INJURY AND SAFETY
ACCIDENT PROCEDURES FOR COACHES

I. In Case of Injury

A. Minor – Coaches are expected to be able to handle minor first aid and normal training injuries. Medicines, such as aspirin, shall not be prescribed.

B. Doctor Referral – Should an obvious injury of a serious nature arise the following procedures shall be adhered to in getting the athlete to a doctor.

1. If the injury is serious, yet not life threatening:
    a) Give first aid.
    b) Get parent's home number from Athletic Emergency Card.
    c) Get the name of the student's doctor from Athletic Emergency Card.

    With the above information (b, c) make every effort to contact parent(s). Permission to take the athlete to the doctor's office or hospital is found on emergency card. Ask the parent to call the doctor's office or hospital to give the release for treatment.
    d) Call an ambulance – 911.
2. If the injury is serious and/or life endangering:
    a) Give emergency first aid.
    b) Call for ambulance immediately – 911.
    c) Call parent and have them meet with the doctor at the hospital. Important regarding doctors and emergency numbers must be on a Medical Emergency Card, prepared by each head coach.
3. If number 1 or 2 should occur, or the athlete sees a doctor for any other type of injury the coach shall:
    a) Report the injury on an Accident Report Form, have the Athletic Coordinator sign, send it to the Safety Risk Manager. Obtain an insurance claim form from the main office if the athlete is using school insurance.
    b) Details are recorded on the insurance claim form and sent to the parents.
    c) Instructions from the doctor must be obtained and carried out before permitting student to return to active participation. Use the Return to Play Form in the back of this manual.

SAFEGUARDING THE HEALTH OF THE ATHLETE

Participation in high school athletics is a privilege involving both responsibilities and rights. The athlete's responsibilities are to play fair, give his/her best, to keep in training, and to conduct himself/herself with credit to his/her sport and his/her school. In turn, he/she has the right to optimal protection against injury as this may be assured through good conditioning and technical instruction, proper regulation and conditions of play, and adequate health supervision.

Periodic evaluation of each of these factors will help to assure a safe and healthful experience for players. The checklist below contains the kind of questions to be answered in such an appraisal.

PROPER CONDITIONING helps prevent injuries by hardening the body and increasing resistance to fatigue.

1) Are prospective players given directions and activities for pre-season conditioning?
2) Is there a minimum of two weeks of practice before the first game or contest?
3) Is each player required to warm-up thoroughly prior to participation?
4) Are substitutions made without hesitation when players evidence disability?

CAREFUL COACHING leads to skillful performance, which lowers the incidence of injuries.

1) Is emphasis give to safety in teaching techniques and elements of play?
2) Are injuries carefully analyzed to determine causes and to suggest preventive programs?
3) Are tactics discouraged that may increase the hazards and thus the incidence of injuries?
4) Are practice periods carefully planned and of responsible duration?

GOOD OFFICIATING promotes enjoyment of the game as well as the protection of players.

1) Are players as well as coaches thoroughly schooled in the rules of the game?
2) Are rules and regulations strictly enforced in practice periods as well as in games?
3) Are officials employed who are qualified both emotionally and technically for their responsibilities?

RIGHT EQUIPMENT and facilities serve a unique purpose in protection of players.

1) Is the best protective equipment provided for contact sports?
2) Is careful attention given to proper fitting and adjustment of equipment?
3) Is equipment properly maintained and worn and outdated items discarded?
4) Are proper areas for play provided and carefully maintained?

ADEQUATE MEDICAL CARE is a necessity in the prevention and control of athletic injuries.

1) Is there a thorough pre-season health history and medical exam?
2) Is a trainer present at contest and readily available during practice sessions?
3) Does the trainer make the decision as to whether an athlete should return to play following injury during games?
4) Is authority from a physician required before an athlete can return to practice after being out of play due to injury?
5) Is the care given an athlete by coach or trainer limited to first aid and medically prescribed services?

PREVENTING INJURIES

Perhaps the first step in preventing injuries is knowing which activities are most apt to result in physical education and athletic accidents. Dr. Stanley Pechar, New York University School of Education, in a recent survey of physical education (New York high schools), found that over a ten-month period there were 1,408 accidents reported and that:

1) The greatest number of accidents occurred in September and October.
2) The activities, which produced the most injuries, were (a) Football, b) Basketball, (c) Wrestling, (d) Soccer, and (e) Track and Field.
3) The highest number of accidents occurred during practice for interscholastic competition.
4) The second highest number of accidents occurred during actual interscholastic athletic competition.
5) Among strictly physical education activities, apparatus and tumbling caused the most injuries.
6) Sprains were the most frequent types of injury, followed by fracture and wounds.
7) The leg and foot were the most frequently injured part of the body, followed by the arm, hand and head.

Dr. Pechar's study revealed that students with inadequate skills were more liable to injury. Other important factors were fatigue and inadequate conditioning.

The second step in preventing injuries is to make sure that all your athletes have had recent physical examinations. Then adopt these rules as your personal code for preventing injuries:

1) Never send in an injured player back into a game unless you clear it with your school or team physician.
2) Never let a boy or girl attempt a stunt or any other activity unless he/she has been properly taught to execute the maneuver.
3) Teach proper skills and make sure your students and players have mastered techniques before you require them to use these techniques in games or class situations.
4) Remove overly fatigued players from all athletic contests.
5) Introduce activities to develop physical fitness.

The third step in preventing injuries is to make sure that all your equipment is in good condition. A most frequent cause of injures is defective equipment. We suggest that you make a periodic inspection of your facilities. Here's what to look for:

1) Defective equipment.
2) Lockers not secure to the floor.
3) Play areas not equipped with mats and other protective equipment.
4) Defective and obsolete athletic equipment.
5) Bleachers and grandstands too flimsy to withstand the weight of the crowd.

After each inspection, notify your building athletic coordinator who in turn will notify the appropriate parties to eliminate the situation.

HEAD INJURIES

In the event that head injury occurs, the present policy regarding aid is to:

1) Always error on the side of caution.
2) Carry the athlete from the field flat on a stretcher.
3) Cover the patient and let him/her lie on his/her side with the face slightly downward.
4) Secure an adequate air passage by allowing the tongue to fall forward.
5) Call the ambulance service and take to the nearest hospital: 911.
6) Call the parents and have them meet with the physician at the hospital. Information regarding the parent's emergency number, physician, etc. should always be in the coaches' kit on the field.

When head injury has occurred, the coach may follow these general principles:

1) If the athlete in temporarily dazed or shaken up, keep him/her out of the game and do not permit him/her return; continue to observe his/her behavior on the sideline.
2) If brain concussion has occurred there has been a period of unconsciousness, even though brief, remove the athlete from the game and do not permit him/her to return. Do not allow participation in further games until written clearance has been secured from the athlete's physician, or walk-in clinic physician.

HOME HEAD INJURY INSTRUCTIONS

Stephen G. Rice, MD

Your child experienced a head injury today during practice or a game. Examples of mild head injuries are (1) "dings" or brief periods of being stunned, and (2) concussions which usually involve a brief period of unconsciousness.

Although no evidence for any serious injury was found at this time, careful attention for the next 24-48 hours is advised since signs of head injury may appear later (sometimes several weeks after the injury).

It is uncommon for individuals to experience headaches, mild visual disturbances, dizziness, unusual feeling, nausea and vomiting, drowsiness, or memory loss after a head injury.

A responsible adult should stay with the injured person for the first 24 hours. The child should be awakened every few hours during the night to be certain that the individual is able to communicate normally (know who he/she is, who you are, where he/she is and behave appropriately when awakened).

Call your doctor or take the child to an emergency medical facility if the child cannot be aroused, does not respond normally, has a convulsion or seizure, has persistent vomiting, or has a severe head or neck ache.

RECOGNITION, PREVENTION & MANAGEMENT OF ASTHMA IN ATHLETICS

Asthma is commonly seen in athletes in all levels of competition. For a majority of people who have chronic asthma, exercise is a trigger.

Certified athletic trainers (ATCs), as well as other allied health care professionals, are in a unique position to help coaches, parents and athletes, recognize, prevent and manage asthma. The National Athletic Trainers' Association (NATA) has issued its first ever position statement on Management of Asthma in Athletics, which will appear in its entirety in the September issue of the *Journal of Athletic Training*. NATA offers the following recommendations for ATCs and other health care professionals to follow:

I. Be aware of the major asthma signs and symptoms:

- Coughing
- Wheezing
- Tightness in the chest (or chest pain in children)
- Shortness of breath (dyspnea)
- Breathing difficulty at night
- Breathing difficulty upon awakening in the morning
- Breathing difficulty when exposed to certain allergens or irritants
- Exercise-induced symptoms such as coughing or wheezing
- An athlete who is well conditioned but does not seem to be able to perform at a level comparable with other athletes who do not have asthma
- Family history of asthma
- Personal history of atopy (where the reaction or allergy can be found in other areas of the body, e.g. ingesting something and then breaking out in a rash) including atopic dermatitis/eczema or hay fever (allergic rhinitis)

II. Provide guidelines for referral so athletes with asthma and/or those suspected of having it, can receive a thorough evaluation. Athletic trainers and other health care professionals should:

- Devise an asthma action plan for managing and referring athletes who may experience significant or life threatening attacks, or breathing difficulties, into their existing emergency action plans.
- Have pulmonary function measuring devices, such as peak expiratory flow meters (PFMs), at all athletic venues, and be familiar with how to use them.
- Encourage well-controlled asthmatics to engage in exercise to strengthen muscles, improve respiratory health and enhance endurance and overall well being.
- Refer athletes with atypical symptoms; symptoms that occur despite proper therapy; or other complications that can exacerbate asthma (e.g. sinusitis, nasal polyps, severe rhinitis, gastroesophageal reflux disease [GERD] or vocal cord dysfunction), to a physician with expertise in sports medicine. Such doctors include allergists, ears, nose and throat physicians, cardiologists and pulmonologists trained in providing care for athletes.

III. Describe management plans to prevent and control asthma attacks when they occur. ATCs and coaches should:

- Consider providing alternative practice sites for athletes with asthma. Indoor practice facilities that offer good ventilation and air conditioning should be taken into account for at least part of the practice.
- Schedule practices during times at which pollen counts are lowest (e.g. in the evening during the peak of ragweed pollen season).
- Encourage players with asthma to have follow-up examinations at regular intervals with their primary care physician or specialist. These evaluations should be scheduled at least every six to 12 months.

IV. Educate ATCs and athletes about pharmacological and non-pharmacological therapies and techniques to help control asthma:

- Athletes with exercise-induced asthma (EIA) may benefit from use of short- and long-acting b2-agonists. These agents can be used for prophylaxis during practice and game participation.
- When used to prevent EIA, a short-acting b2-agonist, such as albuterol, should be inhaled 10 to 15 minutes prior to exercise.
- The excessive need for short-acting b2-agonists therapy during practice or an athletic event should cause concern. A physician should evaluate the athlete before returning to participation.
- Long-acting b2-agonists should, in general, only be used for asthma prophylaxis and control. Usually, the long-acting agents are combined with an inhaled steroid. Athletes with past allergic reactions or intolerance to aspirin or non-steroidal anti-inflammatory drugs (NSAIDs) should be identified and provided with alternative medicines, such as acetaminophen.

NCAA GUIDELINE - Lightning Safety

July 1997 • Revised June 2001

Lightning is the most consistent and significant weather hazard that may affect intercollegiate athletics. Within the United States, the National Severe Storms Laboratory (NSSL) estimates that 100 fatalities and 400-500 injuries requiring medical treatment occur from lightning strikes every year. While the probability of being struck by lightning is extremely low, the odds are significantly greater when a storm is in the area and the proper safety precautions are not followed.

Prevention and education are the keys to lightning safety. Education begins with background information on lightning. The references associated with this guideline are an appropriate resource. Prevention should begin long before any intercollegiate athletics event or practice. The following steps are recommended by the NCAA and NSSL to mitigate the lightning hazard:

1. Designate a chain of command as to who monitors threatening weather and who makes the decision to remove a team or individuals from an athletics site or event. An emergency plan should include planned instructions for participants as well as spectators.
2. Obtain a weather report each day before a practice or event. Be aware of potential thunderstorms that may form during scheduled intercollegiate athletics events or practices.
3. Be aware of National Weather Service-issued (NWS) thunderstorm "watches" and "warnings" as well as the signs of thunderstorms developing nearby. A "watch" means conditions are favorable for severe weather to develop in an area; a "warning" means that severe weather has been reported in an area and for everyone to take proper precautions.
4. Know where the closest "safe structure or location" is to the field or playing area, and know how long it takes to get to that safe structure or location. Safe structure or location is defined as:
    a. Any building normally occupied or frequently used by people, e.g., a building with plumbing and/or electrical wiring that acts to electrically ground the structure. Avoid using shower facilities for safe shelter and do not use the showers or plumbing facilities during a thunderstorm.
    b. In the absence of a sturdy, frequently inhabited building, any vehicle with a hard metal roof (not a convertible or golf cart) and rolled-up windows can provide a measure of safety. A vehicle is certainly better than remaining outdoors. It is not the rubber tires that make a vehicle a safe shelter, but the hard metal roof which dissipates the lightning strike around the vehicle. DO NOT TOUCH THE SIDES OF THE VEHICLE!
5. Be aware of how close lightning is occurring. The flash-to-bang method is the easiest and most convenient way to estimate how far away lightning is occurring. Thunder always accompanies lightning, even though its audible range can be diminished due to background noise in the immediate environment, and its distance from the observer. To use the flash-to-bang method, count the seconds from the time the lightning is sighted to when the clap of thunder is heard. Divide this number by five to obtain how far away (in miles) the lightning is occurring. For example, if an individual counts 15 seconds between seeing the flash and hearing the bang, 15 divided by five equals three; therefore, the lightning flash is approximately three miles away.

Lightning awareness should be increased with the first flash of lightning or the first clap of thunder, no matter how far away. This activity must be treated as a wake-up call to intercollegiate athletics personnel. The most important aspect to monitor is how far away the lightning is occurring, and how fast the storm is approaching, relative to the distance of a safe shelter. Specific lightning-safety guidelines have been developed with the assistance of the National Severe Storms Laboratory (NSSL).

Lightning-Safety Guidelines:

1. As a minimum, NSSL staff strongly recommends that by the time the monitor obtains a flash-to-bang count of 30 seconds, all individuals should have left the athletics site and reached a safe structure or location. Athletics events may need to be terminated.
2. The existence of blue sky and the absence of rain are not protection from lightning. Lightning can, and does, strike as far as 10 miles away from the rain shaft. It does not have to be raining for lightning to strike.
3. If no safe structure or location is within a reasonable distance, find a thick grove of small trees surrounded by taller trees or a dry ditch. Assume a crouched position on the ground with only the balls of the feet touching the ground, wrap your arms around your knees and lower your head. Minimize contact with the ground, because lightning current often enters a victim through the ground rather than by a direct overhead strike. MINIMIZE YOUR BODY'S SURFACE AREA, AND MINIMIZE CONTACT WITH THE GROUND! DO NOT LIE FLAT! If unable to reach safe shelter, stay away from the tallest trees or objects (such as light poles or flag poles), metal objects (such as fences or bleachers), individual trees, standing pools of water, and open fields. Avoid being the highest object in a field. Do not take shelter under a single, tall tree.
4. A person who feels his or her hair stand on end or skin tingle should immediately crouch, as described in item 3.
5. Avoid using the telephone, except in emergency situations. People have been struck by lightning while using a land-line telephone. A cellular phone or a portable remote phone is a safe alternative to land-line phones, if the person and the antenna are located within a safe structure or location, and if all other precautions are followed.
6. When considering resumption of an athletics activity, NSSL staff recommends that everyone should ideally wait at least 30 minutes after the last flash of lightning or sound of thunder before returning to the field or activity.
7. People who have been struck by lightning do not carry an electrical charge. Therefore, cardiopulmonary resuscitation (CPR) is safe for the responder. If possible, an injured person should be moved to a safer location before starting CPR. Lightning-strike victims who show signs of cardiac or respiratory arrest need emergency help quickly. Prompt, aggressive CPR has been highly effective for the survival of victims of lightning strikes. **Note**: Flash-to-bang count, weather watchers, real-time weather forecasts and commercial weather warning devices are all tools that can be used to aid in decision-making regarding stoppage of play, evacuation and return to play.

THE UNCONSCIOUS ATHLETE

A comment by the National Federation of State High School Associations and the Committee on the Medical Aspects of Sports of the American Medical Association:

The common definition of the "first aid" is the immediate emergency care of injury or illness until medical attention can be obtained. This is especially significant with regard to the player rendered unconscious during an athletic contest or practice.

Medical attention should be immediately available with a physician present or readily available at the game and during practice sessions. This required that plans be developed so that a physician can be reached quickly by phone. The unconscious play can pose a serious problem, and the physician, the coach and the athletic trainer must realize the importance of prompt and proper care.

There are a number of conditions that may cause unconsciousness. Some of these conditions are listed below:

HEAT STROKE – Collapse with dry, warm skin indicates sweating mechanism failure and rising body temperature. **THIS IS AN EMERGENCY; DELAY COULD BE FATAL**. Immediately cool the athlete by the most expedient means (immersion in cool water is the best method). Obtain medical care at once. Player should not return to participation without consent of a physician.

HEAT EXHAUSTION – Weakness with profuse sweating indicated state of shock due to depletion of salt and water. Place in the shade with the head level lower than body. Give sips of diluted slat water. Obtain medical care at once. The player should not return to participation without the consent of a physician.

IMPACT BLOWS TO SOLAR PLEXUS – Rest the athlete on his/her back and moisten the face with water. Loosen clothing around the waist and chest. Do nothing else except obtain medical care if needed. The player may return to participation if further medical care is not indicated.

IMPACT BLOWS TO HEAD – Head injuries in sports are usually subtle in nature. That is, the player may be briefly dazed or slow to get up. He/She may feel groggy or dizzy for only few moments. Such a player should be benched for at least a half-hour, preferably the day, and not returned to play until alert, fully in command mentally, and free of headache or mental confusion.

With a definite loss of consciousness, the player should be evaluated by a physician and observed hourly for a twenty-four hour period at a hospital or at home for any evidence of intracranial bleeding (e.g., headache, dilation of one pupil, nausea, dizziness, confusion). He/She should not be returned to sports in the interim, and subsequently only if he/she is completely free of symptoms such as headache or dizziness or mental confusion.

Any suspicion of intracranial bleeding must be followed by immediate medical attention. Beyond the complaints of the athlete such as headache or dizziness, the following simple observations can be conducted to determine if there is an expanding intracranial lesion:

1) State of consciousness – How impaired are movements?
2) Pupils – Inequality of size.
3) Heart – Unusual slowing.
4) Eye Movements – Nystagmus (dancing eyes).
5) Outstretched arms – Drift unilaterally.
6) Finger to nose test (eyes closed) – Asymmetry.
7) Heel to knee test (eyes closed) – Asymmetry.
8) Romberg test (standing with eyes closed) – Falling
9) Tandem walk (heel to toe walking in a straight line) – Inability to perform.

The three cardinal points to be stressed for successful emergency treatment are:

1) COMMUNICATION – A "non-pay" telephone close to the sports arena for quick calls for help.
2) TRANSPORTATION – A vehicle must be readily available at the site to move the patient to the hospital when warranted.
3) NOTIFICATION – The hospital must be informed of the patient's status so that medical and nursing in the proper facilities will be available on his/her arrival.

HOT WEATHER HINTS

A comment by the Committee on the Medical Aspects of Sports of the American Medical Association and the National Federation:

Early fall football practice frequently is conducted in very warm and highly humid weather in many parts of the United States. Under such conditions, special precautions should be observed. Otherwise, the athlete is subject to:

Heat Cramps – depletion of electrolytes
Heat Fatigue – depletion of salt and water due to sweating
Heat Exhaustion – excessive depletion of salt and water
Heat Stroke – overheating from breakdown of the sweating mechanism.

Each of these symptoms is a separate clinical entity. But the development of heat stroke is progressive and definite symptoms and signs will be manifested before it occurs. If these early warning signs are ignored, the failure of the body to dispose of excess internal heat could progress from heat fatigue to heat exhaustion to heat stroke.

Heat cramps are only temporarily disabling, but the moment of occurrence may be significant.

Heat fatigue dulls the athlete's skillful alertness and makes him more vulnerable to injury. The two heat illnesses can result in serious physical harm and even death; both are preventable.

Heat exhaustion and heat stroke are preventable only by careful control of various factors in the conditioning program of the athlete. Basic, of course, is an athlete health history examination prior to participation in practice. With the start of fall practice, it is essential to provide for gradual acclimation to hot weather activity. Equally important is the need to adjust salt and water intake to weather conditions.

As the athlete becomes accustomed to hot weather activity, he perspires more freely (thus dissipating body heat) and excretes less salt (thus conserving sodium and potassium). With a graduated training regimen, such acclimation can be expected to take place over a period of about one-week.

The old idea that water should be withheld from athletes during workouts has no scientific foundation. In fact, such restriction, by depleting water in the body, can lead to heat fatigue and serious heat illness. During exercise in the heat, it is essential to replace – at least hourly – the water lost by perspiration.

Salt also needs to be replaced daily, particularly during the acclimation period. Extra salting of the athlete's food within bounds of taste will accomplish this purpose. Salt tablets, particularly on an empty stomach, can be irritating and may be poorly absorbed.

Even after acclimation, it is advisable to alternate periods of strenuous exercise with periods of rest during hot weather. Also, it is important of the coach to observe his athletes carefully for signs of lethargy, inattention, stupor, awkwardness or unusual fatigue. Symptoms of water and salt depletion may include sluggishness, headache, nausea, hallucinations, and/or week and rapid pulse. If heat illness is suspected, prompt attention to these recommended emergency procedures might have vital importance.

HEAT STROKE: Collapse – with dry warm skin and rapid weak pulse – indicates sweating mechanism failure and raising body temperature. **THIS IS AN EMERGENCY: DELAY COULD BE FATAL**. Immediately cool athlete by the most expedient means (spray or sponging with cool water is a good method). **OBTAIN MEDICAL CARE AT ONCE**.

HEAT EXHAUSTION: Weakness – with profuse sweating and rapid pulse – indicates state of shock due to depletion of salt and water. Place the person flat on his/her back in the shade with head on the ground, level or lower than body. Give sips of diluted salt water if conscious. OBTAIN MEDICAL CARE AT ONCE.

The following suggestions are offered to help coaches prevent heat exhaustion and heat stroke during hot weather athletic activity:

1) Require a careful medical history and check-up prior to the beginning of practice.
2) Schedule workouts during cooler morning and early evening hours in hot weather.
3) Acclimate athletes to hot weather activity by carefully graduated practice schedules.
4) Provide rest periods of 15 to 30 minutes during workouts of an hour or more in hot weather.
5) Supply clothing that is white to reflect heat, comfortable to permit heat escape, and permeable to moisture to allow heat loss via sweat evaporation.
6) Furnish extra salt water in recommended amounts during hot weather.
7) Watch athletes carefully for signs of trouble, particularly athletes who lose much weight, heavy athletes (e.g. interior lineman), and the determined athlete who may not report discomfort.
8) Remember that temperature and humidity are the crucial factors. Measuring the relative humidity, by use of a sling psychrometer on the field, is advantageous in this regard. Heat exhaustion and heat stroke can occur in the shade.
9) Alert the hospital emergency room medical and nursing staff of the possibility of heat illness among athletes before an emergency occurs to that they are prepared to care for a stricken athlete.
10) Know what to do in case of such an emergency. Be familiar with immediate first aid practices and pre-arranged procedures for obtaining immediate medical, including ambulance service.
11) Outlaw the hazardous warm weather use of rubberized apparel or other dehydration devices by players.

Some teams encounter hot weather during the season either through intersectional travel or following an unseasonably cool period. By that time the athlete should be physically fit; nevertheless, they will not be environmentally fit. Coaches who face this situation are advised to schedule practices preceding the game at the warmest time of day, to diligently subscribe to the other recommendations above, and to use substitutes during the game more frequently than normal. The result will benefit the team's performance as well as the health of athletes.

MOVING THE INJURED ATHLETE

Stop (stop play immediately at the indication of an injury).

Look (look for obvious deformity or other deviation from normal).

Listen (listen to the athlete's complaint).

Act (move the athlete only after serious injury is ruled out).

The First Aid Chart for Athletic Injuries thus places "action" last among the four final steps of first aid to protect the athlete at the time of injury.

Serious injuries occur in sports as in other activities of life. The advantage of participating in supervised sports is that those injuries can be anticipated and appropriate safeguarding measures taken. First Aid procedures and equipment can be pre-arranged. Student managers, as well as coaches, trainers, and other faculty members connected with sports, should be well grounded in correct first aid procedures, especially proper methods of moving the injured player. Improper or careless methods can increase the severity of the injury and may even cause disability or death.

A physician hopefully is present at athletic contests such as football where the risk of injury is obvious. One of the responsibilities of the attending physician is to supervise the transportation of an injured athlete when this is necessary. However, such a provision is no assurance against problems, because serious injuries can occur: (1) in practice when a physician may not be immediately at hand, and (2) in sports that are not so hazardous as to require the regular attendance of a physician. In such instances it may be necessary to move the injured player in accordance with sound principles, although it would be preferable to do so only on physicians' instruction.

PRINCIPLE ONE – Avoid being hurried into moving an athlete who has been hurt. Meriting re-emphasis is the admonition that to protect the athletes at the time of the injury and move him only after serious injury is ruled out. Few injuries in sports require breakneck speed in removal of the players; the game officials will respect the judgment and caution of responsible personnel.

PRINCIPLE TWO – Obtain medical supervision before moving an athlete with a suspected neck or spinal injury. An athlete's inability to move or feel an extremity, even if momentary, is sufficient cause for the first aid provider to be determined in his conservatism. Moving a player with such an injury can cause further damage and result in permanent disability, if not death. The game can wait.

PRINCIPLE THREE – Have near at hand for ready use at the site of participation: (1) a stretcher, (2) a telephone and (3) safe means of transportation to the nearest hospital. The stretcher may be in conflict with the heroic stoicism an injured player mistakenly wants to display. But with any serious injury, attempting to walk or run off the field may be sufficiently aggravating to delay unnecessarily the effective return of that athlete to competition. In the case of a head injury (concussion), the recumbent position is a wise precaution against aggravation of possible internal bleeding before medical care can be reached. The immediate availability of a vehicle or rapid transit can be a lifesaver. Rapid communication with an assigned physician is frequently necessary.

PRINCIPLE FOUR – If the player can be moved, support the injured joint or limb. If in the lower extremity, avoid weight bearing. An assistant of 140 pounds is little help in this regard when helping a limping 220-pound player away from the zone of action. If the upper extremity is involved, giving support against gravity will bring the player to medical care with the least pain and risk.

PRINCIPLE FIVE – If the player is to be moved, move him away from the proximity of the crowd. Emergency medical stations near, but not at the site of action, will minimize the natural tendencies of the athlete to attempt unauthorized return to play. Equally important, it will give the physician the opportunity to make a quiet, thorough initial evaluation of the severity of the injury.

PRINCIPLE SIX – Post conspicuously and have understood by all supervisory personnel, the step-by-step directions for emergency first aid procedures. The physician closest to the school's sports program can help develop the best practical plan for fitting the community's resources to the supervisory coverage of games and practices.

DIET HINTS FOR THE HIGH SCHOOL ATHLETE

There does not exist, unfortunately, any "magic formula" of foods or vitamins that will produce a "super athlete." However, a well balanced diet of carbohydrates, proteins, fats, minerals, roughage and vitamins is essential to attaining and maintaining peak athlete performance.

Diet for the Athlete

1) Types of Foods

A) Bread-Cereal Group – 4 or more daily servings.
B) Dairy Foods – 4 or more glasses of milk or equivalent in dairy products.
C) Meat Group – 3 or more servings daily – meat, poultry, fish, eggs, and cheese.
D) Vegetable – Fruit Group – 5 or more servings daily, including green leafy vegetables, yellow vegetables, citrus fruits, juices or tomatoes.

Recent studies in nutrition have proven without a doubt that a fair number of our high school students do not eat an adequate diet. Likewise, I am sure that a fair number of high school athletes are deficient in on or more aspects of the well-balanced diet. The popularity of the "drive-in" or "fast food" has taken nutrition out of the home and put it in the hamburger and milkshake stand – a woefully deplorable situation. Coaches and team physicians would do well to spend a session early in the season instruction the squad in the fundamentals of an adequate diet.

2) Caloric Requirement for the High School Athlete

Caloric requirements vary with age, rate of growth, size plus physical activity. A 15-18 year old male student requires 25 cal/pound, plus 10% more for his physical output. The 150-pound boy requires about 4,000 to 5,000 calories.

A) Assign a reliable trainer to keep an accurate weight chart for every member of the squad. This type of record is very important and will give the coach and team physician many clues regarding body weight, fluid balance and physical performance.
B) The grossly overweight boy/girl should be on a reducing diet, preferably under the guidance of his/her family physician – he/she should have started this in June! The skinny kid will probably gain weight during the season as a result of the physical activity, if he/she is provided enough calories of the proper types.

3) Pre-Game Feeding

A) On Thursday and especially on Friday preceding a Friday or Saturday game, instruct the squad to eat a diet higher in carbohydrates and lower in protein. Protein is not the best fuel for working cells – carbohydrates are – consumption of a carbohydrate-rich diet will improve capacity for prolonged exercise.
B) A meal before game time should be given three or more hours before the event, and feed mainly carbohydrates, i.e., toast with honey or jelly, cereals, fruits in heavy syrup, Jell-O with fruit. Avoid steak, bacon, eggs, etc.
C) Liquid feedings are of some value for athletes with nervous stomachs who habitually vomit just prior to game time. Instant Carnation is a good as any and the cheapest.

4) Halftime Liquids

Plenty of cold water is usually sufficient. Real hot weather – special formula liquids may be helpful. Sweetened liquids sometimes are indicated – orange juice, tea with sugar**, soft drinks???, etc.**

DRUGS AND THE HIGH SCHOOL ATHLETE

This discussion related only to drugs that have been used by athletes to enhance their performance. The use of such drugs should neither be tolerated nor encouraged by coaches, trainers or physicians. All national and international organizations associated with athletics have taken a definite and firm stand against the use of any such drug.

Amphetamines or "Pep Pills"
They impair the individual's ability to think clearly. There is a real hazard of addiction and habituation, plus toxicity in excessive doses.

Androgens – Anabolic Steroids
Contrary to the beliefs of some athletes, they do not help in building super muscles and are of no value to the healthy athlete. On the contrary, their use may produce serious but subtle side effects that can be harmful to the health and body – growth – sexual development – liver function.

Oral Enzymes
Hasten healing and absorption of bloods. Equivocal results – their use is not particularly harmful and, if used, should be under the guidance of a physician.

Tranquilizers and Sedatives
Their use may result in ineffective performance and slowing up of both physical and mental activity. The occasional exception is the highly keyed-up player the night preceding the game.

Analgesics (pain killers)
Their use to "get the star back into the game" is strongly condemned. If the injury is severe enough to require a strong analgesic, the player should not be returned to the game until full evaluation of injury is made. They dull reflexes and the mind, and make the player vulnerable to further injury.

Novocain Injections
Never allow it for your high school athletes. Local anesthetic will dull and/or relieve pain, but it also can easily mask serious injuries, including fractures. You had better let the team physician evaluate the injury and forget the Novocain injection.

EQUIPMENT TO BE ON HAND AT FIELD OR COURTSIDE

Item	Recommended Quantity
Clipboard w/Emergency Cards	1
Gate keys (if gate is locked)	1
Coins for payphone	2 sets
Identification Cards	1 per player
First Aid Cards	1
Ice Chest	1
Crushed Ice	1 bucket
Plastic bags with ties	20
2” ace bandages in ice	2
4” ace bandages in ice	2
6” ace bandages in ice	2
Drinking cups & water	Variable
Towels	12
Kleenex	1 box
Crutches	1 pr
Sling	2
Neck Collars	2
Knee Splints	1
Stretcher	1
Air Splints (assorted for extremities)	Several
Spine Board **(properly trained personnel use only)**	1
*Trainer’s Angel	1 pr
*PVC Pipe Cutter	1
*Screwdrivers (1 regular/1 Phillips)	1 ea
*Sharp Box Knife	1

*Items for football only – for use in removing facemask from helmet.

Depending on sport, items may be readily available in trainer’s office if playing/practicing at home site.

SUPPLY LIST FOR A BASIC TRAINER'S TRAVEL KIT

Item	Recommended Quantity
Adhesive Tape (1-1/2" rolls)	4
Alcohol or hydrogen peroxide	3 oz
Analgesic Balm ("heat" source)	6 oz
Band Aids 1"	25
Bandage Scissors and/or tape cutters	1
Butterfly bandages or steri-strips	25
Contact lens kit (mirror + wetting solution)	1
Cotton balls	25
Cotton tip applicators ("Q" tips)	25
Disinfecting soap (Phisohex or Cinder Suds)	3 oz
Elastic tape (3" rolls)	2
"Ace" or Elastic Wrap – 4", 6", or Double 6"	2 of ea
Eye cup (sterile)	1
Eye patches (sterile)	3
Eye wash (sterile dacriosse solution)	½ oz
Felt (1/4", ½", 6"x6")	1 ea
Felt shoe horses	3
Foam rubber	1 piece
First aid cream or ointment (antiseptic)	1 tube
Flashlight or penlight	1
Gauze pads (3"x3", sterile)	12
Moleskin	1 piece
Pencil & paper	1
Plastic bags for ice or chemical ice	6 bags
Powder (talcum and/or foot powder)	3 oz
Skin lubricant (Vaseline)	6 oz
Tape adherent (spray or tincture of benzoin)	6 oz
Thermometer (or Tempadots)	1 or 6
Tongue depressors	12
Triangular bandage or sling	2
Tweezers	1
Underwrap (Pre-wrap/Pro-wrap), optional	2 rolls
Emergency identification cards	1 per athlete

ITEMS FOR A CENTRALIZED TRAINING ROOM

Item	Recommended Quantity
Ace wraps (3" or 4", 6", Dbl 6")	4 dz ea
Adhesive Tape (1-1/2") coach	35 cs
Alcohol	10 pints
Applicators (swabs)	1 cs
Athletic Training Kits (empty)	6
Band Aids (1")	1 cs
Biohazard Waste Bags	100 bags
Biohazard Waste Can	1
Blankets	3
Blister Tape (1/2" + 1")	1 box
Blood Spill/Bodily Fluid Clean-Up Kit	6
Bulletin Board & Blackboard	1
Butterfly Closures (steri-tips)	100
Cabinets or Shelves for Supplies	As needed
Chairs for Waiting Athletes	2 or 3
Clock	1
Cotton, Sterile	1 case
CPR Barrier	6
Crutches (adjustable)	2
Cups-Paper or plastic for drinking (4oz)	500
Disinfectant (spray + ointment)	1 gallon
Elastic Tape 3" (Elastikon, Conform)	36 rolls
Emergency Kit (to include): 50 cents, telephone numbers of emergency (911) nearest hospital, major trauma hospital/medical center (e.g. Providence-Colby Campus), team physician, address of practice facility (plus facility gate), location of nearest telephone (plus key if it is in a maintenance shack that is locked), key to vehicular gate if it is locked. Have a map with linked-in route to nearest hospital and/or trauma hospital/medical center (e.g. Providence-Colby Campus). Emergency Cards – the athletes' emergency information cards **must** be on hand at field or courtside for all practice and games.	
Emery Board or Sand paper for callus trimming	10
Extra 2" large Band Aids	5 boxes
Eye Patches	10
Felt (2 sheets) ¼" + ½" (40x40)	1 ea
First Aid Cream	12 tubes
Flashlight (+ extra light & batteries)	2
Foam padding 1/8", ¼", ½" (40x40)	2 ea
Gauze pad 4"x4" sterile	1 cs
Gauze pads (unsterile tendon coverings in taping)	2 cs
Gauze rolls (for ankle and dressing)	1 cs
Heel cups for bruised heels	6
Hotpack Terrycloth Covers	8
Hydrogen Peroxide	8 pints

Ice (available daily)	
Ice Chest	3
Latex Gloves	8 boxes
Mirror	1
Moleskin	1 roll
Neck Collars (foam in various sizes)	3
Plastic Bags	1 case
Powder (foot & body) 12oz cans	12
Refrigerator	1
Scales	1
Scalpel Blades (disposable)	12
Scissors (bandage & dressing purposes)	6 pairs
Scissors (surgical)	1
Sink w/Hot and Cold Water	1
Skin Adherent for taping	1 gallon
Skin Soap – Bar Soap	1 gallon
Slings for Triangular Bandages	2
Spine Boards **(properly trained personnel use only)**	1
Splints (regular)	2 sets
Splints Knee Corsets/Immobilizer	3
Stretcher	1
Tables, taping (24" wide x 72" long x 32-34" high)	1 minimum
Tape Cutters	6
Tape Remover	1 gallon
Thermometer (oral)	3
Tongue Depressors	12
Towels	2 ea
Tweezers & Forceps	2 ea
Underwrap (Pre-wrap/Pro-wrap)	4 cs
Vaseline	10 lbs
Water Dispenser	1
Weight Charts	12
Whirlpool	1
Hydrocollator	1
Silicon gel hotpacks for hydrocollator	6 or 8
Heat Balm	30 oz
Plastic Waste Basket (to fit foot for contrast therapy)	2

Quantity based on high school enrollment of 1,000 with 17 varsity sports.