service.
  4. Rescue squad.
  5. Police department.
- C. Post all numbers at telephones.
- D. Give all numbers to:
  1. Announcer.
  2. Coaches (visiting and home).
  3. Managers.

**II. EMERGENCY FACILITY AND SERVICE**

Alert local medical services to the fact that you are conducting an event.

- A. Hospital emergency room.
- B. Ambulance service.
- C. Rescue squad.
- D. Prior to season alert physicians to schedule and possible need for assistance.

**III. WHEN AN EMERGENCY OCCURS**

Be prepared in the event that you must transport an athlete without the services of an emergency vehicle. Have a station wagon or other usable vehicle available.

**IV. IMMEDIATE CARE**

Know who will administer first aid or immediate care if needed. Coach, athletic trainer, other?

#### V. **RETURN TO COMPETITION FORM**

When an athlete is taken from a competition site to a hospital/off-site medical facility for diagnosis/treatment due to injury or illness, a MSHSAA "Return to Competition" form signed by the attending off-site physician must be received at the completion site for the athlete to be permitted to return to competition in the same tournament or contest.

#### VI. **EQUIPMENT**

Have all emergency equipment on hand and readily available.

- A. Have close at hand and well labeled.
- B. Alert all to its location.
- C. Be sure it is in working order.
- D. Be certain someone present knows how to use it.
- E. It is the host schools responsibility to provide an appropriate container for the disposal of body fluids/blood and for the proper disposal of the container. As per OSHA guidelines, a hard plastic container for sharp objects, a separate red bag for soiled linens or uniforms, and a separate red bag for contaminated gauze tape, dressing, etc. should all be provided.

#### VII. **NOTIFICATION**

Have a procedure set for notifying parents of an injured athlete. Have telephone numbers available (home, work, other).

#### VIII. **FOLLOW-UP REPORTS**

File a report on each incident in the student's personal file. Use a standardized accident/injury report form, or give at least the following information:

- A. The name of the individual involved.
- B. Date of the incident.
- C. Type of injury.
- D. Mechanism of the injury.
- E. First aid given.
- F. Where the individual was sent, i.e., home, hospital, physician's office.
- G. Who was notified of the injury?
- H. Notation regarding any instructions given to the injured party regarding follow-up.

### SECTION 4:

## LICENSED PHYSICIANS (MD or DO) COVERING MSHSAA TOURNAMENTS

The designated tournament manager should assume responsibility for the following items:

#### I. **SEND THE TOURNAMENT PHYSICIAN THE FOLLOWING ITEMS AND INFORMATION PRIOR TO THE EVENT**

- A. Tickets or information as to where they can be picked up.
- B. Parking information and pass, if necessary. Reserve a space for physicians.
- C. Specifically where and to whom to report upon arrival at contest site.
- D. Reminder to bring along normal emergency materials.
- E. Copy of MSHSAA policies regarding tournament physicians.
- F. Make hospitality room available to tournament physician and guest.

#### II. **UPON THE PHYSICIAN'S ARRIVAL**

- A. Familiarize him/her with the facilities including:
  1. Where he/she will be seated.
  2. Location of training room, if one is available.
  3. Location of telephone.
- B. Provide him/her with:
  1. Normal procedures for calling an emergency vehicle.
  2. A pad of paper on which to make notations regarding injuries attended to during the course of the event, instructions for an athlete, a coach, a parent, second tournament official, etc.
- C. Introduce him/her to:
  1. Athletic trainer, if one is available.
  2. Participating coaches.
  3. Physicians traveling with the competing teams, if any.

### III. FAMILIARIZE YOURSELF AND THE TOURNAMENT PHYSICIAN WITH THE FOLLOWING MSHSAA POLICIES

- A. The tournament physician's relationship to:
1. Athletic trainers -- The tournament physician's opinion shall always supersede that of an athletic trainer.
  2. Physician traveling with a competing team.
    - a. If the coach wishes, he/she may have such a "team physician" attend to his/her player. Such a "team physician" must be seated near the team bench if he/she is to do the initial examination of an injured athlete.
    - b. If such a "team physician" is seated elsewhere, the tournament physician shall be the first responder with the athlete, and then at an appropriate and convenient time, turned over to the "team physician."
    - c. Teams should be alerted to the requirement that any "team physician" they bring with them must be identified and introduced to the tournament manager, tournament physician and contest officials.
    - d. To avoid creating any situation in which the tournament physician and "team physician" might be in disagreement as to whether or not an athlete can continue to competition, the decision will be made by the tournament physician.
- B. Tournament physician's responsibility and authority:
1. Basic purpose of having a tournament physician in attendance is to:
    - a. Render medical assistance.
    - b. Render medical judgments regarding whether or not athletes should be allowed to continue to participate.
  2. When an athlete is taken from a competition site to a hospital/off-site medical facility for diagnosis/treatment due to injury or illness, a MSHSAA "Return to Competition" form signed by the attending off-site physician must be received at the competition site for the athlete to be permitted to return to competition in the same tournament or contest. The designated tournament medical professional shall have the final judgment and shall make the final determination on return to competition situations.
  3. In some cases, it may be necessary to defer final judgment regarding further participation for a given athlete to the next attending tournament physician whether it is in another session of the same tournament or in a subsequent tournament.  
*NOTE: It is imperative that the tournament physician notify the tournament manager and/or the MSHSAA staff member in attendance of the need for future physician examination of an athlete before continued participation. It is highly desirable that details be provided any subsequent tournament physician in writing by the original tournament physician.*
  4. Before leaving a tournament, or an individual tournament session, a tournament physician should notify the MSHSAA personnel on hand and/or tournament manager of any significant injuries he/she has attended to. Written records of such injuries should be kept and should include the following information:
    - a. Number and/or name of injured athlete and school.
    - b. Nature of the injury.
    - c. Treatment given.
    - d. Instructions given and to whom:
      - 1) Coach.
      - 2) Athlete.
      - 3) Parent.
  5. Tournament managers might wish to provide visiting schools with emergency telephone numbers and/or physician's names for use during off hours in the event they find themselves in need of medical attention, prescription medicines, etc.
  6. The designated medical professional (physician or ATC) onsite at MSHSAA state events determines if a student-athlete is able to return to the same competition.

## SECTION 5: SECURING MEDICAL OPINIONS WHEN RETURNING TO COMPETITION DURING THE REGULAR SEASON

From time-to-time, athletic injuries will occur that are either unique or outside the general area(s) of expertise of the first attending physician. In such cases, the athlete and/or his/her parents may wish to ask for a second opinion regarding the return of their son/daughter to competition. The following guidelines are designed to assist member schools and coaches in those schools in dealing with such cases.

- I. Usually one opinion is all that is needed. It is best if the physician involved is the family physician or one he/she has recommended if the injury is outside his/her area of expertise.
- II. If a second medical opinion is desired, the first physician should be so informed by the parents or legal guardian. The physician selected should be one who has appropriate specialty training with experience with the type of medical problem involved.

- III. The ultimate responsibility for deciding whether or not an athlete returns to competition rests with the parents or legal guardian. This includes which physician's advice to follow if there is a divergence of opinions between physicians.
- IV. Member schools are strongly urged to make their position on such questions a matter of written record.
- V. If a tournament physician has been designated, he/she shall have the final judgment on returning to that competition and his/her decision cannot be over-ruled.

## SECTION 6: MSHSAA POLICY ON SUBSTANCE ABUSE

### MODEL TO SET STANDARDS FOR MOOD-ALTERING CHEMICALS

#### STATEMENT OF PHILOSOPHY

It is the philosophy of the MSHSAA and its member schools that students should be encouraged and supported in their efforts to develop and maintain a chemical-free lifestyle.

The MSHSAA and its member schools recognize the use of mood-altering chemicals as a significant health problem for many students, resulting in negative effects on behavior, learning and the total development of each individual.

The MSHSAA has adopted the following NFHS position statement on the use of drugs, medicine, and food supplements: "School personnel and coaches should not dispense any drug, medication or food supplement except with extreme caution and in accordance with policies developed in consultation with parents, health-care professionals and senior administrative personnel of the school or school district. Use of any drug, medication or food supplement is a way not prescribed by the manufacturer should not be authorized or encouraged by school personnel and coaches. Even natural substances in unnatural amounts may have short-term or long-term negative health effects. In order to minimize health and safety risk to students-athletes, maintain ethical standards and reduce liability risks, school personnel and coaches should never supply, recommend or permit the use of any drug, medication or food supplement solely for performance-enhancing purposes."

The MSHSAA and its member schools believe the close contact of coaches, advisors and students in the classroom or activities provide a unique opportunity to observe, confront and assist one another.

#### STATEMENT OF PURPOSE

The purpose of the chemical awareness program of TARGET: Missouri is to:

1. Emphasize concerns for the health of students in areas of safety while participating in activities and the long-term physical and emotional effects of chemical use on their health.
2. Promote a sense of order and discipline among students.
3. Confirm and support existing state laws which restrict the use of such mood-altering chemicals.
4. Establish standards of conduct for those students who are leaders and standard-bearers among their peers.
5. Assist students who desire to resist peer pressure that directs them toward the use of mood-altering chemicals.
6. Assist students who should be referred for assistance or evaluation regarding their use of mood-altering chemicals.

A Code of Conduct Recognizing the diversity of its member schools, the MSHSAA recommends that a Code of Conduct incorporate the following:

1. Philosophy: Specify the philosophy and basis for recommending a code of conduct.
2. Purpose for Establishing Rules: State the reasons for setting standards and the educational rationale for assisting students through such standards.
3. Defining the Rule: Incorporate the mood-altering chemicals to be included; the time during which the students are responsible for the rules.
4. Specifying the Consequences for Violations of the Rule: Define the activities for which the student is ineligible, the length of time and events which apply to each violation, and the responsibilities of the student during those periods.
5. Develop the Procedures for Due Process: Specify the procedures by which the school officials will investigate reported violations of the rules and apply the consequences for confirmed violations.
6. A Code of Conduct would define the time during which the rule is in effect, include the parameters of use, possession, intent to buy or sell, transmit, etc., and the consequences of a violation.

## **SAMPLE CODE & RULE**

### **SAMPLE RULE FOR A MODEL CODE OF CONDUCT**

A sample of a rule which incorporates the standards cited above could read:

"Regardless of the quantity, a student shall not: (1) use a beverage containing alcohol, (2) use tobacco; or (3) use or consume, have in possession, buy, sell or give away any other controlled substance."

### **SAMPLE OF CONSEQUENCES FOR VIOLATIONS OF THE RULE**

Consequences for rule violations should incorporate the following standards:

1. A Standard of Certainty: An expectation by those to be affected by the rule that it will be applied with a measure of consistency and uniformity to all involved.
2. A Standard of Severity: An expectation that the consequences for the violation are fair for the act committed and that those affected will be encouraged to follow through with the consequences, including coaches, students, and parents.
3. A Standard of Promptness: An expectation that the due process will promptly be applied following an alleged violation.

## **SECTION 7: INFECTIOUS DISEASE POLICY and COMMUNICABLE AND SKIN INFECTION PROCEDURES**

### **BLOOD-BORNE INFECTIOUS DISEASES**

The MSHSAA Board of Directors has adopted the following policy in an effort to minimize the possibility of any transmission of HIV and the resulting Acquired Immune Deficiency Syndrome (AIDS). Although the policy was originally written with the sport of wrestling in mind, it is applicable for all sports. The MSHSAA Board of Directors also strongly recommends that each school adopt a similar policy to apply to any situation in which an injury might occur which results in bleeding may occur. Such injuries are most likely to occur in physical education classes, athletic practice sessions, and contests. Therefore, it is extremely important that teachers, coaches, and referees follow the procedures outlined in the policy and be cognizant that any time there is blood present that it be treated with respect regarding its ability to transmit infectious diseases.

Health-care workers, including doctors and athletics trainers, who care for student-athletes should employ the universal precautions currently recommended by Centers for Disease Control in the care of all athletes, since medical history and examination cannot reliably identify patients infected with HIV:

#### **The universal precautions when BLEEDING occurs include:**

1. Routine use of barrier precautions to prevent skin and mucous-membrane exposure when contact with blood or other body fluids is anticipated. Gloves should be worn for touching blood, bloody fluids, mucous membranes or nonintact skin (e.g., abrasions, dermatitis) of all athletes for handling items or surfaces soiled with blood or body fluids, and for performing venipuncture. Gloves should be changed after contact with each student-athlete. Masks and protective eye wear or face shields should be worn during procedures that are likely to generate droplets of blood or other body fluids to prevent exposure of mucous membranes of the mouth, nose, and eyes.
2. Hands and other skin surfaces should be washed immediately and thoroughly if contaminated with blood and other body fluids. Hands should be washed immediately after gloves are removed.
3. Surfaces contaminated with blood should be cleaned with a solution made from a one-to-hundred (1:100) dilution of household bleach.
4. Precautions should be taken to prevent injuries caused by needles, scalpels and other sharp instruments or devices. To prevent needle stick injuries, needles should not be recapped, purposely bent or broken by hand, removed from disposable syringes, or otherwise manipulated by hand.
5. Although saliva has not been implicated in HIV transmission, to minimize the need for emergency mouth-to-mouth resuscitation, mouthpieces, resuscitation bags or other ventilation devices should be available for use.
6. Health-care workers who have exudative lesions or weeping dermatitis should refrain from all direct patient care until the condition resolves.
7. Soiled linen should be bagged and washed in hot water with detergent.
8. In the athletics environment, universal guidelines should be considered in the immediate control of bleeding and when handling bloody dressings, mouth guards and other articles containing bodily fluids. Member institutions should ensure that policies exist for the orientation and education of all health-care workers on the prevention of transmission of HIV and the need for routine use of the above universal precautions. Additionally, provision of equipment and supplies necessary to minimize the risk of infection, as well as the monitoring of adherence to recommended protective measures, need to be guaranteed.



In the area of interscholastic activities, some alarm has been expressed regarding the presence of HIV in sweat, saliva and bleeding from minor injuries. Some important things to remember are:

1. At this time, it is uncertain that the AIDS virus is transmitted by either saliva or sweat. Therefore, efforts need to be concentrated in the area of the minor injuries that result in bleeding.
2. Proper handling of these situations by coaches, officials and competitors will greatly reduce the possibility of any transmission of AIDS, if indeed the athlete who is bleeding is infected by the disease.
3. The possibility of transmitting AIDS in this manner is much less than the possibility of transmitting other very dangerous blood-borne viral infections such as Hepatitis B.
4. However, the chance of transmitting the AIDS virus is not zero. Therefore, precautions should be taken to insure that no transmission can occur.
5. If an athlete sustains a minor bleeding problem -- and most bleeding problems in sports result from minor injuries in the nose area -- the contest should be stopped, the bleeding stemmed, and any blood on the playing surface should be wiped off using a disinfectant such as Clorox, in a 100 to 1 solution (100 parts water and one part disinfectant). This same solution should be used to wipe any blood off the opponent's skin. However, the area should then be rinsed with water to avoid either participant getting the disinfectant in his eyes. It should be noted that there are also many other disinfectants that are very successful in combating HIV such as isopropyl alcohol. If any of the blood has gotten on the opponent's uniform, unless the opponent has an open cut or unskinned area on his body, it is not necessary to clean the uniform at this point. If there is an open cut or unskinned areas then the uniform should be wiped with the disinfectant solution and then thoroughly rinsed with water to avoid either participant getting the disinfectant in his eyes. If an official should get blood on himself, he should do the same as the competitors -- use the disinfectant solution to wipe the area of the blood.

**NOTE:** Disposable towels should be used in all clean up and then placed in a sealed container near the mat. Also, extreme care should be used in disposing of cotton used to stem bleeding.

#### **COMMUNICABLE DISEASE AND SKIN INFECTION PROCEDURES**

While the risk for blood-borne infectious diseases, such as HIV/Hepatitis B, remains low in sports, proper precautions are needed to reduce the risk of spreading diseases. Along with these issues are skin infections that occur due to skin contact with competitors and equipment.

**Note:** *Infectious skin diseases include those caused by Staphylococcus aureus (Staph infections) and by methicillin-resistant Staphylococcus aureus (MRSA), which are more difficult to treat.*

#### **The universal hygiene protocol for all sports:**

Shower immediately after all competition and practice.

Wash all workout clothing after practice.

Wash personal gear, such as knee pads, periodically.

Don't share towels or personal hygiene products with others.

Refrain from cosmetic shaving.

#### **Infectious Skin Diseases:**

Means of reducing the potential exposure to these agents include:

- Notify guardian, athletic trainer and coach of any lesion before competition or practice. Athlete must have a health-care provider evaluate lesion before returning to competition.
- If an outbreak occurs on a team, especially in a contact sport, consider evaluating other team members for potential spread of the infectious agent.
- Follow NFHS or state/local guidelines on "time until return to competition." Allowance of participation with a covered lesion can occur if approved by health-care provider and in accordance with NFHS, state or local guidelines.

#### **Blood-Borne Infectious Diseases:**

Means of reducing the potential exposure to these agents include:

- Bleeding must be stopped immediately and all wounds covered. All blood-soaked clothing must be removed before continuing competition or practice. Contaminated clothing must be cleaned before using again.
- Athletic trainers or caregivers need to wear gloves and take other precautions to prevent blood-splash from contaminating themselves or others.
- Immediately wash contaminated skin or mucous membranes with soap and water.
- Clean all contaminated surfaces and equipment with disinfectant before returning to competition. Be sure to use gloves with cleaning.
- Any blood exposure or bites to the skin that break the surface must be reported and evaluated by a medical provider immediately.

## SECTION 8: DISPENSING DRUGS, MEDICINE & FOOD SUPPLEMENTS

A number of individuals have contacted the MSHSAA office inquiring as to what the legal ramifications are for coaches who dispense tablets of one kind or another. The Sports Medicine Advisory Committee was asked for their reaction to this type of practice in general. It was their feeling that the MSHSAA should do everything it can to discourage the dispensing of any substances. It is the Committee's recommendation that the MSHSAA adopt the position that no substances should be dispensed without the approval of a physician. The MSHSAA has adopted the following NFHS position statement on the use of drugs, medicine, and food supplements: "School personnel and coaches should not dispense any drug, medication or food supplement except with extreme caution and in accordance with policies developed in consultation with parents, health-care professionals and senior administrative personnel of the school or school district. Use of any drug medication or food supplement in a way not prescribed by the manufacturer should not be authorized or encouraged by school personnel and coaches. Even natural substances in unnatural amount may have short-term or long-term negative effects. In order to minimize health and safety risks to student-athletes, maintain ethical standards and reduce liability risks, school personnel and coaches should never supply, recommend or permit the use of any drug, medication or food supplement solely for performance-enhancing purposes."

## SECTION 9: HYPOTHERMIA AND ATHLETES

### **Purpose of Statement**

Educate coaches and student athletes on:

1. What hypothermia is.
2. Why hypothermia is important.
3. When hypothermia is most likely to occur.
4. Signs and symptoms of hypothermia.
5. Simple measure to prevent and treat hypothermia.

### **Definition**

Hypothermia is a subnormal body temperature that occurs when the heat production of the body falls below the heat loss of the body. This subnormal body temperature results in generalized decreased body functions. The athlete who is engaged in prolonged athletic activity in a cool or cold environment is at risk to develop this serious condition.

### **Importance of Hypothermia Recognition**

Lack of recognition and correction of increasing hypothermia can lead to a medical emergency in which an athlete can develop shock and loss of consciousness. In a more practical day-to-day application, hypothermia results in decreased athletic performance. As little as 2OF drop in body temperature can impair athletic performance. The decreasing athletic performance results from loss of coordination, amnesia, shivering and euphoria that develop as a body cools to subnormal temperatures.

### **When Hypothermia Occurs**

Hypothermia is most likely to occur on cool, windy, damp or rainy days. A cool day that becomes cooler while the athletic event is going on also increases the risk of developing hypothermia. Dehydration and exhaustion are major factors in developing hypothermia. The post game period is a special high period for developing hypothermia. At the high school level, football, soccer, cross country, track and baseball are the high-risk sports.

### **Signs and Symptoms of Hypothermia**

#### **Early hypothermia:**

1. Appearance of intoxication (Slurred speech, loss of coordination).
2. Euphoria.
3. Shivering (which is an attempt of the body to raise its temperature).
4. Amnesia
5. Slowing of pulse.

#### **Intermediate Hypothermia:**

1. Lethargy
2. Muscle weakness
3. Disorientation
4. Shivering may stop
5. Hallucinations
6. Combativeness
7. Occasional undressing and resistance to being covered, secondary to temperature regulatory center getting false messages.

**Severe Hypothermia:**

1. Loss of consciousness.
2. Shock.

**Prevention and Treatment**

Prevention and awareness are the keys to dealing with hypothermia. The following is a list of suggestions in dealing with hypothermia.

1. Be aware of weather conditions, recognizing cool, windy, damp or rainy days with falling temperatures as the most important factors.
2. Keep the athlete well hydrated before, during and after the event.
3. Recognize wet clothing next to the body as a major factor in increasing changes of hypothermia.
4. Availability of dry clothing is important to prevention and treatment.
5. Protect athletes from wind when not actively involved in competition to slow cooling.
6. If symptoms of hypothermia occur, get the athlete to a warm area, get wet clothes off, dress in warm clothes and/or blankets and give warm fluids.
7. Athletes with hypothermia that do not respond to basic treatment outlined above, should be seen by a physician as soon as possible.

**Conclusion**

Fall and spring weather conditions may make high school athletes prime candidates for developing hypothermia. Not only does hypothermia decrease athletic performance, but, left unchecked, it can lead to a serious medical emergency. Awareness and prevention are the keys to eliminating hypothermia. (Reprinted with permission of Ronald L. Harms, M.D. Shawano and WIAA Office)

## SECTION 10: GUIDELINES FOR AVOIDING HEAT-RELATED PROBLEMS DURING PRACTICE AND CONTESTS

**Note:** *It is recommended that MSHSAA member host schools develop an emergency action plan for heat-related and injury situations at all athletic venues.*

- I. The National Weather Bureau, on its radio station, broadcasts an hourly heat index reading. It is strongly recommended that all schools use this service to make judgments about athletic contests. Basically, precautionary measures should be taken when the heat index is between 95 and 105 degrees. Over 105 degree heat index indicates a significant danger level (see Appendix G).
  - A. The following procedures should be followed for athletic contests scheduled during the day in hot weather:
    1. The National Weather Service, that is broadcast every hour, should be checked at 1:00 p.m. on the day before a game, as well as one hour before the scheduled start of the contest.
    2. If heat index is stated between 95 and 105 degrees, plans should be implemented to alter game conditions for both schools.
    3. If heat index is stated over 105 degrees, plans to postpone or reschedule athletic contest should be implemented (both schools).
  - B. The following procedures should be followed for athletic contests scheduled during the evening in hot weather:
    1. The National Weather Service, that is broadcast every hour, should be checked three (3) hours before schedule contest.
    2. If a heat index between 95 and 105 degrees is stated, plans should be implemented to alter game conditions that day (both schools).
    3. If a heat index over 105 degrees is stated, plans to postpone or reschedule athletic contest should be implemented (both schools).
  - C. The following procedures should be considered for practice sessions when a dangerous heat index level is indicated:
    1. Possible cancellation of all practice.
    2. Shorter practice time.
    3. Early morning or late evening practice.
    4. Move outside practice sessions indoors.

- II. A combination thermometer may be obtained at most hardware stores. These can be used and kept on the fields to indicate wet bulb globe readings. A radio weather cube is obtainable at most radio shops. This can be kept in the Athletic Office and as mentioned, hourly heat index readings are available. Also, weather alerts are given when indicated.
- III. It is recommended that a weight chart be kept for each individual athlete and posted in the locker room or available area. Each athlete should weigh in at the beginning of each practice session and weigh out at the end of each practice session. The percentage of weight loss should be calculated. A weight loss greater than three (3) percent should indicate potential danger of excessive loss of body fluids during the practice sessions and accordingly, adequate fluid replacement should be maintained throughout the remainder of that day. Greater than five (5) percent weight loss indicates the possibility and significant danger of developing a heat-related illness.
- IV. It must be instilled in the athletes by the coaches that water and salt replenishment is a continual process and not a "stop-gap maneuver." Athletes should be encouraged during hot weather to drink adequate quantities of fluid throughout the day at home, as well as at practice sessions. During practice sessions, water should be available to them at all times. Obviously, the hotter, more humid weather indicates more frequent water breaks. This can be scheduled either up to every ten (10) to fifteen (15) minutes during extremes or if applicable, free water intake should be allowed during the entire practice session.

Salt replacement is also a daily process and the athletes should be encouraged to adequately salt their foods during all meals. **It is not advised to use salt tablets at any time.**

These can actually cause more danger, as they cause more concentrations in the stomach and can lead to nausea, vomiting and stomach problems. Salted solutions may be given during practice sessions but certainly water is adequate.

- V. It is recommended that practice sessions during middle and late August be scheduled as much as possible during the early morning hours and late evening hours. For example, 8 o'clock practice in the morning and 6:00 p.m. practices seem to be advisable. When more than one practice session per day is encountered, sufficient recovery time should be observed between sessions.
- VI. It is recommended that during hot weather in game situations several heat breaks be called in addition to any other time-outs. It is recommended that at least three (3) breaks per quarter be done by the officiating crew. (For Football).
- VII. Heat disorders may be classified as heat cramps, heat syncope, heat exhaustion and heat stroke.

\*\*These Guidelines were adopted by the St. Louis Suburban Athletic Conference for their member schools effective 1985-86 school year with the cooperation of Dr. Charles Mannis and Dr. Benji Boonshaft. The guidelines have been edited by the MSHSAA.

## **Heat Stress and Athletic Participation**

### **Frederick O. Mueller, Ph.D.**

Early fall football, cross country, soccer and field hockey practice are conducted in very hot and humid weather in many parts of the United States. Due to the equipment and uniform needed in football, most of the heat problems have been associated with football. Under such conditions the athlete is subject to:

**Heat Cramps** -- Painful cramps involving abdominal muscles and extremities caused by intense, prolonged exercise in the heat and depletion of salt and water due to profuse sweating.

**Heat Syncope** -- Weakness, fatigue and fainting due to loss of salt and water in sweat and exercise in the heat. Predisposes to heat stroke.

**Heat Exhaustion (Water Depletion)** -- Excessive weight loss, reduced sweating, elevated skin and core body temperature, excessive thirst, weakness, headache, and sometimes unconsciousness.

**Heat Exhaustion (Salt Depletion)** -- Exhaustion, nausea, vomiting, muscle cramps, and dizziness due to profuse sweating and inadequate replacement of body salts.

**Heat Stroke** -- An acute medical emergency related to thermoregulatory failure. Associated with nausea, seizures, disorientation, and possible unconsciousness or coma. It may occur suddenly without being preceded by any other clinical signs. The individual is usually unconscious with a high body temperature and a hot dry skin (heat stroke victims, contrary to popular belief, may sweat profusely).

It is believed that the above mentioned heat stress problems can be controlled provided certain precautions are taken. According to the American Academy of Pediatrics Committee on Sports Medicine, heat related illnesses are all preventable. (Sports Medicine: Health Care for Young Athletes, American Academy of Pediatrics, July 2000). The following practices and precautions are recommended:

1. Each athlete should have a physical examination with a medical history when first entering a program and an annual health history update. History of previous heat illness and type of training activities before organized practice begins should be included. State high school associations recommendations should be followed.
2. It is clear that top physical performance can only be achieved by an athlete who is in top physical condition. Lack of physical fitness impairs the performance of an athlete who participates in high temperatures. Coaches should know the PHYSICAL CONDITION of their athletes and set practice schedules accordingly.
3. Along with physical conditioning the factor of acclimatization to heat is important. Acclimatization is the process of becoming adjusted to heat and it is essential to provide for GRADUAL ACCLIMATION TO HOT WEATHER. It is necessary for an athlete to exercise in the heat if he/she is to become acclimatized to it. It is suggested that a graduated physical conditioning program be used and that 80% acclimatization can be expected to occur after the first 7-10 days. Final stages of acclimatization to heat are marked by increased sweating and reduced salt concentration in the sweat.
4. The old idea that water should be withheld from athletes during workouts has NO SCIENTIFIC FOUNDATION. The most important safeguard to the health of the athlete is the replacement of water. Water must be on the field and readily available to the athlete at all times. It is recommended that a minimum 10-minute water break be scheduled for every half hour of heavy exercise in the heat. Athletes should rest in a shaded area during the break. **WATER SHOULD BE AVAILABLE IN UNLIMITED QUANTITIES.**
5. Check and be sure athletes are drinking the water. Replacement by thirst alone is inadequate. Test the air prior to practice or game using a wet bulb, globe, temperature index (WBGT index) which is based on the combined effects of air temperature, relative humidity, radiant heat and air movement. The following precautions are recommended when using the WBGT Index: (ACSM's Guidelines for the Team Physician, 1991)

Below 64 - Unlimited activity  
 65-72 - Moderate risk  
 74-82 - High risk  
 82 Plus - Very high risk

6. There is also a weather guide for activities that last 30 minutes or more (Fox and Matthew, 1981) which involves knowing the relative humidity and air temperature (RH = RELATIVE HUMIDITY):

AIR TEMP	DANGER ZONE	CRITICAL ZONE
70 F	80% RH	100% RH
75 F	70% RH	100% RH
80 F	50% RH	80% RH
85 F	40% RH	68% RH
90 F	30% RH	55% RH
95 F	20% RH	40% RH
100 F	10% RH	30% RH

One other method of measuring the relative humidity is the use of a sling psychrometer, which measures wet bulb temperature. The wet bulb temperature should be measured prior to practice and the intensity and duration of practice adjusted accordingly. Recommendations are as follows:

Under 60 F	Safe but always observe athletes
61-65 F	Observe players carefully
66-70 F	Caution
71-75 F	Shorter practice sessions and more frequent water and rest breaks
75+ F	Danger level and extreme caution

7. Cooling by evaporation is proportional to the area of skin exposed. In extremely hot and humid weather reduce the amount of clothing covering the body as much as possible. NEVER USE RUBBERIZED CLOTHING.
8. Athletes should weigh each day before and after practice and WEIGHT CHARTS CHECKED. Generally a 3-percent weight loss through sweating is safe and over a 3-percent weight loss is in the danger zone. Over a 3-percent weight loss the athlete should not be allowed to practice in hot and humid conditions. Observe the athletes closely under all conditions. Do not allow athletes to practice until they have adequately replaced their weight.
9. Observe athletes carefully for signs of trouble, particularly athletes who lose significant weight and the eager athlete who constantly competes at his/her capacity. Some trouble signs are nausea, incoherence, fatigue, weakness, vomiting, cramps, weak rapid pulse, visual disturbance and unsteadiness.
10. Teams that encounter hot weather during the season, through travel or following an unseasonably cool period, should be physically fit but will not be environmentally fit. Coaches in this situation should follow the above recommendations and substitute more frequently during games.
11. Know what to do in case of such an emergency and have your emergency plans written with copies to all your staff. Be familiar with immediate first aid practice and prearranged procedures for obtaining medical care, including ambulance service.

**Heat Stroke:** THIS IS A MEDICAL EMERGENCY-DELAY COULD BE FATAL. Immediately cool body while waiting transfer to a hospital. Remove clothing and place ice bags on the neck, in the axilla (armpit), and on the groin areas. Fan athlete and spray with cold water to enhance evaporation.

**Heat**

**Exhaustion:** OBTAIN MEDICAL CARE AT ONCE. Cool body as you would for heat stroke while waiting for transfer to a hospital. Give fluids if athlete is able to swallow and is conscious.

**Summary:** The main problem associated with exercising in hot weather is water loss through sweating. Water loss is best replaced by allowing the athlete unrestricted access to water. Water breaks two or three times every hour are better than one break an hour. Probably the best method is to have water available at all times and to allow the athlete to drink water whenever he/she needs it. Never restrict the amount of water an athlete drinks, and be sure the athletes are drinking the water. The small amount of salt lost in sweat is adequately replaced by salting food at meals. Talk to your medical personnel concerning emergency treatment plans.

## SECTION 11: REDUCING BRAIN AND SPINAL INJURIES IN FOOTBALL

**Frederick O. Mueller, Ph.D., University of North Carolina at Chapel Hill**

Head and neck injuries in football have been dramatically reduced since the rules were changed in 1996 regarding blocking and tackling.

Generally, about 3-5% of the injuries experienced by participants in athletics are concussions, e.g., temporary dizziness, confusion, nausea, headaches, and perhaps unconsciousness. Concussions are given grades from Grade 1 (a hit that dazes for a few minutes) to Grade 3 (Unconscious). No concussion should be dismissed as minor until proven so by medical personnel. The task is to be sure that the athlete no longer has any post concussion symptoms at rest and exertion before returning to competition. What is now called "the second impact syndrome" with its high rate of morbidity if not mortality, is the result of returning to play too soon.

Several suggestions for continued reducing brain and spinal injuries follow:

1. Preseason physical exams for all participants. Identify during the physical exam those athletes with a history of previous brain or spinal injuries. If the physician has any questions about the athlete's readiness to participate the athlete should not be allowed to play.
2. A physician should be present at all games and practices. If it is not possible for a physician to be present at all games and practice sessions, emergency measures must be provided. The total staff should be organized in that each person will know what to do in case of a brain or spinal injury in game or practice. Have a plan ready and have your staff prepared to implement that plan. Prevention of further injury is the main objective.
3. Athletes must be given proper conditioning exercises which will strengthen their neck muscles in order for

them to be able to hold their heads firmly erect when making contact. Strong neck muscles may help prevent neck injuries.

4. Coaches should drill the athletes in the proper execution of the fundamentals of the football skills, particularly blocking and tackling. **KEEP THE HEAD OUT OF FOOTBALL.**
5. Coaches and officials should discourage the players from using their heads as battering rams. The rules prohibiting spearing should be enforced in practice and games. The players should be taught to respect the helmet as a protective device and that the helmet should not be used as a weapon.
6. All coaches, physicians and athletic trainers should take special care to see that the players' equipment is properly fitted, particularly the helmet.
7. Strict enforcement of the rules of the game by both coaches and officials will help reduce serious injuries. When a player has experienced or shown signs of brain trauma (loss of consciousness, visual disturbances, headache, inability to walk correctly, obvious disorientation, memory loss) he/she should receive immediate medical attention and should not be allowed to return to practice or game without permission from the proper medical authorities. Coaches should encourage players to let them know if they have any of the above mentioned symptoms (that can't be seen by others, such as headaches) and why it is important. Both athletes and their parents should be warned of the risks of injuries. Coaches should not be hired if they do not have the training and experience needed to teach the skills of the sport and to properly train and develop the athletes for competition.

**Following is a list of Post Concussion Signs/Symptoms**

Depression	Numbness/tingling
Dizziness	Poor Balance
Drowsiness	Poor Concentration
Excess Sleep	Ringing in the ears
Fatigue	Sadness
Feel "in fog"	Sensitive to Light
Headache	Sensitivity to Noise
Irritability	Trouble falling asleep
Memory Problems	Vomiting
Nervousness	Nausea

**SECTION 12: FOOTBALL HELMET INSPECTION LIST**

**SUSPENSION STYLE**

- Check hardware, i.e., screws or rivets are loose/missing.
- Check webbing for tears in threads, stretching, or pulling away at rivet locations.
- If crown webbing is adjustable, check that crown rope is properly adjusted and is tied tightly using a square knot.
- Check interior padding for proper placement and condition.

**PADDED STYLE**

- Foam/Air/Liquid
- Check foam padding for proper placement and any deterioration.
- Check for cracks in vinyl/rubber covering of air, foam, liquid padded helmets.
- Check that protective system or foam padding has not been altered or removed.
- Check for proper amount of inflation in air padded helmets. Follow manufacturer's recommended practice for adjusting air pressure at the valves.
- Check all rivets, screws, Velcro and snaps to assure they are properly fastened and holding protective parts.

1. All helmets must display a current NOCSAE seal of approval.
2. Check helmet fit for agreement with manufacturer's instructions and procedures.
3. Examine shell for cracks particularly noting any cracks around holes (where most cracks start) and replace any that have cracked. **DO NOT USE A HELMET WITH A CRACKED SHELL.**
4. Examine all mounting rivets, screws, Velcro and snaps for breakage, distortion and/or looseness. Repair as

necessary.

5. Replace face guards if bare metal is showing, there is a broken weld or if guard is grossly misshapen.
6. Examine for helmet completeness, and replace any parts which have become damaged, such as sweatbands, nose snubbers and chin straps.
7. Replace jaw pads when damaged. Check for proper installation and fit.
8. Examine chin strap for proper adjustment, and inspect to see if broken or stretched out of shape; also inspect the hardware to see if it needs replacement.
9. Read instructions provided by manufacturer regarding care and maintenance procedures. Always follow these instructions.

**CAUTION:** Only paints, waxes, decals or cleaning agents approved by the manufacturer are to be used on any helmet. It is possible to get a severe or delayed reaction by using unauthorized materials, which could permanently damage the helmet shell and affect its safety performance.

**PLAYERS:** Inspect your particular helmet prior to each usage as follows:

If any of the above inspections indicate a need for repair and/or replacement, notify your coach. **This is your responsibility.**

\*NOCSAE Manual

#### **Football Coaches Checklist -- Memory Joggers**

- A. Keep the head up
- B. Discuss risk of injury
- C. Keep the head out of contact
- D. Explain how serious injuries occur
- E. Involve parents in early season meeting
- F. Have a set plan for coaching safety
- G. Clearly explain and demonstrate safe techniques
- H. Provide best medical care possible
- I. Monitor blocking and tackling techniques every day
- J. Repeat drills which stress proper and safe techniques
- K. Admonish and/or discipline users of unsafe techniques
- L. Receive clearance by doctor for athlete to play following head trauma
- M. Stress safety every day
- N. Don't glorify "head hunters"
- O. Support officials who penalize illegal helmet contact
- P. Don't praise or condone illegal helmet contact
- Q. Provide conditioning to strengthen neck muscles
- R. Entire staff must be "tuned in" to safety program
- S. Check helmet condition regularly
- T. Improper technique causes spinal-cord injuries
- U. Helmet must fit properly
- V. Be prepared for a catastrophic injury
- W. The game doesn't need abusive contact
- X. Player safety is your responsibility
- Y. It's a game -- not a job for the players

**MAKE SAFETY A COMMITMENT AND YOUR #1 PRIORITY!!**

## SECTION 13: GUIDELINES FOR INJURIES INCURRED WHILE PARTICIPATING IN ATHLETICS

The recommended guidelines listed below are suggested in the event of a serious injury to an athlete. It is of utmost importance that the coaches involved remain calm and poised and follow the recommendations. The safety and welfare of the injured is imperative. The continuance of the practice session is secondary. The Head Coach is in charge and has the prime responsibility to protect the health and well being of the injured.

1. Keep the injured quiet and as still as possible. Be alert to the possibility of the injured going into shock.
2. Locate the injury to the best of your ability.
3. If it is determined necessary, call for whatever help is needed (ambulance, doctor, etc.). An assistant coach



can do this. It is imperative that accurate directions be given the ambulance and/or doctor as to the location of the injured and how to gain access to the field or building. This will save time which is crucial. All staff members are to be aware of the location of the nearest telephone and have access to it.

4. If it is a back, leg, head or neck injury . . . DO NOT move the injured until a doctor or ambulance arrives and then only with extreme caution under their direction. If in doubt as to the type of injury -- DO NOT MOVE.
5. Head Injury – Return to contact sports following a concussion or other brain injury requires the most careful consideration on the part of the physician. A player who has sustained a concussion should not return to play on the same day. A concussion may occur without loss of consciousness. The persistence of headache following a concussion is the best indication that the player is not ready to return to practice or play. If a player has sustained three concussions in the course of one season of play, his/her participation should be stopped for that season and a thorough evaluation performed before he/she participates in another season of contact sports. If a player has suffered repeated concussions over several seasons of play, serious consideration should be given to terminating his/her participation in contact sports.  
**NOTE:** See Appendix A for the Colorado Medical Society guidelines on "Closed Head Injury in Sport."
6. If breathing has stopped, Cardiopulmonary Resuscitation (CPR) techniques should be applied by a qualified person. If there is vomiting, the injured should be placed on his side to prevent suffocation. Quickly clear the air passages and then continue the CPR techniques.
7. If there is excessive bleeding this should be stopped immediately by applying direct pressure on the wound. Use of pressure points may assist in stopping the bleeding.
8. Notify the parents. Advise them of the situation and inform them whether or not you have called an ambulance. Make arrangements with them to contact a doctor and to either come to the school or meet you at the hospital or doctor's office.
9. Notify the principal of the school and the Building Athletic Coordinator.
10. If the injured is to be taken to the hospital or the doctor's office, the Head Coach or designate should accompany him. A designated person should call ahead and alert the hospital emergency room or the doctor's office. If the injured is to be taken home by his parents, the Head Coach or designated person should make himself available to converse with them regarding details of the injury.
11. Assistant coaches will continue with practice or supervise the dismissal of the rest of the squad. They should react according to the directions of the Head Coach.

#### **EMERGENCY TELEPHONE NUMBERS**

For ANY EMERGENCY CALL: \_\_\_\_\_

Ambulance Service: \_\_\_\_\_

Doctor to be Called: \_\_\_\_\_

Police: \_\_\_\_\_

Fire Department: \_\_\_\_\_

### SECTION 14: PRE-SEASON SPORTS MEDICINE PROGRAM FOR COACHES

Realizing that in most cases the coach will be the only supervisor present at practice and contests, the following program has been developed by the Sports Medicine Advisory Committee of the MSHSAA. It is designed to be used by individual schools (or groups of schools) at a time when coaches are required to attend i.e. as a part of your regular preschool orientation meetings.

The topics covered are considered the minimum knowledge and procedures a coach needs to know to properly handle serious injuries. Without this knowledge, the severity of the injury might be significantly increased by improper action with the obvious devastating results.

The athletic administrator should secure the services of the necessary personnel to conduct this clinic. It is suggested that the clinic be expanded as the local staff and facilities permit.

The clinician should be provided with and/or secure available films and resource materials to aid in the presentation.

#### **OUTLINE**

- A. The following items should be on hand at all practices and contests (use of each to be described by clinician).
1. Air Way
  2. Bolt cutter and/or small carpet blade (Football only)
  3. Crutches
  4. Drinking fluids in adequate amounts
  5. Elastic Wraps, 4" and 6"
  6. Foam Padding, ½" thick for pressure bandage--minimum 4" x 4"
  7. Gauze Pads, 4" x 4" -- sterile
  8. Ice
  9. Jaw Wedge
  10. Scissors, bandage type
  11. Stretcher and spine board (or hook combination)
  12. Splints, minimum 1 arm and 1 leg
  13. Tape, 1½"
  14. Towels-cloth, bath, minimum 2
  15. Sling Psychrometer
  16. Latex gloves
  17. Appropriate body fluid/blood disposal container
  18. "Return to Competition" forms
- B. Emergency procedures form should be posted on the wall at the telephone that is available in each area where an emergency may occur and on the First Aid Kit that includes items from No. 1 above. This form is to furnish the coach the following:
1. Hospital Emergency Room to be used and Phone Number.
  2. Ambulance Service to be used and Phone Number.
  3. School Doctor or a designated doctor, Phone Numbers for home and office in case immediate advice is needed.
  4. Know where the telephone is located and that it works.
- C. When the injury occurs prepare the injured for transportation to physician or Emergency Room by:
- Step 1. If NON-RESPONSIVE (semi or unconscious) check for breathing, pulse and external bleeding.
- a. Check for breathing and pulse. If not breathing--clean airway; assume the worst and initiate C.P.R.
  - b. If bleeding seriously, apply direct sterile pressure and wrap with pressure dressing.
  - c. DO NOT MOVE UNTIL THE SERIOUSNESS OF THE INJURY IS DETERMINED.
- Step 2. If RESPONSIVE determine if the injured is coherent or incoherent by asking four questions about TIME-PLACE-PERSON-PURPOSE, i.e. what quarter is it? Where are we? Name? Why are we here? DO NOT REMOVE UNTIL THE SERIOUSNESS OF THE INJURY IS DETERMINED.
- a. If inappropriate answers are given assume the injured is incoherent and prepare for transportation to physician or Emergency Room:
    1. DO NOT move (victim is probably very active-restrain)
    2. Transport to spine board very carefully. Assume that changing body position will convert an incomplete injury to a complete injury.
    3. Keep under constant observation for shock symptoms.
  - b. If appropriate answers are given and injured is coherent prepare for transportation to physician or Emergency Room by:
    1. Ask injured what is wrong?
    2. Keep under observation if injury could have caused internal bleeding. This is evidenced by a "pasty" appearance, faintly feeling, restless, and anxious behavior. If this occurs, keep prone until transported.
    3. Deformities (dislocations, fractures, and sprains)
      - a. Splint or sling where they lie. Leave deformity in its exact position.
      - b. Attempt no manipulation for any dislocations.
      - c. Apply ice.
- Step 3. DO NOT leave an apparently injured athlete unattended at anytime.

**D. Heat Illness:**

Heat Exhaustion. Weakness with profuse sweating and rapid pulse indicates a state of shock due to the depletion of water and salt. Place person flat on back in the shade with head level or lower than body. Give sips of water if conscious. Obtain medical care at once.

Heat Stroke: Collapse with dry warm skin and rapid weak pulse. THIS IS AN EMERGENCY, DELAY COULD

BE FATAL. Immediately cool the body by the most expedient means and obtain medical care at once.

**E. Physiology:**

1. Emphasize importance of a balanced diet.
2. Avoid sudden and drastic weight changes, i.e. drugs, starving, plastic sweat suits, etc.
3. Conditioning, strength, and flexibility will minimize the incidence and severity of injuries.
4. Athletes must be acclimated to hot weather. Coaches need to be aware of current temperatures and humidity through use of a sling psychrometer and as they gather information they should refer to Chart A below.
5. Avoid fluid deprivation with frequent fluid breaks.  
A knowledge of A, B, C, D, and E above are essential before a coach should be allowed to supervise practices or contests. At this point the clinic may be expanded to include further items of importance to the local school.

## SECTION 15: RULE RESTRICTIONS

(Refer to NFHS Rules Books for specifics in each sport)

### BASEBALL RULES

**RULE 1, SECT. 5, ART 8:** All casts, splints, and braces must be padded (1/2" in thickness). No protective equipment shall have exposed metal or any other hard material. Prostheses may be worn if approved in advance by the MSHSAA.

**RULE 1, SECT. 5, ART 9 and 12:** Any equipment judged by the umpire to be unreasonably dangerous is illegal. Jewelry is prohibited. Medical alert bracelets or medical alert necklaces are not considered jewelry. If worn, they must be taped to the body. A religious medal must be worn under the uniform. A medical alert may be visible.

**RULE 3, SECT. 1, ART 5:** A player who has been rendered unconscious during a game shall not be permitted to resume participation that day without written authorization from a physician.

**RULE 3, SECT. 1, ART 6:** A player or coach who is bleeding or who has an open wound shall be prohibited from participation further in the game until appropriate treatment has been administered. If medical care or treatment can be administered in a reasonable amount of time, the individual would not have to leave the game. The length of time that is considered reasonable is umpire judgment. The reentry rule would apply to players. If there is an excessive amount of blood on the uniform, it must be changed before that individual can participate again.

### BASKETBALL RULES

**RULE 3, SECT. 3, ART 7:** A player who is bleeding, has an open wound, or has any amount of blood on his/her uniform, or has blood on his/her person, shall be directed to leave the game until the bleeding is stopped, the wound is covered, the uniform and/or body is appropriately cleaned, and/or the uniform is changed before returning to competition, unless a time-out is requested by, and granted to, his/her team and the situation can be corrected by the end of the time-out.

**RULE 3, SECT. 3, ART 8:** A player who has been determined apparently unconscious shall not return to play in the game without written authorization from a physician (MD/DO).

**RULE 3, SECT. 5, ART 1:** The referee shall not permit any team member to wear equipment or apparel which, in his or her judgment, is dangerous or confusing to other players or is not appropriate.

**RULE 3, SECT. 5, ART 2:** Guards, casts, braces, and compression sleeves must meet the following guidelines:

- a. A guard, cast or brace made of hard and unyielding leather, plaster, pliable (soft) plastic, metal or any other hard substance may not be worn on the elbow, hand, finger/thumb, wrist or forearm; even though covered with soft padding.
- b. Hard and unyielding items (guards, casts, braces, etc.) on the upper arm or shoulder must be padded.
- c. Knee and ankle braces are permitted but all exposed hinges must be covered. Most over-sleeves recommended by manufacturers are acceptable. These braces may be padded or unpadded.
- d. Must be worn for medical purposes.

**NOTE:** Each state association may authorize the use of artificial limbs which in its opinion are no more dangerous to players than the corresponding human limb and do not place an opponent at a disadvantage.

**RULE 3, SECT. 5, ART 3:** Head decorations, headwear and jewelry.

**Exception:** State associations may on an individual basis permit a player to participate while wearing a head covering if it meets the following criteria:

- a. For medical or cosmetic reasons -- In the event a participant is required by a licensed medical physician to cover his or her head with a covering or wrap, the physician's statement is required before the state association can approve a covering or wrap which is not abrasive, hard, or dangerous to any other player and which is attached in such a way it is highly unlikely that it will come off during play.
- b. For religious reasons -- In the event there is documented evidence provided to the state association that a participant may not expose his or her uncovered head, the state association may approve a covering or wrap which is not abrasive, hard, or dangerous to any other player and which is attached in such a way it is highly unlikely it will come off during play.

**RULE 3, SECT. 5, ART 4:** Equipment which is unnatural and designed to increase a player's height or reach or to gain an advantage shall not be permitted. Equipment and apparel shall not be modified from the original manufactured state and shall be worn in the manner the manufacturer intended it to be worn.

## FOOTBALL RULES

**RULE 1, SECT. 5, ART 2:** The following auxiliary equipment may be worn if sanctioned by the umpire as being soft, nonabrasive, non-hardening material:

- a. Each state association may authorize the use of artificial limbs which in its opinion are no more dangerous to players than the corresponding human limb and do not place an opponent at a disadvantage.
- b. Forearm pads, which may be anchored on each end with athletic tape..
- c. Through the 2011 season, gloves and hand pads, which may be anchored with athletic tape, and even though modified, must have a securely attached label or stamp (NFHS/NCAA specifications) indicating compliance with test specifications on file with the SGMA as of January 1, 1994, unless made of unaltered plain cloth. Beginning in 2012, gloves, which may be anchored with athletic tape, and even though modified, must meet the NOCSAE test standard at the time of manufacture, unless made of unaltered plain cloth.  
*NOTES: 1) A glove is a covering for the hand having separate sections for each finger. Pads worn on the hand, but not having separate sections encircling at least part of any finger are not gloves. The thumb is not considered a finger. 2) Non-athletic gloves, worn solely for warmth and made of unaltered plain cloth, and which do not enhance contact with the ball, do not require a label or stamp indicating compliance.*
- d. Tape, bandage, or support wrap on the hand or forearm to protect an existing injury.  
*EXCEPTION: Tape, bandage or support wrap(s) not to exceed three thicknesses are legal without inspection or approval.*

**RULE 1, SECT. 5, ART 3:** Illegal Equipment. No player shall participate while wearing illegal equipment. This applies to any equipment, which in the opinion of the umpire is dangerous, confusing or inappropriate. Illegal equipment shall always include but is not limited to:

- a. The following items related to the Game Uniform.
  1. Any transverse stripe on the sleeve below the elbow.
  2. Slippery or sticky substance of a foreign nature on equipment, towel, uniform, opponent or on an exposed part of the body which affects the ball or an opponent.
  3. Uniform adornments, with the exception of:
    - a) One unmarked moisture-absorbing white towel, which shall be no less than 4 inches in width and 12 inches in length and no greater than 18 inches in width and 36 inches in length; or
    - b) Moisture-absorbing sweatbands, when worn on the wrist beginning at the base of the thumb and extending no more than 3 inches toward the elbow.
  4. Tear-away jerseys or jerseys that have been altered in any manner than produces a knot-like protrusion or creates a tear-away jersey.
  5. Jerseys and pants that have:
    - a) A visible logo/trademark or reference exceeding 2 ¼ square inches and exceeding 2 ¼ inches in any dimension.
    - b) More than one manufacturer's logo/trademark or reference on the outside of either item. (The same size restriction shall apply to either the manufacturer's log/trademark or reference).
    - c) Sizing, garment care or other non-logo labels on the outside of either item.
- b. The following items related to Pads and Padding:
  1. Hard and unyielding items (guards, casts, braces, etc.) on the hand, wrist, forearm, elbow, or upper arm unless padded with a closed-cell, slow-recovery foam padding no less than ½" thick.
  2. Knee and ankle braces which are altered from the manufacturer's original design/production.  
*NOTE: Knee and ankle braces that are unaltered do not require any additional padding.*
  3. Knee braces worn over the pants.
  4. Rib pads and back protectors unless fully covered by a jersey.

5. Plastic material covering protective pads whose edges are not rounded with a radius equal to half the thickness of the plastic.
  6. Shin guards that do not meet NOCSAE specifications.
- c. The following items related to Other Illegal Equipment:
1. An eye shield attached to the helmet that is not:
    - a) Constructed of a molded rigid material;
    - b) Is not clear without the presence of any tint.
  2. Metal that is projecting or other hard substance on clothes or person.
  3. Ball-colored helmets, jerseys, patches, pads or gloves.
  4. Jerseys, undershirts or exterior arm covers/pads manufactured to enhance contact with the football or opponent.
- d. The following additional items:
1. Jewelry. Religious and medical alert medals are not considered jewelry. A religious medal must be taped and worn under the uniform. A medical-alert medal must be taped and may be visible.
  2. Communication devices, other than those permitted in Rule 1-6-1 and Rule 1-6-2.
- NOTES:** 1) Each state association may authorize the use of a drum by a team composed of deaf or partially deaf players, in order to establish a rhythmic cadence following the ready-for-play signal. 2) Each state association may authorize the use of a hearing instrument to enhance the efficiency of a required hearing aid prescribed by a licensed medical physician (MD/DO), provided it is not dangerous to the wearer or any other player. 3) Such prohibition does not include the use of computers and/or other electronic devices, which produce reports for the purpose of compiling statistics, including those listed in the NFHS Statisticians Manual. However, the use of computers and/or other electronic devices shall be considered illegal if they are used at any time during the game and can be used to produce play tendencies and other scouting information and such information is given to any member of any team prior to the conclusion of the game.

**RULE 3, SECT. 5, ART 10:** A time-out occurs when:

- a. An apparently injured player who is discovered by an official while the ball is dead and the clock is stopped and for whom the ready-for-play signal is delayed, or for whom the clock is stopped. The player shall be replaced for at least one down, unless the halftime or an overtime intermission occurs. These time-outs, if not charged, are an official's time-out.
- b. Any player who exhibits signs, symptoms or behaviors consistent with a concussion (such as loss of consciousness, headache, dizziness, confusion or balance problems) shall be immediately removed from the game and shall not return to play until cleared by an appropriate health-care professional. (Please see NFHS Suggested Guidelines for Management of Concussion). This time-out, if not charged, is an official's time-out.
- c. An official discovers a player who is bleeding, has an open wound, has any amount of blood on his/her uniform, or has blood on his/her person. The player shall be directed to leave the game until the bleeding is stopped, the wound is covered, the uniform and/or body is appropriately cleaned, and/or the uniform is changed before returning to competition. Such player shall be considered an apparently injured player as in Rule 3-5-10a (See NFHS Communicable Disease Procedure).

## **SOCCER RULES**

**RULE 3, SECT. 3, ART. 1:** A team may substitute:

- b. When a player(s) from either team is injured and removed from the field:
  1. A coach or athletic trainer may not enter the field without approval from a referee. During the time a coach or athletic trainer is permitted on the field by the referee to attend to an injured player, coaching instruction shall not be given to any player on either team.
  2. The player(s) who is injured and attended to on the field or who is deemed injured by the referee shall leave the field and may be replaced.
  3. Any player who exhibits signs, symptoms or behaviors consistent with a concussion (such as loss of consciousness, headache, dizziness, confusion, or balance problems) shall be immediately removed from the contest and shall not return to play until cleared by an appropriate health-care professional. (Please see NFHS Suggested Guidelines for Management of Concussion).

**RULE 3, SECT. 3, ART. 2:** Time for substitutions:

- d. When a player is required to leave the field because of communicable disease concerns:
  1. An athlete who is bleeding, has an open wound, has any amount of blood on his/her uniform, or has blood on his/her person, shall be directed to leave the activity until the bleeding has stopped, the wound is covered, the uniform and/or body is appropriately cleaned, and/or the uniform is changed before returning to competition. That player shall leave the field but may be replaced.

**RULE 4, SECT. 1, ART. 1:** Shoes must be worn by all participants in a game:

- j. Shoes with soles containing metal (aluminum, magnesium, titanium, etc.), leather, rubber, nylon, or plastic

cleats, studs, or bars, whether molded as part of the sole or detachable, are allowed as long as the referee does not consider them dangerous or they have been altered in any way creating sharp edges thus rendering them unsafe.

**RULE 4, SECT. 2, ART. 1:** Illegal equipment shall not be worn by any player. This applies to any equipment which, in the opinion of the referee, is dangerous or confusing. Types of equipment which are illegal include the following:

- a. projecting metal or other hard plates, or projections on clothing or person;
- b. head, arm, thigh, or hip pads containing sole leather, fiber, metal or any unyielding materials;
- c. hard and unyielding items (guards, casts, braces, etc.) on the hand, wrist, forearm, elbow, upper arm or shoulder unless covered, and must be padded with a closed-cell, slow-recovery foam padding no less than ½-inch thick.
- d. shin guards which have exposed sharp edges or have been altered;
- e. spectacle guards;
- f. knee and ankle braces which are altered from the manufacturer's original design/production. Knee and ankle braces that are unaltered do not require any additional padding. Ankle braces may be worn outside a stocking;
- g. Helmets, hats, caps, or visors:

**Exception 1:** The goalkeeper may wear a head protector made of closed cell, slow-recovery rubber or other similar material that stays soft in its final form. This head protector shall not have a bill, or other protruding design. It shall not cover the face, other than the forehead, and shall be secured by a chin strap;

**Exception 2:** The goalkeeper may wear a soft-billed baseball type hat or soft-billed visor. If worn in conjunction a head protector, it is to be worn outside and may not be attached to the head protector.

**Exception 3:** By state association adoption, players may wear soft and yielding caps during inclement weather. Caps must be alike in color (Missouri has adopted this exception).

**NOTE:** *The wearing of illegal uniforms or equipment is prohibited even though the coaches of both teams approve it.*

**RULE 4, SECT. 2, ART. 2:** Hair control devices may be worn if made of soft material and not for adornment.

**RULE 4, SECT. 2, ART. 3:** Sweatbands may be worn on the head or wrist if made of soft material.

**RULE 4, SECT. 2, ART. 4:** Jewelry shall not be worn except for religious or medical medals.

- a. A religious medal must be taped and worn under the uniform.
- b. A medical alert must be taped and may be visible.

**RULE 4, SECT. 2, ART. 5:** Artificial limbs, which in the judgment of the State High School Association are no more dangerous to players than the corresponding human limb and do not place an opponent at a disadvantage, may be permitted. Upper limb prostheses and above-knee leg prostheses are discouraged. Hinges shall be lateral and covered by suitable material. All permissible artificial limbs must be padded with a closed-cell, slow recovery foam padding no less than ½-inch thick.

**RULE 4, SECT. 2, ART. 6:** Hearing aids worn in or behind the ears are legal, provided that the device does not create the threat of injury.

**RULE 4, SECT. 2, ART. 7:** A tooth and mouth protector (intraoral), which shall include an occlusal (protecting and separating the bit surfaces) and labial (protecting the teeth and supporting structures) portion and covering the posterior teeth with adequate thickness, is legal. It is recommended that the protector be properly fitted and:

- a. Constructed from a model made from the individual's teeth.
- b. Constructed and fitted to the individual by impressing the teeth into the tooth and mouth protector itself.
- c. The tooth and mouth protector should be of a readily visible color, other than white or clear.

**RULE 4, SECT. 2, ART. 8:** A protective face mask may be worn by a player with a facial injury. The mask may be made of hard material, but must be worn molded to the face with no protrusions. A medical release for the injured player signed by a physician (MD/DO) shall be available at the game site.

## **SOFTBALL RULES**

**RULE 3, SECT. 2, ART. 9:** A pitcher shall not wear any item on the pitching hand, wrist, arm or thighs which may, in the umpire's judgment, be distracting to the batter.

**RULE 1, SECT. 6:** A batting helmet with a permanently affixed NOCSAE stamp and legible exterior warning label is mandatory for each batter, on-deck batter, players/students in the coaches' boxes, runners and retired runners, and non-adult bat/ball shaggers while in live ball area. The batting helmet shall have extended ear flaps which cover both ears and temples. Batting helmets that are broken, cracked, dented, or that have been illegally altered are prohibited from use. All fast-pitch batting helmets shall be equipped with an NOCSAE approved face protector.

**NOTE:** The exterior warning label may be affixed to the helmet in either sticker form or embossed (at the point of manufacture) and must be clearly visible.

**RULE 3, SECT. 2, ART. 11:** Shoes are required equipment. All players must wear shoes with plastic, nylon, canvas, leather or similar synthetic material uppers. The soles may be smooth, have soft or hard rubber cleats, or rectangular metal spikes. Spikes must not extend in excess of 3/4 inch from the sole and may not be round. Shoes with detachable cleats that screw into the sole of the shoes are permitted.

**NOTE:** Metal toe plates and metal cleats are permitted.

**RULE 3, SECT. 3, ART 9:** Any player who has been rendered unconscious or apparently unconscious during a game shall not be permitted to resume participation that day without written authorization from a physician.

**RULE 3, SECT. 3, ART. 10:** A player or coach who is bleeding or who has an open wound shall be prohibited from participation further in the game until appropriate treatment has been administered. If medical care or treatment can be administered in a reasonable amount of time, the individual does not have to leave the game. The length of time that is considered reasonable is umpire judgment. The re-entry rule would apply to players. If there is an excessive amount of blood on the uniform, it must be changed before that individual may participate. (See Communicable Disease Procedures)

## **SWIMMING, DIVING AND WATER POLO RULES**

**RULE 3, SECT. 2, ART. 6:** When it is detected that a competitor is bleeding, has an open wound, has any amount of blood on his/her suit, or has blood on his/her person, he/she shall be directed to leave the activity until the bleeding is stopped, the wound is covered, the suit and/or body is appropriately cleaned, and/or the suit is changed before returning to competition. When this occurs prior to the start of a relay race, the start shall be delayed while the competitor receives proper treatment or is replaced by another legal entry off the relay entry card. Once a relay race begins and blood is detected in the starting area or on a competitor who is not in the water (except the fourth swimmer when in the water), the race shall be stopped. The area and competitor shall be properly treated and the race re-swum after an appropriate recovery period. If the bleeding cannot be stopped, the wound is not properly covered or there is no legal substitute on the relay card, the relay team shall forfeit the race.

**RULE 3, SECT. 2, ART. 7:** A competitor who has been rendered unconscious or apparently unconscious during a meet shall not be permitted to resume participation in that meet without written authorization from a physician (MD/DO).

**RULE 3, SECT. 3, ART. 2:** Competitors shall not wear or use any device to aid their speed or buoyancy. A foreign substance may be applied to the body. The referee shall require a competitor using an excessive amount of a foreign substance to remove it before competing.

**RULE 3, SECT. 3, ART. 3:** A competitor with a disability may use equipment provided, in the judgment of the state association, no advantage is gained. The written approval from the state association must be made available to the referee.

**RULE 3, SECT. 3, ART. 4:** A competitor with a disability requesting specific accommodation(s) in the start, strokes, turns, etc., which does not require equipment, must seek written approval from the state association, which may be granted provided the accommodation(s) does not fundamentally alter the sport and/or no advantage is gained.

**RULE 3, SECT. 3, ART. 5:** A competitor shall not wear illegal attire or jewelry. When it is discovered that any competitor is wearing illegal attire or jewelry prior to the start of the heat/round, he/she shall not be permitted to participate in an event/dive until the illegal attire/jewelry is replaced or removed.

## **TRACK AND FIELD AND CROSS COUNTRY RULES**

**RULE 4, SECT. 5, ART. 8: Note:** The use of an atomizer during competition containing a prescription drug designed to alleviate the asthmatic condition is not considered to be an illegal aid as long as a physician's statement documenting the need of the athlete to use the prescription is presented to the meet director/referee prior to the beginning of the meet (the cross country reference is 9-7-4).

**RULE 6, SECT. 2, ART. 14:** To obtain a better grip in the throwing events, competitors are permitted to use chalk or an adhesive or similar substance such as rosin on their hands during competition.

**Additional Comments:** Use of Adherent Material On Hands May Be Restricted: 6-2-14 **Note** has been expanded to give the games committee the authority to restrict the use of adherents or other foreign materials on the hands, if the host school is supplying all or the throwing implements.

**RULE 6, SECT. 4, ART. 7; RULE 6, SECT. 5, ART. 7; RULE 7, SECT. 5, ART. 21:** Taping of any part of the hands

or fingers shall not be permitted in the discus, shot put, and pole vault event unless there is an open wound that must be protected by tape. Gloves are not permitted; however, a support belt may be worn. Taping of the wrist is permissible. Competitors may use chalk or an adhesive or similar substance such as rosin on their hands during the pole vault competition.

**RULE 9, SECT. 7, ART. 4:** *Note:* Providing liquids during competition is not considered to be an aid or assistance.

## **VOLLEYBALL RULES**

**RULE 4, SECT. 1, ART. 1:** A guard, cast or brace made of hard and unyielding leather, plaster, pliable (soft) plastic, metal or any other hard substance, shall not be worn on the hand, finger, wrist or forearm, even though covered with soft padding.

**RULE 4, SECT. 1, ART. 2:** Hard and unyielding items (guards, casts, braces, etc.) on the elbow, upper arm or shoulder must be padded with a closed-cell, slow-recovery foam padding no less than ½-inch thick. An elbow brace shall not extend more than halfway down the forearm.

**RULE 4, SECT. 1, ART. 3:** Knee and ankle braces, which are unaltered from the manufacturer's original design/production, do not require any additional padding.

**RULE 4, SECT. 1, ART. 4:** Each state association may authorize the use of prostheses which in its opinion are no more dangerous to players than the corresponding human body part(s) and do not place an opponent at a disadvantage.

**RULE 4, SECT. 1, ART. 5:** Any equipment that in the judgment of the first referee increases a player's advantage or presents a safety concern, i.e., towel tucked in uniform waistband, is prohibited.

**RULE 4, SECT. 1, ART. 6:** Hair devices made of soft material or unadorned bobby pins and unadorned flat clips, no longer than 2 inches, may be worn. Hair adornment made of soft material and no more than 2 inches wide may be worn..

**RULE 4, SECT. 1, ART. 7:** Jewelry shall not be worn by players during warm-ups and/or competition.  
c. Medical-alert medals are not considered jewelry and must be taped to the body and alert may be visible.  
d. Religious medals are not considered jewelry and must be worn under the uniform and taped to the body.

**RULE 4, SECT. 1, ART. 8:** Modification of player equipment/accessories or uniform (due to medical, special needs, or religious reason), pending approval, shall require a letter of authorization from the state association and shall be made available to the referees at or prior to the prematch conference.

**RULE 4, SECT. 1, ART. 9:** Players shall not wear body paint or glitter on their hair, face, uniform or body.

**RULE 11, SECT. 4:** Time-outs regarding injury/illness and bleeding.

## **WRESTLING RULES**

**RULE 2, SECT. 2, ART 2:** For safety purposes, the restricted zone for coaches shall be no closer than 5 feet to the edge of the circle.

**RULE 4, SECT. 2, ART 1:** The hair, in its natural state, shall not extend below the top of an ordinary shirt collar in the back; on the side, the hair shall not extend below earlobe level; in the front, the hair shall not extend below the eyebrows.

**RULE 4, SECT. 2, ART 3:** If a participant is suspected by the referee or coach of having a communicable skin disease or any other condition that makes participation appear inadvisable, the coach shall provide current written documentation, as defined by the NFHS or the state associations, from a physician stating that the suspected disease or condition is not communicable and that the athlete's participation would not be harmful to any opponent. This document shall be furnished at the weigh-in for the dual meet or tournament. The only exception would be if a designated on-site meet physician is present and is able to examine the wrestler immediately prior to or after the weigh-in. Covering a communicable condition shall not be considered acceptable and does not make the wrestler eligible to participate. If an individual has a communicable disease, he cannot wrestle regardless of any statement from a physician. Once that disease has reached the non-communicable category then the doctor can grant permission for the wrestler to participate.

**NOTE S:** 1) In Missouri, the "MSHSAA Wrestling Skin Condition Report" form is utilized. Besides physicians, advanced nurse



practitioners and certified physicians in a written collaborative practice with a physician are permitted to evaluate skin conditions and to sign "MSHSAA Wrestling Skin Condition Report" forms provided that the name of the physician with whom there is a collaborative practice also appears on the report form. Furthermore, a doctor's letterhead or a sheet from the doctor's prescription pad shall be attached to the MSHSAA skin form to prove that the athlete has been seen by a doctor. The skin form will not be accepted without this attachment, and the wrestler will not be permitted to wrestle. 2) The administrative manager/director of a wrestling match or tournament hosted by an MSHSAA school is required to send copies of the "MSHSAA Wrestling Skin Condition Report" form in pre-event information to each out of state school.

**RULE 4, SECT. 2, ART 5:** Each contestant who has braces or has a special orthodontic device on their teeth shall be required to wear a tooth and mouth protector. A tooth and mouth protector (intraoral) which shall include an occlusal (protecting and separating the biting surfaces) and a labial (protecting the teeth and supporting structures) portion and covers the teeth and all areas of the braces or special orthodontic device with adequate thickness. This would include upper and lower teeth if devices are present on both. It is recommended that protector be properly fitted and:

- a. Constructed from a model made from an impression of the individual's teeth and braces or special orthodontic device.
- b. Constructed and fitted to the individual by impressing the teeth and braces or special orthodontic device into the tooth and mouth protector itself.

**RULE 4, SECT. 2, ART 5 (NEW):** A contestant may have documentation from a physician only indicating a specific condition such as a birthmark or other non-communicable skin conditions such as psoriasis and eczema, and that documentation is valid for the duration of the season. It is valid with the understanding that a chronic condition could become secondarily infected and may require re-evaluation.

**RULE 4, SECT. 3, ART. 1:** Special equipment is defined as any equipment worn that is not required by rule. Any equipment which does not permit normal movement of the joints and which prevents one's opponent from applying normal holds shall not be permitted. Any equipment which is hard and/or abrasive must be covered and padded. Special equipment includes, but is not limited to, hair coverings, face masks, braces, supports, and eye protection.

**RULE 4, SECT. 3, ART 2:** Artificial limbs, which, in the judgment of the rules administering officials (state association office), are no more dangerous to contestants than the corresponding human limb and do not place an opponent at a disadvantage, may be permitted.

**RULE 4, SECT. 3, ART 3:** All parts of a pad must fit snug against the wrestler's body. Loose pads are prohibited.

**RULE 4, SECT. 3, ART 4:** Taping or strapping which substantially restricts the normal movement of a joint shall be prohibited.

**NOTE:** *The taping of fingers and thumb is not a violation.*

**RULE 4, SECT. 4, ART 3:** At any time the use of sweat boxes; hot showers; whirlpools, rubber, vinyl and plastic type suits; or similar artificial heating devices; diuretics and/or other methods for which weight reduction purposes is prohibited and shall disqualify an individual from competition.

**RULE 4, SECT. 5, ART 2 (NEW):** Wrestling tournaments involving multiple days of competition, at the discretion of the tournament manager, will have the option of allowing wrestlers to weigh-in immediately following the last match of the day/evening for the following day of competition.

**RULE 5, SECT. 5, ART 5:** In order to be granted a 1-pound additional weight allowance, a minimum of 48 hours advance notice is required for the opponent(s). The acceptable person(s) to receive that notice shall be the head coach, principal, or athletic director.

**RULE 6, SECT. 4, ART 4:** Any coach of the contestant or the contestant has the prerogative to default a match to the opponent at any time by informing the referee.

**RULE 7, SECT. 1:** Illegal Holds (see NFHS Wrestling Rules Book).

**RULE 7, SECT. 2:** Potentially Dangerous Holds (see NFHS Wrestling Rules Book).

**RULE 8, SECT. 2, ART 1:** An injured or ill contestant is entitled to a maximum time-out of 1 1/2 minutes, which is cumulative throughout the match, including overtime periods. Time required to treat a pre-existing medical condition or illness is also counted as injury time. There is a limit of two injury time-outs which may be permitted in any match, provided the total time does not exceed 1 1/2 minutes. Time required searching for a contact lens or correct illegal equipment is counted as injury time. The injured wrestler can receive coaching during an injury time-out. If a second

time-out is taken during a regulation period, the opponent shall have the choice of top, bottom, or neutral position on the restart.

- a. If the second injury time-out is taken at the conclusion of the first period, the opponent shall have the choice at the start of the second and third periods.
- b. If the second injury time-out is taken at the conclusion of the second period, the opponent shall have the choice at the start of the third period;
- c. If the second injury time-out is taken at the conclusion of the third period, the opponent shall have the choice of any one of the three starting positions at the beginning of the sudden victory period.
- d. If the second injury time-out is taken any time during the sudden victory period, the opponent shall have the choice of top, bottom, or neutral position on the restart.
- e. If the second injury time-out is taken at the conclusion of the sudden victory period, the opponent shall have the choice of either top or bottom position at the start of both 30-second tiebreaker periods.
- f. If the second injury time-out is taken at the conclusion of the first 30-second tiebreaker period, the opponent shall have the choice of either top or bottom at the start of the second 30-second tiebreaker period.
- g. If the second injury time-out occurs at the conclusion of the second 30-second tiebreaker period, the opponent shall have the choice of top or bottom at the start of the ultimate tiebreaker period.
- h. If the second injury time-out occurs during either of the 30-second tiebreaker periods or during the ultimate tiebreaker period, the opponent shall have the choice of top or bottom on the restart. A third injury time-out shall terminate the match. The opponent shall be declared the winner by default.

**RULE 8, SECT. 2, ART. 4:** Any player who exhibits signs, symptoms or behaviors consistent with a concussion (such as loss of consciousness, headache, dizziness, confusion, or balance problems) shall be immediately removed from the contest and shall not return to play until cleared by an appropriate health-care professional. (Please see NFHS Suggested Guidelines for Management of Concussion).

**RULE 8, SECT. 2, ART. 6:** During a time-out for injury, no more than 2 team attendants and a physician/medical staff shall be permitted on the mat with either wrestler.

**RULE 8, SECT. 2, ART. 7:** Any contestant who is bleeding will be charged with bleeding time. The number of time-outs for bleeding is left to the discretion of the referee. If bleeding is not controlled within a cumulative time of 5 minutes the match shall be terminated, and the opponent shall be awarded the match by default.

**RULE 8, SECT. 2, ART 8:** The match shall be stopped for any wrestler who is bleeding, has an open wound, has any amount of blood on his/her uniform or has blood on his/her person, shall be directed to be treated until the bleeding is stopped, the wound is covered, the uniform and/or body is appropriately cleaned, and/or the uniform is changed before returning to competition.

## **APPENDIX A: CONCUSSION EDUCATION and MANAGEMENT PROTOCOL**

### **Education**

Concussions are common in sports. The Missouri State High School Activities Association (MSHSAA) believes that education of coaches, officials, athletes, and their parents or guardians are key to safely returning a student athlete to play. Appropriate immediate care after a suspected concussion, and follow up incorporating a multi-disciplinary team that includes the coach, parent or guardian, athlete's physician, team physician and athletic trainer (if available), and school representatives, also are important for the proper management of a sport-related concussion.

Each school district will receive educational materials for coaches, athletes, parents, and school officials, required forms for student athlete participation and parent/guardian consent, and recommended medical clearance forms for return to play.

Annually, MSHSAA member school districts will ensure that every coach, student athlete, and parents or guardians of a student athlete completes a concussion and head injury information sheet and returns it to the school district prior to the student athlete's participation in practice or competition. Officials will receive training from their parent organization. Each official's organization will require annual concussion training and maintain a signed head injury information sheet for each official.

## **Recognition and Evaluation of the Athlete with a Concussion**

1. Recognition of the signs and symptoms of a concussion is important. Every member of the team-athlete, teammates, coaches, parents or guardians, officials, athletic trainers, and team physicians have a duty to report a suspected concussion. Not all school districts have medical personnel available to cover every practice and competition; therefore, the coach is the person in the best position to protect the player and must be aware that not all student athletes will be forthcoming about their injury.
2. An official shall not be responsible for making the diagnosis of a concussion. The official can assist coaches and medical staff by recognizing signs and symptoms of a concussion and informing the coach and medical staff of their concerns.
3. The coach, ATC, or physician on site should evaluate the athlete in a systemic fashion :
  - A. Assess for airway, breathing, and circulation (basic CPR assessment)
  - B. Assess for concussion
    - A. Any unconscious athlete should be assumed to have a severe head and/or neck injury and should have their cervical spine immobilized until a determination can be made that the cervical spine has not been injured. If no medical professional can make the assessment, the athlete should be transported to an appropriate emergency care facility.
    - B. A conscious athlete with no neck pain can be further evaluated on the sideline.
4. An athlete experiencing ANY of the signs/symptoms of a concussion should be immediately removed from play. Signs/Symptoms of a concussion include :

<b><u>PHYSICAL</u></b>	<b><u>COGNITIVE</u></b>	<b><u>EMOTIONAL</u></b>
Headache	Feeling mentally "foggy"	Irritability
Nausea/Vomiting	Feeling slowed down	Sadness
Dazed/Stunned	Difficulty concentrating	More emotional
Balance problems	Difficulty remembering	Nervousness
Visual problems	Forgetful of recent information	
Fatigue	Confused about recent events	
Sensitivity to light	Answers questions slowly	
Sensitivity to noise	Repeats questions	

5. Evaluation
  - A. Following any first aid management, the medical team, or coach in the absence of medical personnel, should assess the athlete to determine the presence or absence of a concussion. The SCAT (Sideline Concussion Assessment Tool) and SCAT2 are effective assessment tools that are readily available and can assist with the assessment.
  - B. The athlete should be monitored for worsening or change in signs and symptoms over the next 24 hours. Instructions should be given to the parent or guardian as to signs and symptoms that may require further or more emergent evaluation.
6. Management of a Concussion and Return to Play
  - A. An athlete determined to have a concussion or have concussion-like symptoms will be removed from practice or competition and is not allowed to return to practice or competition that same day.
  - B. If an athlete displays concussion-like signs or symptoms, the athlete should be assumed to have a concussion until further medical evaluation can occur. "WHEN IN DOUBT, SIT THEM OUT!"
  - C. Written clearance from a physician (MD or DO), Advanced Nurse Practitioner in written collaborative practice with a physician, Certified Physician Assistant in written collaborative practice with a physician, or Certified Athletic Trainer in written supervision of a physician, must be provided prior to return to play.
  - D. Following a concussion, the athlete should have both physical and cognitive rest until symptoms have resolved.
  - E. An athlete must be asymptomatic at rest and with exertion prior to return to play.

A graduated return to play protocol has been outlined by the Third International Concussion in Sport Group Statement (2008, Zurich), is recommended by the NFHS (nfhs.org), and may be used to guide return to play following medical clearance.

## APPENDIX B: LIGHTNING SAFETY GUIDELINES

The MSHSAA Board of Directors has adopted the position statement of the National Athletic Trainers' Association regarding lightning safety (Journal of Athletic Training 2000; 35(4):471-477).

The procedures are listed below:

1. Formalize and implement a comprehensive, proactive lightning-safety policy or emergency action plan specific to lightning safety. The components of this policy should include the following:
  - A. An established chain of command that identifies who is to make the call to remove individuals from the field or an activity.
  - B. A designated weather watcher (i.e., a person who actively looks for the signs of threatening weather and notifies the chain of command if severe weather becomes dangerous).
  - C. A means of monitoring local weather forecasts and warnings.
  - D. A listing of specific safe locations (for each field or site) from the lightning hazard.
  - E. The use of specific criteria for suspension and resumption of activities (refer to recommendations 4, 5, and 6).
  - F. The use of the recommended lightning-safety strategies (refer to recommendations 7, 8, and 9).
2. The primary choice for a safe location from the lightning hazard is any substantial, frequently inhabited building. The electric and telephone wiring and plumbing pathways aid in grounding a building, which is why buildings are safer than remaining outdoors during thunderstorms. It is important not to be connected to these pathways while inside the structure during ongoing thunderstorms.
3. The secondary choice for a safer location from the lightning hazard is a fully enclosed vehicle with a metal roof and the windows closed. Convertible cars and golf carts do not provide protection from lightning danger. It is important not to touch any part of the metal framework of the vehicle while inside it during ongoing thunderstorms.
4. Seeking a safe structure or location at the first sign of lightning (**cloud-to-ground**) or thunder activity is highly recommended. By the time the flash-to-bang count approaches 30 seconds (or is less than 30 seconds), all individuals should already be inside or should immediately seek a safe structure or location. To use the flash-to-bang method, the observer begins counting when a lightning flash is sighted. Counting is stopped when the associated bang (thunder) is heard. Divide this count by 5 to determine the distance to the lightning flash (in miles). For example, a flash-to-bang count of 30 seconds equates to a distance of 6 miles (9.66 km).
5. Postpone or suspend activity if a thunderstorm appears imminent before or during an activity or contest (regardless of whether **cloud-to-ground** lightning is seen or thunder heard) until the hazard has passed. Signs of imminent thunderstorm activity are darkening clouds, high winds, and thunder or lightning activity.
6. Once activities have been suspended, wait at least 30 minutes after the last sound of thunder or lightning flash before resuming an activity or returning outdoors. A message should be read over the public address system and lightning-safety tips should be placed in game programs alerting spectators and competitors about what to do and where to go to find a safer location during thunderstorm activity.
7. Extremely large athletic events are of particular concern with regard to lightning safety. Consider using a multidisciplinary approach to lessen lightning danger, such as integrating weather forecasts, real-time thunderstorm data, a weather watcher, and the flash-to-bang count to aid in decision making.
8. Avoid being in contact with, or in proximity to, the highest point of an open field or on the open water. Do not take shelter under or near trees, flag poles, or light poles.
9. Avoid taking showers and using plumbing facilities (including indoor and outdoor pools) and land-line telephones during thunderstorm activity. Cordless or cellular telephones are safer to use when emergency help is needed.
10. Individuals who feel their hair stand on end or skin tingle or hear crackling noises should assume the lightning-safe position (i.e., crouched on the ground, weight on the balls of the feet, feet together, head lowered, and ears covered). Do not lie flat on the ground.
11. Observe the following basic first-aid procedures, in order, to manage victims of lightning strike:
  - A. Survey the scene for safety. Ongoing thunderstorms may still pose a threat to emergency personnel responding to the situation.
  - B. Activate the local emergency management system.
  - C. Move the victim carefully to a safer location, if needed.
  - D. Evaluate and treat for apnea and a systole.
  - E. Evaluate and treat for hypothermia and shock.
  - F. Evaluate and treat for fractures.
  - G. Evaluate and treat for burns.
12. All persons should maintain current cardiopulmonary resuscitation (CPR) and first-aid certification.
13. All individuals should have the right to leave an athletic site or activity, without fear of repercussion or penalty, in order to seek a safe structure or location if they feel they are in danger from impending lightning activity.

## APPENDIX C: MSHSAA AND NFHS SUPPLEMENT POSITION STATEMENT

The NFHS Sports Medicine Advisory Committee (SMAC) strongly opposes the use of dietary supplements for the purpose of athletic advantage. Research data shows widespread use of dietary supplements by adolescent and high school athletes, despite considerable safety concerns. Dietary supplements are marketed as an easy way to enhance athletic performance, increase energy levels, lose weight, and feel better. It is proven that adolescents are more susceptible to advertising messages and peer pressure, increasing the risk of dietary supplement usage. This can create a culture more concerned about short term performance rather than overall long term health.

The Dietary Supplement Health and Education Act of 1994 removed dietary supplements from pre-market regulation by the Food and Drug Administration (FDA). Thus, many of the substances that can be obtained from nutrition stores and the internet are not subject to the same strict tests and regulations as “over the counter” and prescription medications. The companies that produce dietary supplements do not need to test their safety or effectiveness before they are available to consumers. In fact, dietary supplements cannot be removed from the marketplace unless they present a significant or unreasonable risk of illness or injury.

## APPENDIX D: MSHSAA AND NFHS POSITION STATEMENT ON ANABOLIC STEROIDS

The Missouri State High School Activities (MSHSAA) and the National Federation of High Schools (NFHS) strongly opposes the use of anabolic steroids and other performance-enhancing substances by high school student-athletes. Such use violates legal, ethical and competitive equity standards, and imposes unreasonable long-term health risks. The NFHS supports prohibitions by educational institutions, amateur and professional organizations and governmental regulators on the use of anabolic steroids and other controlled substances, except as specifically prescribed by physicians for therapeutic purposes.

Anabolic, androgenic steroids (AAS) are synthetic derivatives of the male hormone testosterone. Natural testosterone regulates, promotes and maintains physical and sexual development, primarily in the male, but with effects in the female as well. Like testosterone, AAS have both an anabolic effect (increase in muscle tissue) and an androgenic effect (masculinizing effects that boys experience during puberty). No AAS is purely anabolic. As a result, the use of AAS won't lead to muscle growth without also leading to other unintended, undesirable side effects.

According to national surveys, the use of AAS among high school students has been decreasing since about 2001. There are no national studies that measure the extent of AAS use by high school student-athletes, although some states publish statewide prevalence data. Nearly one-third of high-school age steroid users do not participate in organized athletics and are taking AAS primarily to modify their physical appearance. Athletes who use AAS do so for two main reasons: 1) to gain strength and 2) to recover more quickly from injury.

AAS are controlled substances and are illegal to use or possess without a prescription from a physician for a legitimate medical diagnosis. Some AAS are used by veterinarians to treat pigs, horses and cows. In humans, medical uses of AAS include weight gain in wasting diseases such as HIV-infection or muscular dystrophy, absent gonadal function in males, and metastatic breast cancer in women. AAS should not be confused with corticosteroids, which are steroids that doctors prescribe for medical conditions such as asthma and inflammation. AAS are prohibited by all sports governing organizations.

## APPENDIX E: NFHS STATEMENT FOR BLOOD ON UNIFORM

An athlete who is bleeding, has an open wound, has any amount of blood on his/her uniform, or has blood on his/her person, shall be directed to leave the activity until the bleeding is stopped, the wound is covered, the uniform and/or body is appropriately cleaned, and/or the uniform is changed before returning to competition.

## APPENDIX F: POINTS OF EMPHASIS

1. If a student athletic trainer is required to cover an event without the supervision of a certified athletic trainer, the individual is to be identified as a student serving as a first responder and not identified as an athletic trainer.
2. It is recommended that all MSHSAA member host schools develop an emergency action plan for heat-related and injury situations at all athletic venues.
3. It is highly recommended that treatment via IV fluids not be utilized as a means of returning a student-athlete to competition on the same day as receipt of such treatment.
4. It is strongly recommended that athletes wear mouth guards while participating in contact sports (volleyball, field hockey, basketball, wrestling, soccer, water polo, and lacrosse) where the NFHS rules do not already mandate such wearing.
5. If the proposed football play-off system is adopted by the MSHSAA member schools beginning with the 2008-09 school year, the Football Advisory Committee shall develop a bi-seasonal research component to monitor heat and non-heat related injuries, a system by which game officials shall call a quarterly mandatory water-break time-out for at least the first two games of the regular season, educational guidelines for coaches regarding the acclimatization process of players, a point of emphasis for coaches to take a conservative approach in terms of intensity during the pre-season scrimmage, and a point of emphasis to schedule the starting time of at least the first two regular season games when the heat index is potentially lower.
6. It is recommended that all mats be cleaned/disinfected at the end of wrestling tournaments, as part of the process of the prevention of the spreading of communicable diseases.
7. All Wrestling Weight Management certifiers are required to be retrained and recertified during the summer and fall of 2010.
8. It is recommended to shorten the race distance and/or to schedule the starting time of the races when the heat index is potentially lower for at least the first two weeks of the cross country season in order to minimize heat concerns.



## APPENDIX H: MSHSAA AND NFHS POSITION STATEMENT ON INVASIVE MEDICAL PROCEDURES ON THE DAY OF COMPETITION

The NFHS SMAC was formed in 1996 to assist the NFHS in ensuring the safety of high school athletes across the nation. The SMAC investigates numerous issues, rules, and situations and considers their potential risks to athletes. Recently, the SMAC has reviewed the issue of invasive medical procedures such as intravenous (IV) rehydration and the use of injectable anesthetic/analgesic drugs during or before athletic contests and events.

While we believe these practices are not widespread at the high school level, a handful of such incidents have been reported to the SMAC over the past year. It is reported that these procedures are carried out at the college and professional levels. The SMAC is very concerned that occurrence of, or the desire for, such medical procedures will continue to “trickle down” to high school athletics.

The SMAC encourages a philosophy that high school athletics serve the purpose of providing young men and women the opportunity for personal growth in a controlled environment. The pursuit of victory is not, by itself, justification for medical intervention. We believe that invasive procedures such as the administration of IV fluids and the use of injectable anesthetic/analgesic drugs performed on the day of competition with the sole purpose of enabling a student athlete to participate are inconsistent with the philosophy of high school sports.

This position applies to any athlete requiring a local (example: lidocaine) or systemic (example: Toradol) pain-killing medication to enable him or her to play. This practice increases the risk of further injury to the affected body part. The use of prescription medication that is administered by injection for chronic medical conditions (such as insulin for diabetes or Imitrex for migraine headaches) is appropriate, and will not be affected.

Second, performing medical procedures in a locker room, training room, or other facility is fraught with the potential for infection and other complications. The placement of an intravenous catheter or the administration of an intramuscular or subcutaneous injection is a medical procedure and should be treated as such. Thus, a medical facility is the proper venue for any such invasive procedures to be carried out.

Finally, while our primary concern is with protecting the health of the young athlete, we believe this is also a matter of participation equity. Due to a variety of factors, few high school sports programs have team physicians attending their competitions and in many instances these volunteers do not have special training in sports medicine. Thus, teams and individuals who have a physician or other medical provider willing and able to provide such services will have a significant competitive advantage over their opponents who may not have such a specialist available.

After a review of the potential risks, consequences, and limited medical benefits of these invasive procedures, the NFHS Sports Medicine Advisory Committee takes the position that there is no proper role for these procedures in high school athletics. We strongly recommend to coaches, school administrators, athletic trainers, and team physicians that athletes should not be allowed to participate in athletic contests or events if they have received IV hydration or been injected with an anesthetic or analgesic medication on that same day.