

Heading Soccer Ball Does Not Injure Brain -Study

By Jill Oestreicher Gross WASHINGTON (Reuters)

The next time you rise above the defense to score a winning goal at a soccer match, celebrate carefree -- players do not increase their chances of brain injury while heading the ball, according to research published on Thursday.

Heading -- striking the ball with the forehead to direct it -- is safe when the player is prepared for it, said Dr. Donald Kirkendall, a clinical assistant professor of orthopedics at the University of North Carolina at Chapel Hill School of Medicine.

Soccer moms should only really worry if little Johnny or Joanne is involved in a head collision, he added. "In purposeful heading, where you're actually trying to head the ball and actually do head the ball, the impact is spread out over the whole body because your head is fixed to your body by a tensed neck," said Kirkendall, the lead author of a study in the journal *Sports Medicine*.

"People ask the question, 'Can heading a ball cause a head injury?' In purposeful heading, we don't see that. In accidental ball contacts, yes, it is possible." That's an important distinction, Kirkendall said. Accidental heading can lead to injuries because the neck and body are not braced for the impact of the ball.

"The whole idea that kids are taught is to tighten up the neck. What that does is it makes you a whole lot bigger than the ball. As a result, the impact is spread out over such a large area that it's a fairly small impact."

In reviewing more than 50 studies on heading, head injury and cognitive function dating as far back as 1943 and throughout the United States and Europe, Kirkendall learned that injuries, such as concussions, may occur some time after a person heads a ball. But those types of maladies may be related to other events, drug or alcohol problems or learning disabilities, and are not caused simply by heading the ball.

"The most common method by which someone injures their head in a game is from contact with another player ... as well as head to ground ... and then a very rare occurrence is a head to a goal post," Kirkendall said. For example, a player may head a ball and then bang into another player and fall to the ground. The resulting headache or concussion is from the impact of the fall, not from heading the ball, Kirkendall said.

Heading Can Be Decreased

Encouraging referees to whistle for potentially dangerous play that could cause a head collision and encouraging players to keep the ball on the ground are two ways that the use of heading can be decreased, said Jim Moorhouse, a spokesman for the U.S. Soccer Federation in Chicago.

Common heading injuries are lacerations to the face or nose that result from using poor technique, colliding with something or skidding on the ground, Kirkendall said. A player usually heads the ball between six and 10 times per game. Proper heading technique is for the ball to make contact with the forehead, near the hairline area.

"It's much more enjoyable if the game's played on the ground, I think," Kirkendall said. "But (heading the ball) is a part of the game. ... It's trained and practiced and there's certain tactical things around using the ball with your head."

"The bottom line is that purposeful heading does not seem to be a factor in the cognitive problems that have been published ... people having problems with memory and things like that," Kirkendall said. "Purposeful heading is not the issue, it's the head injuries, the concussions. That seems to be the factor that contributes to the problems people see later on."