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## CLINICAL COMMENTARY

# PATIENT-SPECIFIC AND SURGERY-SPECIFIC FACTORS THAT AFFECT RETURN TO SPORT AFTER ACL RECONSTRUCTION

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### ABSTRACT

**Context:** Anterior cruciate ligament (ACL) reconstruction is frequently performed to allow individuals to return to their pre-injury levels of sports participation, however, return to pre-injury level of sport is poor and re-injury rates are unacceptably high. Re-injury is likely associated with the timeframe and guidelines for return to sport (RTS). It is imperative for clinicians to recognize risk factors for re-injury and to ensure that modifiable risk factors are addressed prior to RTS. The purpose of this commentary is to summarize the current literature on the outcomes following return to sport after ACL reconstruction and to outline the biologic and patient-specific factors that should be considered when counseling an athlete on their progression through rehabilitation.

**Evidence Acquisition:** A comprehensive literature search was performed to identify RTS criteria and RTS rates after ACL reconstruction with consideration paid to graft healing, anatomic reconstruction, and risk factors for re-injury and revision. Results were screened for relevant original research articles and review articles, from which results were summarized.

**Study Design:** Clinical Review of the Literature

**Results:** Variable RTS rates are presented in the literature due to variable definitions of RTS ranging from a high threshold (return to competition) to low threshold (physician clearance for return to play). Re-injury and contralateral injury rates are greater than the risk for primary ACL injury, which may be related to insufficient RTS guidelines based on time from surgery, which do not allow for proper healing or resolution of post-operative impairments and elimination of risk factors associated with both primary and secondary ACL injuries.

**Conclusions:** RTS rates to pre-injury level of activity after ACLR are poor and the risk for graft injury or contralateral injury requiring an additional surgery is substantial. Resolving impairments while eliminating movement patterns associated with injury and allowing sufficient time for graft healing likely gives the athlete the best chance to RTS without further injury. Additional research is needed to identify objective imaging and functional testing criteria to improve clinical decision making for RTS after ACLR.

**Level of Evidence:** Level 5

**Key Words:** Anterior cruciate ligament, reconstruction, return to sport, rehabilitation, injury prevention

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