



ACL injury prevention in female football – mission possible!

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An ACL injury is a potentially devastating injury for a young football player. It affects between **1-3%** of players during a season, with **one-to-two injuries per 10,000** athlete exposures, and with a **two-to-three-fold** higher incidence in female players.

This presentation will summarize the evidence and characteristics of exercise-based prevention programs to mitigate ACL injury risk in female players.



Evidence from systematic reviews and meta-analyses show that exercise-based intervention programs are effective in reducing ACL injury in female players:

WITH AN OVERALL

45%

risk reduction

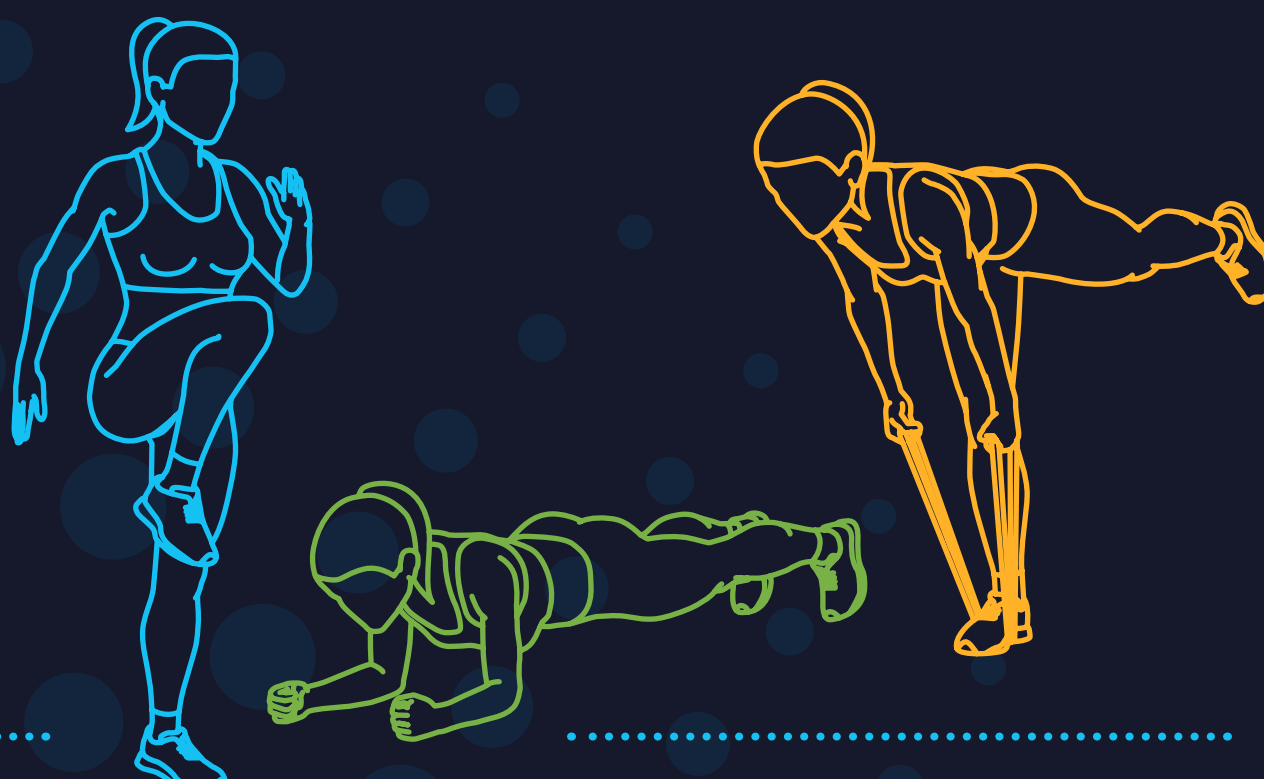
&

67%

for non-contact injuries

KEY COMPONENTS OF EXERCISE-BASED PREVENTION PROGRAMS ARE:

lower extremity and core strength, landing and cutting technique, and balance and agility



Examples of effective exercise programs that should be recommended for female football players are **Knee Control (Knäkontroll)**, **Prevent injury and Enhance Performance (PEP)**, **SportsmetricsTM**, and the **11+**



These programs should be used regularly, **two to three times per week**, throughout the **whole season**, and **high adherence** among coaches and players is key for **optimal effect**.



Take home messages

1



Exercise-based prevention programs cut the risk of ACL injury by

50%

in female players.

2

Key components of effective programs are:



and these programs should be used by female players at all levels of play.

3

It only takes



per training, **two to three times per week**, to provide an **effective vaccine against ACL injury** for your players.



References

- Arundale AJH, Bizzini M, Dix C, Giordano A, Kelly R, Løgerstedt DS, Mandelbaum B, Scalzitti DA, Silvers-Granelli H, Snyder-Mackler L. Exercise-Based Knee and Anterior Cruciate Ligament Injury Prevention. J Orthop Sports Phys Ther. 2023 Jan;53(1):CPG1-CPG34.
- Crossley KM, Patterson BE, Culvenor AG, Bruder AM, Mosler AB, Mentiplay BF. Making football safer for women: a systematic review and meta-analysis of injury prevention programmes in 11 773 female football (soccer) players. Br J Sports Med. 2020 Sep;54(18):1089-1098.
- Magaña-Ramírez M, Gallardo-Gómez D, Álvarez-Barbosa F, Corral-Pernía JA. What exercise programme is the most appropriate to mitigate anterior cruciate ligament injury risk in football (soccer) players? A systematic review and network meta-analysis. Sci Med Sport. 2024 Apr;27(4):234-242.

