**TO:** LHSAA MEMBER SCHOOL PRINCIPALS

**FROM:** KENNY HENDERSON, EXECUTIVE DIRECTOR

**RE:** CHECKLIST FOR CATASTROPHIC INJURIES TO PLAYERS PARTICIPATING IN HIGH SCHOOL SPORTS

**Enclosed is a checklist that I highly recommend you and your staff review in an effort to prevent catastrophic injuries and/or accidents in your school and follow them in the event one of your student athletes is seriously injured while participating in an LHSAA interscholastic athletic event such as a practice session or a contest. Please make copies and distribute to your coaching staff.**

**While this checklist is not all inclusive, it should provide you with some sound guidelines to follow should a situation of this nature develop at your school. We encourage all schools to keep this information on file.**

**Hopefully, you will never have to use these guidelines. However, should such an injury or situation occur at your school, this bulletin is designed to provide you with a checklist of things to consider when reacting to the catastrophic situation.**

**KWH/ygs**

**Enclosures**

**CHECKLIST FOR SCHOOL ADMINISTRATORS, ATHLETIC DIRECTORS, AND COACHES TO FOLLOW IN ATTEMPTING TO PREVENT CATASTROPHIC INJURIES AND/OR SITUATIONS RESULTING FROM ATHLETIC PARTICIPATION IN THE LHSAA:**

1) **Coaches must know the playing rules and instruct his/her players in utilizing the proper and legal playing techniques.**

2) **Coaches should reprimand and/or strictly discipline any player who employs illegal and unsafe playing techniques in practice or in contests.**

3) **Coaches should be well-versed in conducting safe practices in regard to weather conditions and facilities.**

4) **Coaches should make certain that his/her players are adequately and properly conditioned prior to conducting strenuous and rigorous practices.**

5) **Coaches should have taken and passed a first aid training course and a course in CPR.**

6) **Each athletic staff should include the services of a full-time certified trainer if at all possible. The trainer should be available at all athletic practices and contests conducted by the school.**

7) **When a school engages in an interscholastic athletic contest in at least a contact sport, a physician licensed to practice medicine should be on the team bench at that contest. It is also recommended that an emergency medical vehicle and attendants be provided by the administration of the host school at all football contests.**

8) **Rule 1.8.1 of the LHSAA By-Laws which requires that all student athletes pass a physical examination conducted by a physician licensed to practice medicine, a licensed nurse practitioner that is in collaboration with a licensed physician, and/or a licensed physician's assistant under the supervision of a licensed physician each year prior to interscholastic athletic participation must be strictly adhered to in all sports. These completed medical exam forms must be on file at your school.**

9) **Players should be instructed that they are not to move an injured teammate if at all possible; they are to request immediate medical treatment from individuals who are trained to do so.**

10) **Adequate insurance protection and coverage should be carried on all student athletes.**

11) **The head coach shall be required to attend LHSAA rules clinics in their sports.**

12) **Coaches should assure that his/her players are properly fitted and equipped with safe playing equipment and participate in/on safe playing facilities.**

13) **It is recommended that you duplicate the attached consent form and have it reviewed by your head coach and/or athletic trainer in the presence of all your school's players and their parent(s). This form should be filled out by each player and his/her parents and kept on file at your school.**

14) **Make certain that your coaches, in writing and through squad meetings, clearly and emphatically explain to his/her players that participation in high school sports can result in a serious injury.**

**<u>WHEN CATASTROPIC INJURIES OCCUR IN AN LHSAA SPORT AT YOUR SCHOOL</u>:**

1) **Contact the LHSAA as soon as possible giving the details of the situation.**

2) **Do not express a personal opinion about the injury to anyone other than school officials and/or LHSAA officials.**

3) **Do not give any details about the injury to anyone other than school officials and/or LHSAA officials.**

4) **Designate a competent person to act as an official spokesperson about the injury.**

5) **Establish a policy on how to address such an injury to the media.**

6) **Assure that the player(s) and coach(es) understand what is included in this checklist.**

7) **Impound, mark, and safeguard the player`s equipment and the player`s physical examination along with any video material that might exist.**

8) **Secure names, addresses, and telephone numbers of any eye witnesses who might exist; take written and signed statements from these witnesses.**

9) **Take photographs of the physical facilities and the equipment involved.**

10) **Secure documentation of the coaches` practice schedule and instruction to his/her players.**

11) **Be able to support the fact that the player passed an LHSAA required physical examination in order to participate in the sport.**

12) **Keep a file on the media coverage of the situation.**

13) **Visit the injured player and his/her parent(s) on more than one occasion.**

14) **Maintain a file on telephone calls received about the incident.**

15) **Complete the required insurance claim forms.**

16) **Encourage your coach(es) to maintain constant contact with the family members of the player.**

17) **Keep the LHSAA informed of the matter.**

18) **Prepare a news release to the media on the player's injury.**

19) **Do not admit the school's guilt in such an injury.**

20) **If the player dies as a result of the injury, attend the wake and funeral.**

21) **Maintain your own personal file on all information pertaining to the case.**

22) **Adopt "Safety First" coaching techniques.**

**According to legal experts, "failure to warn" usually is one of the primary accusations made against those in the coaching profession in litigation which involves catastrophic injury to a player.**

**To help prevent what could result in the destruction of a coaching career, as well as massive financial loss, adopt "safety first" coaching techniques:**

a. **Have a clear and complete understanding of the intent of correct application of safety rules.**
b. **Make graphically clear to players the risk of violating these rules and use the available "printed" material as a constant authoritative reminder to them of the importance of correct techniques.**
c. **Point out in exact terms the risk of an "accidental" catastrophic injury in athletics before the first practice begins.**
d. **Refrain from using terms in your coaching techniques that may be misconstrued and used against you. (Example: Take the word head out of football coaching.)**

# Make Safety A Commitment and Your No. 1 Priority!!

# Coaches' Checklist

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

## Keep The Head Out of Football

***A 1976 rule change that eliminated the head as the initial contact point in blocking and tackling has significantly reduced head and neck injuries in the sport over the last decade.***

***Coaches can do their part to continue that trend by teaching correct techniques and emphasizing proper fundamentals at all times. That way, players can avoid catastrophic injury and coaches can avoid lawsuits.***

***Keep the head out of football.***

# Heat Stress and Athletic Participation

**Early fall football, cross country, soccer, and field hockey practices 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. There are no excuses for heatstroke deaths if the proper precautions are taken. During hot weather, the athlete is subject to the following:**

**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 heatstroke.**

**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.**

**HEATSTROKE – 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 (heatstroke 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 Your Athletes, American Academy of Pediatrics, 1991). The following practices and precautions are recommended:**

1. **Each athlete should have a physical exam with a medical history when first entering a program and an annual health history update. History of previous heat illness & type of training activities before organized practice begins should be included. State high school association's 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 ACCLIMATIZATION TO HOT WEATHER. It is necessary for an athlete to exercise in the heat is he/she is to become acclimatized to it. It is suggested that a gradual physical conditioning program be used and that 80 percent acclimatization can be expected to occur after the first seven to ten 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 athletes at all times. It is recommended that a minimum of ten minutes be scheduled for a water break every half hour of heavy exercise in the heat. WATER SHOULD BE AVAILABLE IN UNLIMITED QUANTITIES. Check and be sure athletes are drinking water. Cold water is preferable. Drinking ample water before practice and games has also been found to aid performance in the heat.**

5. **Salts should be replaced daily. Modest salting of foods after practice or games will accomplish this purpose. Salt tablets are not recommended. ATTENTION MUST BE DIRECTED TO REPLACING WATER --- FLUID REPLACEMENT IS ESSENTIAL.**

6. **Know both the TEMPERATURE and HUMIDITY. The greater the humidity, the more difficult it is for the body to cool itself. 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 (ASCM's Guidelines for the Team Physician, 1991):**

**Below 64……. Unlimited Activity**
**65 – 72……. Moderate Risk**
**74 – 82……. High Risk**
**82 plus……. Very High Risk**

**There is also a weather guide for activities that last 30 minutes or more (Fox and Mathews, 1981) which involves knowing the relative humidity and air temperature.**

| AIR TEMP | DANGER ZONE | CRITICAL ZONE |
|---|---|---|
| 70 F | 80 Percent RH | 100 Percent RH |
| 75 F | 70 Percent RH | 100 Percent RH |
| 80 F | 50 Percent RH | 80 Percent RH |
| 85 F | 40 Percent RH | 68 Percent RH |
| 90 F | 30 Percent RH | 55 Percent RH |
| 95 F | 20 Percent RH | 40 Percent RH |
| 100 F | 10 Percent RH | 30 Percent RH |
| RH = RELATIVE HUMIDITY | | |

**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 plus F..... Danger level and extreme caution**

7. **Cooling by evaporation is proportional to the area of the 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 three percent weight loss through sweating is safe and over a three percent weight loss is in the danger zone. Over a three percent weight loss , the athlete should not be allowed to practice in hot and humid 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 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 services.**

    **<u>HEAT STROKE – THIS IS A MEDICAL EMERGENCY – DELAY COULD BE FATAL</u>**
    **Immediately cool body wile waiting for transfer to a hospital. Remove clothing and place ice bags on the neck, in the axilla (armpit), and on the groin area. An increasing number of medical personnel are now using a treatment for heat illness that involves applying either alcohol or cool water to the victim's skin and vigorously fanning the body. The fanning causes evaporation and cooling. (Source – The First Aider – September 1987)**

    **<u>HEAT EXHAUSTION – OBTAIN MEDICAL CARE AT ONCE</u>**
    **Cool body as you would for heat stroke while waiting for transfer to hospital. Give fluids if athlete is able to swallow and is conscious.**

    **<u>SUMMARY</u>**
    **The main problem associated with exercising in the 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 per 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.**

12. **Keep your athletes hydrated at all times.**

13. **Allow football players to remove helmets during breaks and when not involved in drills.**

# Reducing Head and Neck Injuries in Football

Frederick O. Mueller, Ph.D.

Head and neck injuries in football have been dramatically reduced since the later 1960s. Several suggestions for continued reduction are as follow:

1. Preseason physical exams for all participants. Identify during the physical exam those athletes with a history of previous head or neck 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. 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 head or neck 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 necks so that participants will be able to hold their head 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 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 in 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 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.

8. When a player has experienced or shown signs of head trauma (loss of consciousness, visual disturbances, headache, inability to walk correctly, obvious disorientation, memory loss), he should receive immediate medical attention and should not be allowed to return to practice or game without permission from the proper medical authorities.

# NFHS 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.**

## Universal Hygiene Protocol for All Sports

- **Shower immediately after all competition and practice**
- **Wash all workout clothes 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, 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.**
- **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.**

***Revised August 2005***

# Tips for Safer Two-A-Days

**Injury rates increase during two-a-day workouts whether athletes are in peak physical condition or not. In fact, many athletes don't even make their starting lineup because of injuries incurred during preseason training.**

**Here are some tips to help ensure athletes stay at their best and prevent heat-related injuries during two-a-days.**

## Encourage Athletes to Begin Conditioning Before Two-A-Days

**Encourage athletes to begin conditioning in the heat two weeks before official practice begins. This allows athletes' bodies to cool more efficiently by increasing sweat production sooner than when they are not acclimated to the heat.**

## Avoid Workouts During Unusually Hot Temperatures

**Practice sessions during unusually hot and humid conditions should be limited to very moderate workouts, postponed until cooler times of the day or brought inside to avoid the heat.**

## Make Fluids Part of the Playbook

**Before, during, and after competition, be sure to consume adequate amounts of fluid. Athletes can make sure they are properly hydrated by checking their urine color: lighter urine color indicates athletes are better hydrated. The longer the workout session, the more frequently fluids need to be replaced. Research shows that a sports drink containing a 6% carbohydrate solution, like Gatorade, can be absorbed as rapidly as water. But unlike water, a sports drink can provide energy, delay fatigue, and improve performance.**

## Use the Shade

**Before practice, warm up in the shade and be sure to rest in the shade during breaks. Even during rest, exposure to heat can raise the body temperature, increase fluid loss, and decrease the blood available to the muscles during workouts.**

## Recommend Wearing Loose Fitting Clothing

**Cotton blend, loose fitting clothing can help promote heat loss. The rule: the less clothing, the better.**

## Be Prepared for an Emergency

**Always have a cell phone on hand and be familiar with emergency numbers. Also keep ice and ice towels on hand in case of heat-related emergencies.**

### Signs of Dehydration and Heat Illness

Dehydration can seriously compromise athletic performance and increase the risk of exertional heat injury. That's why it's important to recognize the warning signs.

- ~ Thirst
- ~ Irritability
- ~ Headache
- ~ Weakness
- ~ Dizziness
- ~ Cramps
- ~ Nausea
- ~ Decreased performance

# Fluid Guidelines for Two-A-Days

**Proper hydration is the best safeguard against heat illness. Remember to have athletes drink before, during, and after training and competition.**

## Before Exercise

- ✓ **2 to 3 hours before exercise drink at least 17 to 20 oz. of water or a sports drink.**
- ✓ **10 to 20 minutes before exercise drink another 7 to 10 oz. of water or a sports drink.**

## What to Drink During Exercise

**Drink early --- Even minimal dehydration compromises performance. In general, every 10 to 20 minutes drink at least 7 to 10 oz. of water or a sports drink. To maintain hydration, remember to drink beyond thirst. Optimally, drink fluids based on amount of sweat and urine loss.**

- ✓ **Athletes benefit in many situations from drinking a sports drink containing carbohydrate.**
- ✓ **If exercise lasts more than 45 to 50 minutes or is intense, a sports drink should be provided during the session.**
- ✓ **The carbohydrate concentration in the ideal fluid replacement solution should be in the range of 6% to 8% (14 to 18 g/8 oz.)**
- ✓ **During events when a high rate of fluid intake is necessary to sustain hydration, sports drinks with less than 7% carbohydrate should be used to optimize delivery.**
- ✓ **Fluids with salt (sodium chloride) are beneficial to increasing thirst and voluntary fluid intake as well as offsetting the amount in lost sweat.**
- ✓ **Cool beverages at temperatures of 50° to 59° F are recommended.**

## What Not to Drink During Exercise

- ✓ **Fruit juices, carbohydrate gels, sodas, and those sport drinks that have carbohydrate levels greater than 8% are not recommended as the sole beverage.**
- ✓ **Beverages containing caffeine, alcohol, and carbonation are discouraged during exercise because they can dehydrate the body by stimulating excess urine production, or decrease voluntary fluid intake.**

## After Exercise

**Immediately after training or competition is the key time to replace fluids. Weigh athletes before and after exercise. Research indicates that for every pound of weight lost, athletes should drink at least 20 oz. of fluid to optimize rehydration. Sports beverages are an excellent choice.**

# Managing Two-A-Days

## Stay Cool

- ✓ Get in shape and acclimate
- ✓ Know the warning signs of dehydration and heat illness
- ✓ Don't rely on thirst to drink
- ✓ Drink on schedule
- ✓ Favor sports drinks
- ✓ Monitor body weight
- ✓ Watch urine color and caffeine intake
- ✓ Key in on meals as an opportunity to increase fluid intake
- ✓ Stay cool when you can

*From: Eichner, E.R. (1998). Treatment of Suspected Heat Illness. Int. J. Sports Med. 19:S150-153*

## Stay Healthy

- ✓ Minimize the stresses of life
- ✓ Eat a well-balanced diet
- ✓ Avoid overtraining
- ✓ Sleep well
- ✓ Avoid rapid weight loss
- ✓ Avoid people with colds
- ✓ Keep hands away from nose and mouth
- ✓ Get a flu shot
- ✓ Stay hydrated and ingest carbohydrates during exercise

*From: Niemen, D.C. (1998). Immunity in Athletes: Current Issues. Sports Science Exchange 11(2): 1-6.*

## Stay Hydrated

- ✓ Drink throughout the day
- ✓ Drink at least 17 to 20 oz. of fluid 2 to 3 hours before a practice or game
- ✓ Drink an additional 7 to 10 oz. of fluid 10 to 20 minutes before competition
- ✓ Drink 28 to 40 oz. of fluid per hour of play (at least 7 to 10 oz. every 10 to 15 minutes) to replace sweat loss during exercise
- ✓ Drink at least 20 oz. per pound of weight loss within two hours of finishing training or competition
- ✓ Optimal to have fluid intake match sweat and urine loss

*From: Casa, D. et al. Journal of Athletic Training 35(2): 212-2224, 2000*