

FAQ's or Debunking the Myths of Head Injuries in Soccer

Myth #1

Myth: I haven't heard of or seen many head injuries in soccer, so there isn't a need for protection.

Truth: **There are thousands of head injuries in soccer every year in the USA and many go unreported.**

- McGill University: study shows 62.7% of college players suffer symptoms of concussions each year
- US Consumer Product Safety Commission reports there are thousands of soccer-related concussions yearly in the US
- Sporting Goods Manufacturers Association: (Over the past eight years) the rate of concussions has grown nearly twice as fast as the growth rate of the sport
- Soccer is considered a contact sport, same as American Football and Hockey, but does not require headgear.

Many head injuries in soccer are cuts, some are bruises, some are broken noses or teeth; however, some of them are concussions, caused primarily by the head impacting the ground, some part of another player's body, or less frequently a goal post.

Concussions have been called "stealth injuries" because there are no visible signs of injury. However, any injury to the brain, including concussions, can be life-threatening, while injuries to other parts of the body often heal with no lasting effects.

Myth #2

Myth: There isn't any clear evidence that heading is dangerous so why should I consider head protection in soccer?

Truth: **A majority of head injuries in soccer are due to head to head, head to ground, head to elbow type of impacts. Regardless of whether heading is also a culprit, head protection is warranted.**

Studies of the forces imparted to the head by soccer balls indicate that very few, if any, concussions are caused by impacts with the ball, particularly when the impact is anticipated. The forces transmitted to the head by the ball simply are not adequate to cause mild traumatic brain injury (MTBI), in most cases.

However, seemingly minor impacts (such as "dings," or "having your bell rung") in reality may be minor concussions. Symptoms at the time of the impact may be as minor as a short-term headache, or a little dizziness, or seeing stars. Even if the symptoms go away quickly, they may come back after a matter of days, indicating that the brain has not yet completely healed. If the head is impacted again before the brain has fully recovered,

it is much more likely to be concussed again, and the second concussion is likely to be worse than the first one, even if the blow seems minor.

It has been stated that 50% of soccer players entering college have already sustained at least one concussion. Most of these concussions come from head to foot, head to head, head to ground, head to elbow and occasionally head to goalpost contact.

Myth #3

Myth: The use of head protection in soccer will change the game.

Truth: **Tests prove the Full90 Headguards do not change the game.**

Soccer is the only sport in which the head is used as an offensive weapon. To perform the act of heading, the head must be free to move naturally in whatever manner will redirect the ball as intended. If the protection is properly designed and manufactured, the head can continue to perform the heading function without alteration while wearing energy absorbing protection.

This is the basic design concept behind Full90's Performance Protection Technology.TM It is the combination of the latest advances in sports technology, with a good old-fashioned love of the game, to produce the first headguard with Tru-Play DesignTM. Because of this patented design the ball always plays "true", as if it were coming directly from your head. It's also what gives these headguards a feeling of "true" comfort and fit.

Independent research has proven that Full90 Performance Headguards can absorb significant amounts of impact energy, thereby reducing the risk and severity of head injuries, without affecting the act or the results of heading. A soccer ball rebounding from a Full90 protected head leaves at the same speed as from a bare head. To view the results of the Rebound Speed Comparison research.

Myth #4

Myth: The Full90 Performance Headguard does not cover everything on the head, so it must not be effective.

Truth: **Full90 Performance Headguards are designed to cover the crucial impact zones on a players head.**

It has been shown that the majority of head impacts in soccer occur around the forehead and temple. This insight was very important in the development of Full90 Performance Headguards. As no head protection can protect against everything, Full90 has focused its product on those areas that are most susceptible in typical soccer impacts.

Dr. Scott Delaney of McGill University states that, "in my personal experience of looking after professional and university level soccer players for many years, my belief is that the majority of head impacts common in soccer likely occur from contact at the forehead and temple areas with a bit less frequency at the back of the head."

The design of the Full90 Performance Headguard not only utilizes this evidence of the human's contact zones in common soccer collisions, it is also a product of rigorous analysis of the body in motion, and its reaction to applied forces including the typical head's tolerance to impact. For example, in the evaluation of materials that had the potential to absorb energy, Full90 put over thirty of these configurations through exhaustive testing, measuring the effects of density, thickness and other various combinations. This PPT™ procedure led us to the materials and configurations now being used.

All of this research and testing has resulted in a product we know is effective; constructed with advanced materials, incorporating biomechanics and ergonomic design for a product that soccer players want to wear, because it's good for their bodies, and good for the game they play. Research is continuing, with the purpose of discovering even better materials and designs for head protection in the future.

Myth #5

Myth: If a player believes his/her head is protected, he/she will play more aggressively; increasing the likelihood of injury.

Truth: **If that were true, no sport would allow any protective equipment to be used.**

This argument has been raised in nearly every activity in which protection is now required. It was heard when bicycle helmets began to become common; it was prevalent in the ice hockey area; it was even heard when seat belts were developed. In no area has anyone shown that players' aggression increases when protective equipment is introduced. Those who tend to be aggressive will be aggressive regardless of the presence or absence of protective equipment. With the Full90 Performance Headguard we will give those players who truly have their head in the game the opportunity to continue to perform full out, without compromising their bodies, the bodies of their opponents or the spirit of the game.

Myth #6

Myth: The Full90 is just a piece of foam; it can't do much to reduce typical impacts in soccer

Truth: **The impact absorbing capabilities of the Full90 Performance Headguard have been proven in studies at two independent laboratories.**

The Full90 Performance Headguard has been proven in studies at two independent laboratories to reduce both linear and rotational acceleration (the forces that cause concussions) by up to 50% in the types of impacts that typically occur in soccer. That means that the severity of a major concussion will likely be reduced to some extent, and

some minor concussions may be prevented entirely. No product can prevent all injuries, and a player may be seriously injured while wearing a Full90 Headguard correctly; however, in many impacts that regularly occur in soccer, Full90 can significantly reduce the amount of force imparted to the head. And Full90 accomplishes this reduction while still allowing the act and result of heading to be performed unchanged. To view the research.

Myth #7

Myth: The rules of soccer do not permit the use of head protection.

Truth: **US Soccer has declared head protection legal for use.**

Whether a headguard can be used in soccer has been up to the judgment of the referee at each game for many years. Some referees have forbidden the use of Headguards because of some of the myths described above. However in March 2003, US Soccer published a memorandum saying that if a player's equipment (including head protection) is not dangerous to the players, its use "should be permitted." Additionally, in July 2003, the National Federation of High Schools (NFHS) announced a new rule interpretation approving the use of performance headguards, now making them legal on every field in America. According to Tim Flannery, Director for the National Federation of High Schools, "based on the new interpretation made by HFHS, the Full90 Sport padded head band is legal for use in interscholastic soccer matches beginning immediately."

The only required protective equipment for soccer is shinguards. This piece of equipment provides some level of protection against bruises and cuts to the leg and possibly against broken bones. However leg injuries heal and they are almost never life-threatening. If you protect your shins, why not your head?

Myth #8

Myth: Concussions rarely happen and are easy to diagnose.

Truth: **More concussions occur in soccer than people realize and many are not diagnosed properly.**

Dr. Scott Delaney of McGill University has determined that 62.7% of college level soccer players incur soccer-related concussions each year.

Many of these concussions are either ignored or are undiagnosed. Seemingly minor impacts (such as "dings," or "having your bell rung") are in reality minor concussions. Symptoms at the time of the impact may be as minor as a short-term headache, or a little dizziness, or seeing stars. Even if the symptoms go away quickly, they may come back after a matter of days, indicating that the brain has not yet completely healed. If the head is impacted again before the brain has fully recovered, it is much more likely to be concussed again, and the second concussion is likely to be worse than the first one, even if the blow seems minor.

Part of this misdiagnosis is because it is often assumed that a concussion only occurs if a person is knocked unconscious. Yes, if a person is unconscious, there is a good chance they have incurred a concussion. However, most concussions do not lead to loss of consciousness. A concussion may cause only a few moments of dizziness, nausea, and sensitivity to light or sound, or just a headache. Unconsciousness is not required for a concussion to have occurred. In fact, loss of consciousness is proof of quite a serious concussion.

Concussions are not only more prevalent than people think, they can be more dangerous than people expect as well, particularly for younger players. A recent study published by Dr. Melvin Field and associates at the University of Pittsburgh (*The Journal of Pediatrics*, May 2003) concludes that high school students recover from concussions more slowly than college students. In particular, Dr. Field states, "The observation that a diffuse and more prolonged cerebral swelling can occur after TBI in children relative to adults suggests that children may be at a greater risk for secondary intracranial hypertension and ischemia. A more diffuse and prolonged cerebral swelling could also lead to a delayed recovery period and may make the adolescent more susceptible to a permanent or severe neurological deficit should they be re-injured during this recovery period." Basically, this means that children may be more likely to suffer long-term deficits than adults in the event of a concussion.