Why psychological readiness determines whether athletes return to sport after ACL reconstruction.

Amy Hertig[1], BSc PT & Anina Moor[1], BSc PT
Supervisor: Angela Blasimann[1], PhD PT
[1]Bern University of Applied Sciences, Department of Health Professions, Division of Physiotherapy, Bern, Switzerland

Introduction & Objective

Every year, around 69 out of 100,000 people suffer an isolated ACL rupture [1]. Only about 55% of athletes return to their original performance level after the injury [2]. 23% of those under the age of 25 suffer a second injury [3]. Despite these high numbers, there is a lack of practical guidelines and close interdisciplinary cooperation in rehabilitation. Psychological factors play a central role: they are closely related to return-to-sport (RTS) assessments, and lower psychological scores are associated with poorer physical outcomes [4]. A high level of psychological readiness during rehabilitation is also considered the most important predictor of a successful return to previous performance levels [5].
Therefore, we aimed at identifying relevant psychological factors and promoting their integration into physiotherapy practice.

Methods

- Study design: Evidence summary, based on systematic review of the literature
- Databases: PubMED, SPORTDiscus, BASPO sports media library
- Inclusion criteria: Athletes with a Tegner score ≥ 5 or proven competitive activity, no restrictions regarding age or gender, first-time ACL rupture, surgically reconstructed using any graft type
- Exclusion criteria: Conservatively treated ACL injuries, other knee injuries
- Assessment for risk of bias: Graphic Approach to Epidemiology (GATE) Frames, Critical Appraisal Skills Programme (CASP) checklist

Results

- 9 studies with predominantly moderate evidence were included.
- Athletes with higher psychological readiness (assessed with the Anterior Cruciate Ligament – Return to Sport Injury Scale (ACL-RSI)) & better subjective knee function (measured with the International Knee Documentation Committee (IKDC) questionnaire) return to sport significantly more often than athletes with lower scores.
- Athletes with ACL-RSI scores < 56 points in the early postoperative stage were associated with a lower probability of RTS [6].
- Athletes with the highest ACL-RSI and IKDC scores are most likely to RTS (77.8%) but also have the highest re-injury rate (13.9%) [7].

Conclusions

Psychological assessments such as the ACL-RSI should be used early and repeatedly in physical therapy. Future research should focus on the development of standardized thresholds, combined assessments, and practical guidelines for ACL rehabilitation.

Practical implications

Physiotherapists should:
- be aware of significant association between psychological aspects and RTS,
- use scales such as the ACL-RSI to identify psychological barriers at an early stage.

Via QR code, our self created flowchart can be downloaded.

SCAN ME

References: [1] Sanders et al., 2016, [2,3] Piskin et al., 2022, [4] Kaplan & Witvrouw, 2019, [5] Webster et al., 2019, [6] Ardern et al., 2013, [7] Caumeil et al., 2024

FH Studierendenprojekt
Projet étudiant
Student project

Bern University of Applied Sciences, School of Health Professions, Division of Physiotherapy, Bern (CH)
Murtenstr. 10, 3008 Bern
bfh.ch | angela.blasimann@bfh.ch