

Rates and Determinants of Return to Play after Anterior Cruciate Ligament Reconstruction in Division 1 College Football Athletes: A Study of the ACC, SEC, and PAC-12

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Objectives: In competitive athletes, return to play (RTP) and return to pre-injury levels of performance are the main goals of anterior cruciate ligament (ACL) surgery. RTP has been studied in several athletic populations, such as the National Football League. However, to our knowledge, RTP has not been comprehensively evaluated in Division 1 college football. This study aimed to determine the rate of RTP amongst players in three major Division 1 college football conferences, and to investigate several athlete and surgery related variables that may affect RTP. We hypothesized that rates of RTP would be higher than those previously reported in the National Football League and that graft choice and history of concomitant meniscectomy would affect RTP. We also hypothesized that players with more experience, at higher depth chart positions, and/or on scholarship would RTP at higher rates than other players.

Methods: Head team orthopaedists and athletic trainers at institutions in the Atlantic Coast Conference, Southeastern Conference, and Pacific 12 Conference were contacted to request their participation in the study. Following IRB approval participating institutions were sent a standardized data collection spreadsheet that asked for RTP and other athlete- and surgery-specific information on all football players undergoing ACL reconstruction from 2004-2010. RTP was defined as an athlete participating in a full practice or official game after the date of his surgery. Athletes whose eligibility expired while injured were excluded from our analysis. Data from each institution was pooled and Chi-square and Fisher Exact tests were used to test the association between any categorical variables and RTP rates.

Results: Data from a total of 184 athletes was obtained. The overall rate of RTP was 82% amongst all athletes. 76% of athletes were able to return to a level of play equal or higher than before their injury. Player's depth chart position before injury did have a significant ($p = .0049$) association with RTP, with 73% of players who rarely played, 88% of utilized players, and 95% of starters returning to play after surgery. Athletes on scholarship returned to play at a higher rate (88%), than those not on scholarships (69%) ($p = .014$). Years of experience also had a significant ($p = .047$) effect on RTP, with freshman RTP at 83%, sophomores at 94%, juniors at 89%, seniors at 73%, and fifth year seniors at 75%. The use of autograft vs. allograft and the specific choice of autograft did not have a significant impact on RTP rates. Players who underwent a meniscectomy returned to play at a rate (79%) similar to those who did not have a concomitant meniscectomy (84%) ($p = .56$).

Conclusion: The overall rate of RTP in our Division 1 college football athlete cohort was higher than that previously reported in professional football players. Athletes at higher positions on the depth chart and those on scholarship returned to play at higher rates. Year in school also had a significant effect on RTP rates, while the type of ACL graft and the performance of meniscectomy did not.

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