

Minimizing Liability Risks of Head and Neck Injuries in Football

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Abstract: *Although catastrophic head and neck injuries in football occur infrequently, their occurrence is almost always followed by litigation. The athletic trainer has to be sure he/she has adequate liability insurance to cover the costs of a defense and a possible judgment. General claims filed against athletic staffs usually deal with instruction, equipment, matching of participants, supervision, and/or postinjury care. The defenses to these claims include: statutory immunity, assumption of risk, releases or waivers, and the reckless disregard standard. The athletic trainer plays a key role in head and neck injury prevention and care, and must be aware of litigation possibilities, along with methods of risk management. We present recommendations aimed at minimizing the risk of head and neck injuries and the risk of liability. The areas covered are: preparing for head and neck lawsuits, preventing head and neck injuries, and postcatastrophic injury care. We base these recommendations on principles that the athletic trainer*

can easily apply to other areas, broadening the risk management concept presented.

Catastrophic head and neck injuries in football are among the most devastating in all of sports. These injuries not only have a tremendous impact on the athlete and his family, but also can affect the entire athletic community. Fortunately, these injuries occur rather infrequently.^{24,33,36,37,54-60} However, the occurrence of a catastrophic head or neck injury is almost certain to be accompanied by litigation.^{5,43,62,66}

The seriousness and finality of these injuries demand that everyone involved take all possible steps to decrease the risk of head and neck injuries. The athletic department should make the commitment to provide the care and expertise an athlete deserves if he is injured. The cost of a judgment can easily exceed \$1 million.⁴³ It is the responsibility of those involved to be aware of potential litigation while decreasing the risk of being at fault for an injury.

The athletic trainer is a key component in the prevention and care of head and neck injuries. But his/her responsibility in this area entwines closely with the team physician, coaching staff, equipment manager, and the administration (Fig 1). The efficacy of one is highly dependent upon the others. For this reason, the purpose of this article is to address the responsibilities of the entire athletic program.

Legal Concerns

It is of paramount importance for the athletic staff to understand pertinent legal terms. The application of this information is the foundation of a risk management program.

Tort

A civil wrong, other than breach of contract, for which the court will provide a remedy in the form of an action for damages.⁴⁵ It has also been defined as “. . . an act or omission which unlawfully violates a person’s right created by law, and for which the appropriate remedy is a common law action for damages by the injured person.”⁴⁵

Negligence

Conduct which falls below the standard established by law for the protection of others against unreasonable risk of harm.⁴⁵ The general standard of conduct imposed by law is that you act like a “reasonable man or person” would under like circumstances.⁴⁵ Negligence is one type of a tort.

Gross Negligence

A step beyond negligence, the person demonstrates a lack of even slight or scant care. It has been described as a failure to exercise even that care which a careless person would use.⁴⁵

Wilful, Wanton, or Reckless Negligence

In practice, these three terms have been treated as meaning the same thing. The usual meaning is that the person whose conduct is so described “. . . has intentionally done an act of an unreasonable character in disregard of a known or obvious risk that was so great as to make it highly probable that harm would follow and which thus is usually accompanied by a conscious indifference to the consequences.”⁴⁵

Contributory Negligence

Prosser and Keeton⁴⁵ describe this as, “conduct on the part of the plaintiff that contributed as a legal cause

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Fig 1.—The athletic trainer, coach, equipment manager, and team physician must coordinate risk management efforts.

to the harm that he (or she) has suffered, which conduct falls below the standard to which he was required to conform for his own protection.”⁴⁵ A finding of any degree of contributory negligence on the part of the plaintiff would generally act as a complete bar to the plaintiff’s action for damages, even though a negligent defendant’s conduct also helped cause the plaintiff’s injuries.⁴⁵ Prior to the modern trend in America of abolishing the doctrine of contributory negligence and replacing it with comparative negligence (in one form or another), it was a strong defense. Currently only six states recognize contributory negligence as a complete defense.³

Comparative Negligence

Apportionment of the responsibility for damages suffered in proportion to the degree of fault of each person for an accident.^{2,45} The various states using a system of comparative negligence have generally adopted a system of “pure” or “modified” comparative negligence. Under a system of “pure” comparative negligence, “. . . a plaintiff’s contributory negligence does not operate to bar his recovery altogether, but does serve to reduce his damages in proportion to his fault.”⁴⁵

Under the two most common systems of “modified” comparative negligence “. . . the plaintiff’s contributory negligence does not bar recovery so long as it remains below a specified proportion of the total fault.”⁴⁵ Under the “equal fault bar” approach, the plaintiff cannot recover if his fault is equal to or greater than the defendant’s. Under the “greater fault bar” system, the plaintiff is prevented from all recovery only if his fault exceeds the defendant’s.⁴⁵

Assumption of Risk

Where the plaintiff is injured as a result of his/her having voluntarily exposed himself to the known and appreciated risk(s) of that injury, the doctrine of assumption of risk will bar the plaintiff’s recovery for damages.⁴⁵ In some states the defense of assumption of risk has been abolished outright.⁴⁵ In other states it has, to varying degrees, “merged” or been “abolished” into the system of comparative negligence adopted by the state.⁴⁵

Informed Consent

In order for the consent of the patient that is a prerequisite to any proposed course of medical treatment or medical procedure to be effective, it

must be knowingly and intelligently given. The medical provider, prior to performing the treatment or procedure, must provide the patient with sufficient information to make an “informed” or intelligent decision on whether to submit to the proposed treatment or procedure.⁴⁵

Joint and Several Liability

The defendants are responsible together and individually for damages.⁴ Application of the common law principle is that a defendant “. . . is liable for all consequences proximately caused by the defendant’s wrongful act”⁴⁵ has led to the rule that joint tortfeasors are jointly and severally liable. Each defendant is liable for the entire loss sustained by the plaintiff, even though his/her act concurred or combined with that of another wrongdoer to produce the result. If a defendant is found to be a joint tortfeasor, the injured person can collect the full amount of the damage award from the defendant regardless of that defendant’s percentage of fault.⁴³

This is illustrated in *Walt Disney World v Wood*.⁶³ In this case, a woman was injured in a bumper car collision. The jury found the woman was 14% responsible, the amusement park was 1% responsible, and the driver of the other bumper car was 85% responsible. However, because the other driver had no assets, the amusement park had to pay 86% of the damages.

Need for Adequate Liability Insurance

In the last two decades, there has been an explosion of tort litigation in this country. The increasing incidence of school districts, coaches, and other athletic staff members being sued as a result of an athlete’s injury mirrors the trend that exists in American society-at-large.

In today’s legal climate, being joined as a defendant in a lawsuit filed by a catastrophically injured athlete can be financially and emotionally devastating. Even if a defendant ultimately proves that he/she was not responsible in any way for

the athlete's injuries, the legal fees and costs incurred in a defense could bankrupt all but the most wealthy individual. The high cost of presenting a defense may actually prevent an individual who does not have proper liability insurance coverage from presenting a proper and complete defense. Thus, for the athletic trainer, proper risk management begins with the acceptance of a position at an institution. It is absolutely essential that the athletic trainer confirm that he/she is covered under the institution's liability insurance policy. Waiting until after an injury has occurred will be too late. Any liability coverage that you obtain after an injury would not cover claims arising prior to the inception date of coverage.

To be certain that you are covered under an institution's liability policy, ideally you should request and receive from the institution a certificate of insurance expressly naming the athletic trainer as an additional insured under their liability policy. At a minimum, you should obtain a letter from the administrator of the institution confirming that the athletic trainer is covered under the institution's policy for activities relating to athletic events. Confirmation of liability insurance coverage is especially important if you are not a full-time employee of the institution. In this situation, a court could decide that you are an "independent contractor" who is not an insured under the standard policy provisions giving coverage to an institution's "employees." This same reasoning could also operate to prevent the statutory immunity that is conferred in some jurisdictions on public institutions, such as schools, from being extended to include the activities of the athletic trainer.

If the school is unable or unwilling to provide liability insurance coverage to the athletic trainer, then you should meet with a competent insurance agent and obtain appropriate liability insurance coverage individually. If you are employed by a clinic, coverage for your scholastic activities may possibly be obtained, at a

reasonable cost, through the insurance company that provides liability coverage for the clinic. In any event, the athletic trainer should obtain the advice and assistance of a competent insurance professional to confirm that he/she has sufficient liability insurance coverage to protect his/her interests.

General Claims Asserted Against Athletic Staffs

A general review of the cases involving claims by injured athletes shows that the claims asserted against the schools, coaches, and other members of the athletic staff allege breaches of duty. The breaches of duty were in one or more of the following five areas.

Failure to Give Adequate Instruction

In *Wissel v Ohio High School Athletic Association*,⁶⁶ for example, a quadriplegic high school football player brought suit against his coaching staff. The complaint claimed negligence of the coaches in failing to properly educate each other and the injured player on proper tackling techniques and available equipment, and failing to maintain a reasonable warning label on the helmet. It also alleged failure to provide the player with a "head up" chin strap or other protective device to prevent dropping of the tackler's head at impact. A complaint was also filed against the state athletic association for failure to adopt a rule change requiring neck protection equipment.

Failure to Supply Proper Equipment

In *Gerrity v Beatty*¹⁷ the complaint alleged negligence against the defendant school district in furnishing the athlete with an ill-fitting and inadequate football helmet. In *Low v Texas Tech University*³⁴ the complaint was against the football coaching staff, management, and trainers for negligence in failing to furnish proper equipment and supporting devices and in failing to allow the student-athlete to wear proper equipment and supporting devices.

Failure to Reasonably Select or Match Participants

For example, in *Vendrell v School District No 26C*,⁶² the complaint was against the high school coaching staff. It alleged negligence contributing to the injury in which a freshman athlete sustained a fracture of the cervical vertebra. The grounds included the fact that the injured athlete was too young, small, uncoordinated, and inexperienced in playing football to participate on the varsity level.

Failure to Provide Nonnegligent Supervision

In *Balet v Brunswick Corporation*⁵ the complaint was filed by a junior varsity football player who was rendered a quadriplegic as a result of a serious neck injury. The complaint claimed negligence against two of the coaches for failure to properly supervise, instruct, and train the injured athlete to participate in the football program. The complaint against the coaches was dismissed on grounds of governmental immunity.

Failure to Use Proper Postinjury Procedures^{32,35}

For example, in *Jarreau v Orleans Parish School Board*,²⁸ the complaint alleged negligence by two members of the coaching staff and the school board for unreasonable delay in referring the injured athlete to a physician for diagnosis. The delay resulted in exacerbation of the injury. On appeal, the judgment of \$80,000 was reduced to \$61,816.91.

General Defences Against Lawsuits

A review of the cases also show that the courts, at times, apply various doctrines to the benefit of the school and its athletic staff in defending claims filed by injured athletes or their families. Following are the most commonly used doctrines.

Statutory Immunity

Several states, by statute, confer total or limited immunity to schools or teachers while acting in the normal scope of their duties.²⁶ Whether such

immunity exists in a particular state and the scope and limits of any such immunity should be investigated and understood by the athletic trainer. For example, the immunity statute did not apply to allegations of negligence in providing defective sports equipment.¹⁷ Colorado limits the recovery against a governmental entity to \$150,000 per person, and \$600,000 per occurrence.¹¹

Assumption of the Risk

Almost every state recognizes, in some form, the concept of assumption of the risk. Simply stated, this doctrine would apply where the injuries complained of result from known risks (physical contact and collisions) inherent in the sport which the athlete has voluntarily undertaken.³⁰ As was stated by the California Court of Appeals, the doctrine of assumption of the risk is “. . . another way of stating that the defendant’s duty of care has been reduced in proportion to the hazards attendant to the event. Where no duty is owed with respect to a particular mishap, there can be no breach; consequently, as a matter of law, a personal injury plaintiff who has voluntarily—and reasonably—assumed the risk cannot prevail.”⁴² The important point to remember is that in order to have the advantage of this doctrine, it must be shown that the plaintiff (injured athlete) knew of and appreciated the risks involved in the activity.

It, therefore, is vitally important that athletes are informed of the risks and dangers (serious injury, including death or quadriplegia) involved in football and, in particular, the prohibited conduct (spearing). These warnings must be given and the adequacy of the content of the warnings should be provable at some later date, should it be necessary.

This can be accomplished by having the athletes (or parents/guardians, if the athlete is a minor) sign appropriate acknowledgement of risk forms. The forms should clearly and specifically apprise the athlete of the risks involved in football. The form should state that, knowing the risks

Athlete's Name: _____
 I understand that the game and sport of football is an inherently dangerous activity and that there are genuine and real serious risks to anyone who engages in this activity.

I also understand that football is the highest risk sport for injury on the high school level. Due to the nature of the physical violence and collisions that are a part of the game and sport of football, I understand that the risk of serious physical injury, including catastrophic injury resulting in permanent paralysis, brain injury or death does exist.

I also understand that other participants, the coaching staff, athletic trainer, team physician and/or spectators may engage in conduct, including negligent conduct, that may increase the risk of injury to me.

I knowingly assume responsibility for any and all such risks and any and all resulting injuries, including death. I promise to accept and assume responsibility and risk for injury, death, illness, or disease, or damage to property arising from my traveling to, participation in, or returning from this activity. And I do hereby voluntarily choose to participate in this event in spite of the risks.

Furthermore I attest that I am physically fit and have sufficiently trained for this event. I do not have any medical record or history that could be aggravated by my participation in this activity.

My signature below indicates I have read this entire document, understood it completely, and agree to be bound by its terms.

Printed Name _____

Address _____

Phone _____

_____ Parent/Guardian Signature Date

Parent/ Guardian must execute form if the athlete is under the age of eighteen (18) years.

_____ Athletes Signature Date

Signature of Witness _____

Fig 2.—An example of an acknowledgement of assumption of risk form for a high school athlete.

involved, the athlete is voluntarily participating in the activity (Fig 2).

In addition, some schools and athletic associations have used videotapes showing experts (well-known coaches, doctors, etc) explaining, in detail, the risks associated with football and dangerous techniques such as spearing. The use of such videotapes not only reinforces the message being conveyed to the athlete but also allows a jury to view the warnings that were given. This can clear up any question regarding the adequacy of the information that was given to the injured athlete. Use of a written acknowledgement form, signed and dated by the athlete immediately after viewing the tape would eliminate any question as to whether a particular student was apprised of the risks involved in football.

Express Release and/or Waiver

There is a recent judicial trend that began in California where courts are recognizing the validity of express release agreements to bar suits for injuries sustained in recreational and sports activities.^{10,41,47} Under these decisions, in order for a release instrument to be effective, it must “. . . clearly and explicitly . . .” release the party being released from liability.⁵¹ It must use clear and unambiguous language, and specifically state that all claims for personal injury are being released and must specifically include the word “negligence” if the intent of the document is to release those claims for damages (Fig 3). Use of a document with convoluted language or arcane legal terms (“legalese”) will render the in-

I, _____, HEREBY ACKNOWLEDGE that I have voluntarily applied to participate in the scholastic football program at [NAME OF INSTITUTION].

I AM AWARE THAT FOOTBALL IS A HAZARDOUS ACTIVITY, AND I AM VOLUNTARILY PARTICIPATING IN THESE ACTIVITIES WITH KNOWLEDGE OF THE DANGER INVOLVED AND HEREBY AGREE TO ACCEPT ANY AND ALL RISKS OF INJURY OR DEATH. PLEASE INITIAL ____.

AS LAWFUL CONSIDERATION for being permitted by [NAME OF INSTITUTION] to participate in these activities and use its facilities, I hereby agree that I, my heirs, distributees, guardians, legal representatives and assigns will not make a claim against, sue, attach the property of or prosecute [NAME OF INSTITUTION], any of its affiliated organizations, owners, officers, employees, agents, servants or contractors for injury or damage resulting from negligence or other acts, howsoever caused, by [NAME OF INSTITUTION], any of its affiliated organizations, owners, officers, employees, agents, servants, or contractors, as a result of my participation in these activities.

I HEREBY RELEASE AND DISCHARGE [NAME OF INSTITUTION], its affiliated organizations, owners, officers, employees, agents, servants, or contractors, from all actions, claims, or demands, I, my heirs, distributees, guardians, legal representatives, or assigns now have or may hereafter have for injury or damage resulting from my participation in these activities.

IT IS THE INTENTION OF THE UNDERSIGNED TO EXEMPT AND RELIEVE [NAME OF INSTITUTION] AND ASSOCIATED PARTIES FROM LIABILITY FOR PERSONAL INJURY, PROPERTY DAMAGE OR WRONGFUL, DEATH CAUSED BY NEGLIGENCE.

I have carefully read this agreement and fully understand its contents. I am aware that this is a release of liability and a contract between myself and [NAME OF INSTITUTION] and its affiliates and I sign of my own free will.

DATE: _____ 19 _____

Signature: _____

IF YOU ARE UNDER THE AGE OF 18 YOU MUST HAVE THE PERMISSION AND AGREEMENT OF YOUR PARENT OR GUARDIAN TO THIS RELEASE.

Parent/Guardian Signature: _____

ant.”³⁸ This standard encourages vigorous athletic competition while diminishing the threat that a participant of athletics might be sued or found liable. Again, one should investigate in order to determine what standard is applicable in the particular state in question.

Guidelines and Recommendations

The athletic department does not exist as a separate entity from its institution. We suggest the athletic administration include the institution's governing body and legal counsel in their risk management efforts. Ideally, the institution and the athletic department should be in concert with each other in areas of liability. Going through the appropriate administrative channels will only be beneficial in the long run. It is also an excellent opportunity for the athletic trainer to educate the institution about the implications of his/her role.

The implementation of a system of head and neck injury prevention and risk management is no guarantee that the athletic staff will not be named as a defendant in litigation. However, such a system will help prevent such catastrophic injuries from occurring in the first place and will assist the athletic trainer in proving he/she should not be held legally responsible for damages resulting from such injuries. Following are our recommendations for implementing such a system. A categorization of these recommendations by general claims appears in the Table.

Preparing for Head and Neck Lawsuits

NOCSAE Helmet Standards. Purchase only helmets approved by the National Operating Committee on Standards for Athletic Equipment (NOCSAE). NOCSAE established safety standards for football helmets. The National Collegiate Athletic Association (NCAA) and the National Federation of State High School Associations (NFSHSA) both accepted these standards by 1980.^{31,36,39}

Fig 3.—An example of an release of liability form for a high school athlete. This form meets the general requirements of the California Courts.

strument ineffective since “. . . [a] valid release must be simple enough for a layman to understand and additionally give notice of its import.”²⁵

Several caveats should be noted in the use of releases as a way to manage risk on behalf of athletic staff members. First, a minor can disaffirm a contract, including a release.^{7,14} Therefore, for any athlete under the age of 18 years, it will be necessary to have a parent or guardian sign on behalf of the minor. Second, many jurisdictions, such as Colorado, will not allow anyone, including a parent, to contract away the rights of a minor or other legal incompetent. In states following that rule, use of a release to bar a minor's claim will simply not be effective. Third, the law regarding the validity

of releases to bar personal injury claims varies widely from state to state. If you are contemplating use of a release as a risk management tool, you should do so only with the advice and assistance of competent legal counsel.

Reckless Disregard Standard

Some states have limited the ability of a participant in an athletic contest to bring a claim for damages by applying what is known as the reckless disregard standard: “Courts and legislatures have espoused the view that torts which might be actionable in other arenas if negligence is shown, should only be actionable in the sports arena if the aggrieved person demonstrates gross negligence or reckless disregard by the defend-

Categories of Recommendations According to General Claims

Instruction

- Fitting helmets
- Acknowledgement of risk
- Informed consent
- Educating athletes
- Dangers of spearing
- Teaching correct technique
- Rules enforcement

Supervision

- Fitting helmets
- Rules enforcement
- Matching players
- Medical coverage
- Teaching correct technique

Postinjury procedures

- Informed consent
- Medical release
- Medical coverage
- Medical plan
- Keep the helmet on

Equipment

- NOCSAE-approved helmets
- Fitting helmets

Matching players

Miscellaneous

- Medical history/physicals
- Strength training
- Flexibility

All helmets should be permanently dated at the time of purchase and records of purchasing information should be kept. The athletic department should use this information to appropriately recondition their helmets. Any helmets that are reconditioned must re-pass the NOCSAE safety standards before use.³⁶ Finally every helmet must have the NOCSAE Football Helmet Warning Statement attached at all times.^{39,66}

Fitting Helmets. The fit of an athlete's helmet is important in injury prevention.^{37,49} Only appropriate personnel, including athletic trainers, equipment managers, and the coaching staff, should fit athletes for helmets. These individuals should strictly follow the guidelines set by the manufacturer and never permit athletes to fit themselves. We also recommend that the athlete should

read aloud the NOCSAE warning on the helmet at the time of fitting.

Other pertinent instructions include proper helmet maintenance and the reporting procedure for problems and repairs. Only qualified personnel should repair or replace helmet parts. The helmet should never be altered or modified. Athletes should be informed that they are not to switch helmets with other players. An option is to have the players sign an exit sheet that states they were fitted for their helmet and instructed on its proper maintenance.

Medical History/Physical. Each athlete should fill out a complete medical history,^{36,49} which includes information on prior head or neck injuries or problems. A physician with sports medicine experience should then do a complete physical examination.^{16,29,36}

Acknowledgement Of Risk. The athletic administration, in conjunction with legal counsel, should construct a form clearly stating the potential catastrophic injury risks associated with football. This form should state that the athlete is voluntarily choosing to participate in football. Each athlete (and parent, if a minor) should sign this form before participating (Fig 2).

Informed Consent. The athletic administration, along with the athletic trainer and legal counsel, also should construct a consent for treatment form. This form should state that the

school employs a certified athletic trainer. It should summarize the athletic trainer's qualifications and role in injury prevention, care, and rehabilitation. A statement giving or denying consent for the athletic trainer to treat the athlete must be included. This form should be signed by the athlete (and parent, if a minor) before participation begins (Fig 4).

Medical Release. For high school athletes, the athletic administration and legal counsel should construct a form giving permission for emergency medical treatment by a hospital in the parent or guardian's absence. These forms should be readily available to the athletic trainer and coach at every practice and game.

Preventing Head and Neck Injuries

Educating the Athlete. The athlete should know, understand, and appreciate the risk of serious injury. To accomplish this, the athletic trainer should take the entire team into a classroom and educate them about the mechanisms of head and neck injuries.^{21,23} The athletic trainer should discuss the severity, prognosis, and incidence of catastrophic injuries, along with contact techniques that minimize the risk of these injuries. We feel an excellent vehicle for this subject is the video, "Prevent Paralysis: Don't Hit With Your Head."⁵⁴ These educational sessions should be

Athlete's Name: _____ Date _____
_____ College employs a certified athletic trainer who is qualified to assess, treat and rehabilitate most injuries you may incur while participating in our intercollegiate athletic program.
The Head Athletic Trainer's qualifications include: certification by the National Athletic Trainers Association, registration with the New Jersey Board of Medical Examiners, certification in CPR, and First Aid and a minimum of a Bachelor of Science degree in the sports medicine field.
(Please Circle Appropriate Response)
I DO / DO NOT give my permission for the athletic training staff to assess, treat, rehabilitate, and refer me as appropriate during the upcoming year.
_____ Signature

Fig 4.—An example of an informed consent form for a college athlete.

run at least twice per season. Athletes should sign a form stating they participated in these sessions.

For high school athletes, we also strongly suggest providing a similar session for parents. Recently, in a national survey, Goldhaber¹⁹ found that parents were uninformed about both the risk of severe brain injury from playing high school football and the existing helmet warnings about that risk.

The athletic trainer also should educate the athletes regarding other injured players. It is vitally important that athletes realize they should never move a player who is down on the field.⁶⁵ They should not try to pick him up or roll him over. If the injured athlete cannot get up on his own, then the other players should wait for the athletic training staff to arrive.

Recognizing the Dangers of Spearing. Spearing (contact with the crown of the helmet) has been shown to be an integral cause of head and neck injury.^{8,16,24,36,37,54-60,64} Torg et al⁵⁴⁻⁶⁰ identified spearing as a mechanism of axial loading to the cervical spine that may result in fracture/dislocation of the vertebrae and paralysis (Fig 5). Head-first contact also can generate enough force to cause a concussion.^{6,9} Spearing is a rule infraction and the NCAA and NFSHSA banned it in 1976. For these reasons, the coaching staff must spend adequate time teaching, demonstrating, and practicing correct contact techniques.^{1,23,37,49,61}

Teaching Correct Technique. Coaches should teach correct technique throughout the year and put specific emphasis on it at least four times per season.²³ Initiating contact with the shoulder and keeping the neck in extension is the safest position for the head and neck during contact.^{23,24,36} The coaching staff should practice this technique with tacklers, ball carriers, and blockers. This should be done in camp before contact begins,¹³ before game 2, game 5, and game 7. The coaching staff should document each time they place specific emphasis on correct contact techniques.

In addition, initiating contact with the face mask is also a high school

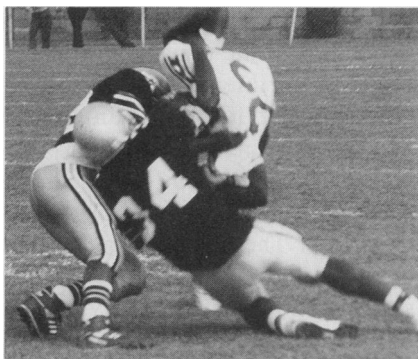


Fig 5.—Spearing is a mechanism of axial loading to the cervical spine that may result in paralysis.

rule violation.^{39,49,57} Face-first contact cannot be taught to any positional player.⁴⁴ This technique requires tremendous discipline by the athlete. If he uses poor technique by lowering his head, he would place himself in the spearing position and at risk of serious injury.^{27,53} Teaching contact skills that protect the neck will do far more to prevent injuries than exercises will.³³

Rules Enforcement. The coaching staff should have a strict enforcement policy for dealing with spearing in practice that is well communicated to the team (Fig 6). Minimally, the coaches and athletic trainers must attempt to correct a player's technique any time they see him lower his head and spear.²³

Regarding rule enforcement, we feel officials play the most important role in this area. It is the officials who have a potentially large impact on re-

ducing the incidence of spearing. Officials can accomplish this by calling the penalty during games and making the rule a true deterrent to players. However, it seems that officials are not calling the penalty with enough frequency to accomplish this.²³

Matching Athletes. Once contact drills begin, the coaching staff should match athletes as appropriately as possible. Factors the staff should consider include skill level, experience, maturity, size, and age.⁴⁰

Strength Training. Strengthening neck musculature is an accepted part of neck injury prevention.^{8,33,37,49,64} The athletes should have access to some type of neck strengthening equipment, and the strengthening program, ideally, should be year-round. If this is not possible, then it should allow adequate time for strength gains (4 to 6 weeks before the season begins). During the season, athletes should continue to lift at least 1 day per week to maintain their strength levels.²⁰

Flexibility. Many authors feel flexibility plays a role in injury prevention.^{15,18,50} Flexibility of the neck musculature is believed to play a role in the prevention of neck injuries.⁶⁴ A stretching routine designed for the neck musculature should be a part of the athlete's daily warm-up.

Postcatastrophic Injury Care

Practice and Game Medical Coverage. An athletic trainer should be on-

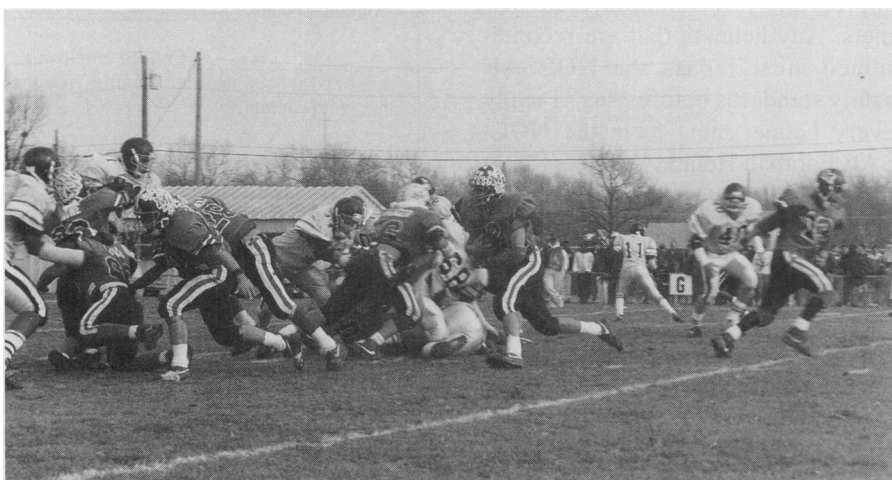


Fig 6.—Keeping the head up in all phases of football reduces the risk of serious head and neck injury.

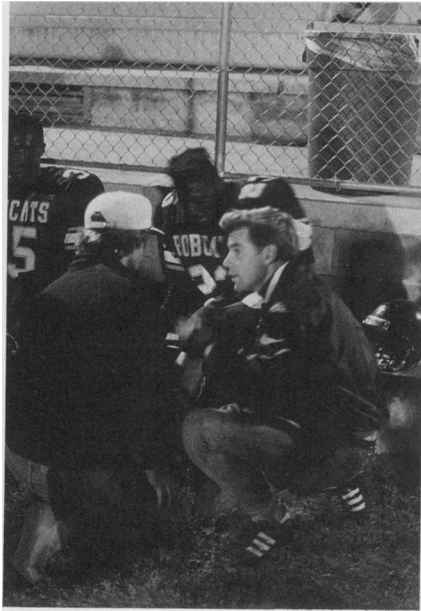


Fig 7.—An established chain of command should defer all injury decisions to the athletic training staff in the team physician's absence.

site or available at all practices that will include contact. In the absence of the athletic trainer, the team should run only noncontact practices. There should be a reliable mode of communication to enact the emergency medical system, which is quickly accessible from the practice field. The field itself also should be easily accessible to an ambulance (gates unlocked, etc).

Ideally, a physician and the athletic trainer should be present during games. However, on the high-school level (especially junior varsity and freshmen), a physician's presence is not always a reality (Fig 7). An established chain of command should defer all injury situations and decisions to the athletic trainer in the physician's absence.^{33,49,65} The athletic department should ensure an ambulance is on-site at all games (including junior varsity and freshmen) for immediate transportation to a medical facility.

Emergency Medical Plan. The athletic department should develop a written emergency procedure for handling serious head and neck injuries. This should address the procedure for handling injuries at practice as well as at games. This procedure

should be distributed to all members of the coaching staff and athletic personnel, and strictly adhered to in emergency situations.^{31,35}

Keep the Helmet On. Removing the helmet of an athlete with a potential cervical spine injury may increase the risk of permanent damage to the athlete's spinal cord. For this reason, the helmet should be left on and the head immobilized until the athlete reaches the hospital facility.^{12,22,52,64} In the event the athlete needs rescue breathing or CPR, the athletic trainer should have a method of removing the face mask while keeping the neck immobilized and the helmet on.⁴⁶

Emergency medical technicians (EMTs) often follow a different protocol for helmet removal. To prevent problems on the field, the athletic trainer (and team physician) should meet with their responding ambulance squad and discuss helmet removal before the season begins.^{12,48,52} It is an excellent opportunity to educate the EMTs to the educational background and role of the athletic trainer.

Conclusion

While we have directed this article at head and neck injuries, the legal concepts used are broad. The athletic trainer can use the legal concepts and recommendations made to formulate a risk management program for areas much wider in scope.

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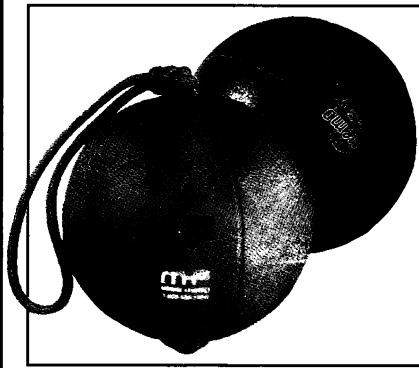
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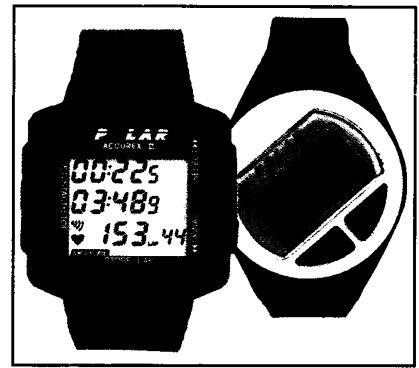
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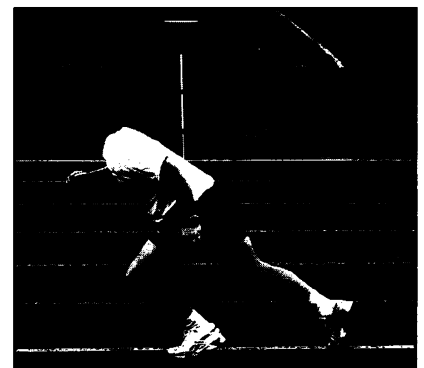
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