

INPLASY202520015

doi: 10.37766/inplasy2025.2.0015

Received: 4 February 2025

Published: 4 February 2025

Corresponding author:

André Bento

aarbento@gmail.com

Author Affiliation:

ISCE—Polytechnic University of
Lisbon and Tagus Valley,
Department of Sport Sciences,
2620-379 Lisbon, Portugal.

Bento, A; Costa, A; Malico, P; Montoro, R; Pinheiro, V;.

ADMINISTRATIVE INFORMATION**Support** - None.**Review Stage at time of this submission** - Data analysis.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY202520015**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 4 February 2025 and was last updated on 4 February 2025.**INTRODUCTION**

Review question / Objective The importance of avoiding early competition of a football player after a ruptured Achilles tendon.

Rationale Achilles tendon rupture is one of the most serious and debilitating injuries for athletes, directly impacting their ability to perform and their career continuity. The rehabilitation process requires time, effective recovery strategies and a gradual return to highly demanding physical activities.

This study is justified by the need to understand the biomechanical and psychological factors involved in returning to competition after recovering from an Achilles tendon rupture. In addition, it seeks to assess which rehabilitation protocols will be most effective in restoring strength, mobility and endurance, minimizing the risk of incidence or compensations that may lead to new injuries.

Athletes often return prematurely, which can compromise performance and increase the risk of new injuries.

Condition being studied The study aims to assess the incidence rate of new injuries or complications upon return to competition of football players who have suffered an Achilles tendon rupture. The research aims to identify risk factors, average time to return and the impacts on performance after injury.

METHODS

Search strategy PubMed, Scopus, Web of science.

Participant or population Football players with Achilles tendon rupture returning to competition.

Intervention Neuromuscular training, proprioception and specific balance training to prevent Achilles tendon rupture. endoscopic transfer of the flexor hallucis longus tendon.

Comparator Athletes who had a longer recovery time compared to athletes who returned prematurely.

Study designs to be included Randomized Controlled trial.

Eligibility criteria Excluded:
Non-randomized studies;
Do not present results on return to play; On Achilles tendon rupture.
Included:
Randomized studies with analysis of the mechanism of achilles tendon injury and results on achilles tendon injury recovery time;
Without limitations of gender and sport level of the athletes.

Information sources PubMed, Scopus, web of science.

Main outcome(s) Results indicate that despite a high rate of return to competition, many athletes face performance difficulties and a high risk of new Achilles tendon ruptures. The preference for complete rehabilitation protocols, neuromuscular training, specific strengthening in the affected area and a gradual return to competition are essential to minimize the incidence rate and ensure a safe and effective recovery.

Additional outcome(s) Biomechanical compensations lead to a high risk of new muscular lesions, specially in the calf, knee and ankle. Players experience a reduction in acceleration and initial explosion in the first few months after returning to competition.

Data management The PEDro scale ensures that the selection and analysis of included studies are carried out with methodological rigor. This increases the reliability of the data found and ensures that recommendations for rehabilitation and return to work are based on high-quality scientific evidence.

Quality assessment / Risk of bias analysis Male soccer players with Achilles tendon rupture.

Strategy of data synthesis Descriptive statistics will be used to synthesize study data, including means, standard deviations, frequencies, and percentiles. For comparisons between groups, mean differences and confidence intervals will be demonstrated.

Subgroup analysis Male soccer players with Achilles tendon rupture.

Sensitivity analysis Not Reported.

Language restriction English.

Country(ies) involved Portugal.

Keywords Recover; ankle lesion; neuromuscular training.

Contributions of each author

Author 1 - André Bento - Lead the project, wrote and revised the original manuscript and analyzed and interpreted the data, wrote the statistical report and revised the original manuscript.
Email: aarbento@gmail.com

Author 2 - Armando Costa - Run the data search, performed the methodological assessment, conducted the data extraction, wrote and revised the original manuscript.
Email: acosta_isce@hotmail.com

Author 3 - Paulo Malico - Run the data search, performed the methodological assessment, conducted the data extraction, wrote and revised the original manuscript.
Email: direccaoddesporto@isce.pt

Author 4 - Raynier Montoro - Analyzed and interpreted the data, wrote the statistical report, wrote and revised the original manuscript.
Email: rayniermb@gmail.com

Author 5 - Valter Pinheiro - Run the data search, performed the methodological assessment, conducted the data extraction, wrote and revised the original manuscript.
Email: prof_valterpinheiro@hotmail.com