



Is Soccer the Safe Sport?

Physicians, coaches, and soccer moms know the answer

Soccer, by far the world's most popular sport, has grown in acceptance in America by leaps and bounds over the last three decades. The huge popularity of soccer in the United States among youth, adults, and spectators results from a host of factors.

One of the most influential factors is the perception that soccer is a "safe" game when compared to other popular sports like football or baseball. "Soccer moms" around the country are rapidly enrolling their little ones in this game knowing that the kids will avoid a major injury from a spearing helmet or a screaming fastball. A look at the game, the common injuries it produces, and their possible prevention may reveal if American moms really know best.

Whether watching an "ankle biter" game of children buzzing around the ball like a swarm of bees or viewing the World Cup final on the big screen, it soon becomes clear that

soccer is a contact sport. However, despite the lack of pads except those covering the shins, soccer injuries generally are confined to bumps and bruises. Catastrophic events in soccer are exceedingly rare and almost always are related to the goalposts. Either the player hits the post or a faulty goalpost lands on a player. Compared to football, catastrophic injuries are nearly nonexistent.

The vast majority of injuries in soccer are minor. Not surprisingly, more than 85 percent involve the lower extremities. Relatively harmless bruises from contact with another player are the most common, and quality shin pads eliminate many. "All players

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should wear shin pads both in training and in games," says Brant Vitek, MD. "Not only will these simple pads prevent aggravating bruises to the lower leg, but they can help prevent serious injuries to the tibia bone, the large bone that makes up the shin."

The other minor injuries are noncontact injuries from overuse, muscle strains, and joint sprains. Minimizing time lost from these types of injuries has been studied, but only to a small degree and with varying results.

Some encouraging data reported that pre-season exercise programs may help decrease the number of ankle and foot sprains, as well as lower extremity muscle injuries. As more of these programs develop and become instituted across the country, they may indeed prove to be useful.

Major injuries, though rare, are obviously impossible to eliminate from any contact sport. Soccer is no exception.

About 15 percent of all injuries in soccer are considered major season- or even career-ending. These usually involve the player's knee, with the anterior cruciate ligament (ACL) being especially vulnerable. As a major contributor to the stability of the knee, a torn ACL means the season is over. As is true in other sports, female soccer players are at least twice as likely to tear this crucial ligament as are their male counterparts. Additionally, the demise of this ligament usually occurs in noncontact situations, so attention to prevention has been a hot topic in medical and soccer training circles searching for sports-specific training programs that might minimize this serious knee injury.

Soccer is the only sport on the planet where players purposefully use their heads to strike the ball. It seems reasonable to wonder whether repetitively whacking a ball hurling through space at high speeds with one's head might cause some short- or long-term damage. There have been many studies aimed at answering this question, but none has demonstrated any long-term deleterious effect of this rather unnatural act.

"Technique is critical when heading a soccer ball to keep the ill effect to a minimum," says Dr. Vitek, who played collegiate soccer at the University of Virginia under the

direction of legendary coach Bruce Arena. "Striking a ball with the hard plate of the forehead avoids any discomfort. Take that same ball and hit it with the top of your head, and you'll be nursing a headache for hours."

Serious concussions from heading a soccer ball are exceedingly rare, if they ever happen at all. When major concussions do occur in the sport, it is usually from a head contacting another head or an elbow, according to a broad study conducted in emergency rooms across Britain. Hard knocks to the head are unfortunately part of the game, but happily few and far between.

A few more statistics may help soccer moms sleep more soundly. Injuries in soccer become increasingly common as a player gets older. Even minor injuries in the under-10 leagues are quite rare.

As players reach adolescence and adulthood, the incidence of injury climbs until it peaks at the professional level. Even then, the incidence is only about one-third that of football. Soccer players are about four times more likely to get hurt during a game than during practice. So training sessions, where players spend the vast majority of their time, are the safest.

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— Brantley P. Vitek, Jr., MD



Nearly all soccer injuries are minor. Most common are bruises from contact with other players. All players of any age should wear shin pads to protect against lower-leg bruising and possible serious shinbone injury.

"Knowledgeable coaches who use proper training techniques to avoid overuse injuries, who demand that players wear proper shin pads and cleats, and who promote fair and controlled play are probably the best protection against injury," says Dr. Vitek. As the game gains popularity, the pool of trained and licensed coaches also grows. As the knowledge of training programs as a preventive measure increases with the population of qualified coaches, the world's most popular game should remain one of the world's safest games to play. **co**



Brantley P. Vitek, Jr., MD, son of an orthopaedic surgeon, earned a BA in Philosophy from the University of Virginia and his medical degree from the Medical College of Virginia in Richmond. He completed a general surgery internship at the University of Colorado and an orthopaedic surgery residency at the University of Texas Health Science Center in Houston. Dr. Vitek's special interests are in sports-related injuries and arthroscopic surgery. Additionally, he is involved with the surgery and treatment of complex trauma patients seen at Inova Fairfax Hospital's Level 1 Trauma Center.