

# Coaches Can Reduce The Risk of Neck Injuries

Cervical spine injuries resulting in paralysis are among the most devastating injuries in all of sport. These injuries have an overwhelming social, financial, and psychological impact on athletes and their families. There is no surgery or rehabilitation that will resolve paralysis. For all of these reasons it is just about certain litigation will also be involved for the coaching staff and school district.

In football, the primary cause of these injuries is axial loading, which can occur if a player accidentally initiates contact with the top of his helmet (head-down contact) or intentionally uses a head-down contact technique (spearing). These injuries occur most often to defensive players, but ball carriers and blockers risk paralysis, as well, by lowering their heads at contact.

Although there has been a dramatic decrease in the incidence of these injuries from the mid 1970s, there is room for improvement. Six to nine athletes are paralyzed every year in football and this is still too many. The helmet-contact penalties are not adequately enforced. Of the 20,837 penalties called in NCAA Division 1 football in 2001, only 25 were helmet-contact penalties. Head-down contact still occurs frequently. Slow motion review of high school game-films found 40 head-down contacts per game.

In an effort to eliminate these injuries from the sport, coaching staffs must acknowledge that unintentional head-down contact by any player is dangerous and then coach accordingly. If head-down contact can be eliminated or drastically reduced the risk of paralysis decreases with it.

The National Athletic Trainers' Association (NATA), a not-for-profit organization representing and supporting 30,000 members of the athletic training profession recently published a position statement on this issue in its *Journal of Athletic Training*, which can be seen in its entirety at <http://www.nata.org/publicinformation/files/spearingps.pdf>.

Below are some highlights of the report and additional recommendations for coaches:

## Key Concepts

- Axial loading occurs when the neck is partially flexed aligning the cervical vertebrae in a straight column. If a force is then applied to the top of the head, the neck is unable to handle the impact causing cervi-



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cal spine compression, which results in fracture or dislocation.

- Unintentional head-down contact is dropping of the head just before contact. Spearing is the intentional use of head-down contact. Both are dangerous and may result in axial loading.

- By practice and repetition, players must overcome their reaction to protect their eyes and face by lowering their heads at contact.

- Every time a player makes contact with his head down, he risks fracturing his cervical spine and paralysis.

- Initiating contact with the shoulder while keeping the head up is the safest way to play football. This is the goal of every collision. The game can be played as aggressively with this technique, and the neck will be protected.

- Catastrophic neck injuries resulting from axial-loading are neither caused nor prevented by players' standard equipment.

## Practice Recommendations

- Head-down contact by ball carriers, blockers, special teams' players, and tacklers, must be addressed.

- Specials teams' players often receive no training in collisions that occur away from the ball carrier. This aspect of football must be addressed through practice.

- Tackling below the waist is the most dangerous collision. Players need specific instruction and repetition on keeping the head-up in this situation.

- Coaches have to design drills where shoulder contact with the head up is the goal for all positional players. These drills

should progress to full speed and game-like situations.

- Typically programs teach correct contact to tacklers before the season begins. This must continue, but be expanded to include the other positional players. In addition, coaches should put specific emphasis on this again three more times spaced throughout the season.

- All coaches must teach with the same routine and methods, i.e., the middle school, freshmen, JV, and varsity should be identical.

- Use the weekly review of game films to also give players feedback on their helmet position.

## Coaching Points

- Never instruct ball carriers to "put their head down" to break tackles or run aggressively. Instruct them to "lower their shoulder."

- Do not coach players to put their "helmet on the ball" when tackling. This is against the spirit of the helmet-contact rules and still teaching helmet-first contact.

- Use the phrase "when the shoulder goes down, the head comes up" (or similar) as a repetitive teaching point.

- Teaching athletes to initiate contact with their face-mask is a rules violation. This is not the intention of "See What You Hit." If an athlete executes this technique poorly by lowering his head, he is in the axial loading position and at risk of paralysis.

## Officiating/ Rules

- The helmet-contact penalties are unique in football. When properly enforced, they are the only action penalties that penalize a player for his own protection. The primary intent of the penalties is to protect the athlete who initiates contact head-first from paralysis.

- Coaches should recognize that when these penalties are enforced, it is an officials attempt to protect your player from paralysis.

## Teaching & Minimizing Liability Risks

- Players must know, understand and appreciate the risks of making head-down contact whether accidental or intentional.

- Formal classroom educational sessions should be held twice per season. One session before contact begins and one

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repeated half way through the season. Recommended topics are mechanisms of head and neck injuries, related rules and penalties, the incidence of catastrophic injury, the severity and prognosis of these injuries, and the safest contact positions.

- The use of videos such as Prevent Paralysis: Don't Hit With Your Head (dlester@riddellsports.com) or See What You Hit ([www.spineinsports.com/programs.htm](http://www.spineinsports.com/programs.htm)) are excellent education tools and should be mandatory at the educational sessions (both videos are free). On the high school level, parents should be given the opportunity view one of these videos at the parents' meeting.

- The use of posters on this topic is recommended and their availability and content should be clearly communicated to the team.
- Document every practice that specifi-

cally addresses prevention. The documentation should include date, time, and drills/activity completed. Create an outline for any safety talks given to the team.

- The inevitable turnover of coaching staffs that happens at most schools must be recognized. It is the administrations responsibility to ensure a blueprint for the prevention of these injuries is established and in place for each new coaching staff to follow.

Everyone associated with football has a significant responsibility to do all in their power to eliminate head-down contact from the sport. This includes coaches, medical professionals, officials, and administrators. Before an athlete is catastrophically injured, we all must be able to say — "I've done everything possible to protect my players from paralysis," — and say it in good conscience.

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take by our staff if we let that kind of stuff interfere with the way we practice and work for each game and each season," Meyer said.

To everybody except Meyer, the turn-arounds that Bowling Green and Utah made under his tutelage are nothing short of remarkable. But, the success of his teams is a direct reflection on how hard Meyer works each and every day to be successful.

"I love the preparation for games. Some coaches hate the Sundays, Mondays and Tuesdays, but that is why I coach," Meyer said. "Some head coaches sit back and let everybody else do all the work, but if I did that, I wouldn't coach anymore. The preparation and the involvement with the student-athletes to get them ready for success is what I love the most."