



## Do soccer header bands really protect you from injury?

Despite soccer being defined as a contact sport by a variety of medical organizations, including the American Academy of Pediatrics, protective head gear isn't required for U.S. youth soccer players. Of soccer related head injuries, the most typical occurrence is due to head-to-head or head-to-ground/goal post contact with as many as 20 percent leading to a concussion. Little information is available about the consequences of repeatedly heading a ball and further research is needed to determine the effects of such multiple "subconcussive" blows.

### Clinical highlights

Over the past 10 years, researchers have followed numerous sports teams, including soccer, to learn more about concussions and repeated "subconcussive" blows. This research has demonstrated:

- Most concussions in soccer do not result from heading the ball. Rather, they occur from collisions with other players, the ground/goalposts or when the ball strikes the head unexpectedly.
- Younger children may be more at risk of suffering a concussion as they have less developed neck muscles and core strength.
- Earlier research suggested that repeated heading of the ball could lead to cognitive problems. However, more recent work indicates that purposeful heading is not likely to lead to brain injury. Future research will more clearly answer this question.
- When an athlete sustains multiple concussions, he or she may not recover as well from subsequent injuries. There is also some concern about the possibility of long-term effects of multiple concussions, especially in children and teens whose brains are still actively developing. Additional research is needed to understand these risks.
- Recent evaluation of past injuries in high school sports (including soccer) indicates that girls have about twice the concussion risk as compared to boys in the same sport.

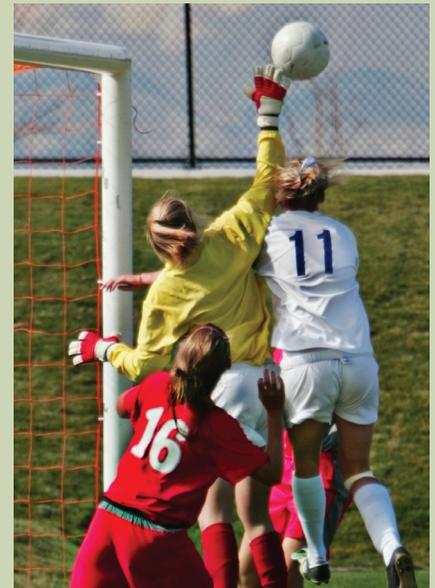
### Do header bands work?

Header bands work by dispersing forces applied to the head. This means the energy of the impact is not concentrated in one spot, which may decrease the amount of force directed to the brain. One study looking at teenage soccer players found:

- The use of header bands decreased the risk of concussion for both males and females.
- Females had an increased additional risk for concussion.

### Supporting studies indicate that header bands may best protect against:

- Higher velocity impacts such as those resulting from head-to head or head-to-ground/goal post contact.



The incidence rate of concussion in soccer, for both men and women, consistently ranks amongst the top 5 highest in high school and college-age sports.



## Guidelines for younger soccer players and heading the ball

Younger children should train using smaller balls with slightly lower pressures and avoid high speed contact with direct kicked balls or corner kicks. Emphasis should be on technique and development of neck and core strength.

### What is the bottom line?

Header bands diffuse the higher forces commonly seen when players hit the ground/ goal posts, other players, or very high velocity balls and may therefore protect somewhat from injury.

- Mandated use of header bands is increasing in popularity. Growing evidence suggests header bands can limit injury to the head and face. They have the potential to lower the risk of concussion, though further quality research is needed in this regard.
- At this time, it is not known whether or not header bands protect against repeated normal velocity headers.
- Adequate training in heading technique, good body positioning skills, and improved core and upper body strength can help prevent or limit the consequences of blows to the head.

### Should my child use a header band?

Direct evidence that header bands protect from impact injury is limited. The potential protection header bands provide in head-to-head or head-to-ground/goal post injuries (i.e. higher impact forces) seems to outweigh any functional limitation or discomfort in play and/or cost.

A history of repeated concussion may be a problem over time, and perhaps the use of header bands will provide a certain level of protection, especially for younger players. Your decision regarding the use of header bands is an important one and should be made in consultation with your primary care physician or other medical specialist trained in assessing these kinds of injuries.

**For more information on concussion topics, visit our website:**  
[childrenscolorado.org/concussion](http://childrenscolorado.org/concussion)

**Concussion Program Hotline: (720) 777-2806**

*Disclaimer: Neither the authors or Children's Hospital Colorado represent or have any financial relationship with any sports equipment manufacturer and do not promote the use of any specific brand of head gear.*