

## Paper #139

# Psychological Readiness to Return to Sport is Associated with Second Anterior Cruciate Ligament Injuries

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### Summary:

We examined the relationship between psychological readiness to return to sport measured at two time points and its association with second anterior cruciate ligament (ACL) injury. We found that younger ( $\leq 20$  years) patients who went on to second ACL injury had lower psychological readiness.

### Abstract:

## Introduction

Psychological responses following anterior cruciate ligament (ACL) injury and reconstruction (ACLR) have been identified as predictors of return to sport, but have not been investigated in relation to second ACL injury. One in three to one in four athletes who return to sport after an ACL injury will sustain a second ACL injury. Therefore, the purpose of this study was to determine if psychological readiness to return to sport is associated with second ACL injury.

## Methods

This was a prospective longitudinal study of patients who underwent a primary ACL reconstruction (ACLR) procedure. Patients completed the ACL-RSI (short-version) scale pre-operatively and 12-months post-ACLR to assess psychological readiness to return to sport. Patients were followed for a minimum of 2 years following surgery to document any subsequent ACL injuries. Analysis was performed for all patients who returned to sport as well as separately for the subset of younger ( $\leq 20$  years) patients. Patients who sustained a second ACL injury were classified as injured.

## Results

Fifty-two second ACL injuries were recorded in 329 patients (16%) who returned to sport after ACLR. No differences were observed in psychological readiness to return to sport at the pre-operative time point between injured and non-injured patients ( $p > 0.05$ ). At 12-months, injured patients tended to report lower psychological readiness than those who did not have a second ACL injury (60.9 vs. 67.2 points;  $p = 0.11$ ). Younger injured patients had significantly lower psychological readiness to return to sport than younger non-injured patients (60.8 vs. 71.5 points;  $p = 0.02$ ). Receiver operator characteristic curve analysis revealed a cut-off score of 77 points to identify younger patients who sustained a second ACL injury with 90% sensitivity and 47% specificity.

## Conclusions

Clinicians should consider assessment of psychological characteristics in addition to physical and functional abilities

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in return to sport criteria to minimize younger patients' risk of future ACL injuries. With the ACL-RSI scale, a score of less than 77 points indicates that a younger patient is at higher risk and may benefit from additional psychological counselling prior to clearance for return to sport.