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**MOST NFL PLAYERS RETURN TO COMPETITION AFTER ACL INJURY, BUT AT A REDUCED PERFORMANCE LEVEL**

*Performance of wide receivers, running backs post-ACL injury falls by one third*

**Rosemont, Ill. – November 30, 2006** – The good news for NFL players who sustain an injury to their anterior cruciate ligament (ACL) is that they'll likely play again in the NFL. The bad news is, they'll return with diminished performance on the field, concludes a study in the December issue of *The American Journal of Sports Medicine* published on the behalf of The American Orthopaedic Society for Sports Medicine by SAGE.

"Although there have been over 2000 articles on the ACL in the past 20 years, only a few have focused on the pro player," writes author James L. Carey MD and colleagues from the Department of Orthopaedic Surgery, University of Pennsylvania School of Medicine, Philadelphia, Pa. "Our study is the first to objectively measure an NFL player's performance before and after an ACL injury." (Dr. Carey is now affiliated with Vanderbilt Sports Medicine, Nashville, Tenn.)

Brian J. Sennett MD, co-author and Chief of Sports Medicine at the University of Pennsylvania, believes "this article will have significant impact on setting appropriate expectations for the injured players, their agents, team owners, and fans. It is the first article to establish that injuries may have a significant negative impact on a player's performance if they are able to return to action."

The researchers collected data on ACL injuries sustained by NFL running backs (RBs) and wide receivers (WRs) during a five-year period (1998-2002). This data came from NFL game summaries, play-by-play documents, weekly injury reports, and player profiles. The injury group was compared to a control group consisting of all NFL RBs and WRs without an identified ACL injury who played during the 2000 season.

Carey, Sennett and colleagues devised a unique measurement of game performance output in the professional athlete. They assigned a "power rating" for every player in every season, defined as a weighted sum of total yards and touchdowns, likely the most important statistics of RB and WR performance. The power ratings for the 3 seasons prior to ACL injury were compared to the power ratings for the 3 seasons following ACL injury.

Data were analyzed for 31 players with 33 ACL injuries. Of the injured players, 21 percent (7 of 33 ACL injuries) never returned to play in another regular season NFL game. Of the 79 percent that did return, most players returned to action 9 to 12 months after an ACL injury.

For those players who returned to NFL action following an ACL injury, performance fell by one-third, the researchers found. Power rating per game played decreased from 9.9 pre-injury to 6.5 post-injury. This decline in player production was statistically significant when compared to the 146 players in the control group.

Knee pain, stiffness, loss of strength, deconditioning and reduced proprioception (the sense of knowing where your leg is) may be factors explaining the loss of production in players after an ACL injury, the authors theorize. Further, ACL reconstruction does not perfectly recreate the complex anatomy and composition of a person's ACL before injury.

Interestingly, prior to their injury the ACL-injured players performed better than did controls. "High-performance RBs and WRs are more likely to be injured because they compete in more plays per game, carry the ball longer on each play, and attract more defensive attention," the authors say. "The same qualities of RBs and WRs that contribute to high performance – instantaneous decelerations as well as explosive pivoting and cutting maneuvers – may increase the risk for ACL injury."

The researchers cite a recent survey of all 31 NFL team physicians who were asked to quantify "what percentage of players return to play in the NFL after ACL reconstruction." Ninety percent of team physicians responded "90 to 100 percent" of players (assuming not borderline talent) return to the NFL. The current study found the number of players who return to play after an ACL injury was actually less, at 79 percent.

"Most studies report good to excellent results in the majority of ACL reconstructions regardless of technique or patient age, but the professional football player presents unique demands on the reconstructed knee," Carey concludes. "Our findings may be useful for athletes, coaches, and team owners in anticipating the future contributions of a player who has injured an ACL."

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*The American Journal of Sports Medicine* is the monthly peer-reviewed scientific journal of the American Orthopaedic Society for Sports Medicine (AOSSM). AOSSM is a world leader in sports medicine education, research, communication, and fellowship. The Society works closely with many sports medicine specialists and clinicians to improve the identification, prevention, treatment, and rehabilitation of sports injuries. Please visit [www.sportsmed.org](http://www.sportsmed.org). To contact authors James L. Carey MD or Brian J. Sennett MD, call AOSSM Director of Communications and Member Services, Patti Davis, at 847/292-4900 or email [patti@aossm.org](mailto:patti@aossm.org).

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