

PROPOSAL FOR "RETURN TO SPORT" TESTS AFTER INJURY, SPECIFIC TO FOOTBALL

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INTRODUCTION:

The decision to return to sport (RTS) after an injury is one of the most complicated in sports medicine, due to the possibility of reinjury.¹

The return to sport tests allow one to set goals to assess the condition of the patient and establish certain criteria before returning to competition.² These tests include: strength tests, jumping tests and stability tests, and are based on the "Limb Symetry Indexes" (LSI).³ Nevertheless, there are studies which indicate that this method of evaluation could overestimate knee function values,⁴ and the need to include specific sport movements in the tests.⁵

OBJECTIVES:

To design a specific RTS protocol for football which is objetivable, adaptable and easily-reproduced.

METHODOLOGY:

A survey was conducted among 22 professional players (6 defenders, 8 midfielders and 8 forwards) of a second-division Spanish team, which compiled 24 basic football movements based on technique (individual, collective and defensive) and their key actions, according to the Royal Spanish Football Association (RFEF: Real Federación Española de Fútbol) ⁶, and in which they were asked:

- the frequency of executing the action.
- the perception of risk associated with the action.
- the injuries suffered that were associated with the action.
- the conditioning of their mode of play due to the perception of risk of injury.

RESULTS:

Dependant on the frequency of the action and according to the player's position, it has been established: 12 common plays, 3 specific plays for defenders, 2 for midfielders and 3 for forwards.

A play was identified with a high index of risk perception by the players: jumping off-balance due to contact from a rival.

The study outlined the actions suffered by players with a greater injury index, which were confirmed by experts in sports medicine, who completed the protocol

The injuries suffered by players did not condicionate significantly their play.

CONCLUSIONS:

An RTS protocol was created, based on the general and specific actions determined in this study, which will be objetived through video analysis among others and through 2 measurements, previously taken during pre-season.

BIBLIOGRAPHY:

1. Sanders TL, Maradit Kremers H, Bryan AJ, Larson DR, Dahm DL, Levy BA, Stuart MJ, Krych AJ. Incidence of Anterior Cruciate Ligament Tears and Reconstruction: A 21-Year Population-Based Study. *Am J Sports Med.* 2016 Jun; 44(6):1502-7.
2. Ardern CL, Glasgow P, Schneiders A, Witvrouw E, Clarsen B, Cools A, Gojanovic B, Griffin S, Khan KM, Moksnes H, Mutch SA, Phillips N, Reurink G, Sadler R, Silbernagel KG, Thorborg K, Wangensteen A, Wilk KE, Bizzini M. 2016 Consensus statement on return to sport from the First World Congress in Sports Physical Therapy, Bern. *Br J Sports Med.* 2016 Jul; 50(14):853-64.
3. van Melick N, van Cingel RE, Brooijmans F, Neeter C, van Tienen T, Hullegie W, Nijhuis-van der Sanden MW. Evidence-based clinical practice update: practice guidelines for anterior cruciate ligament rehabilitation based on a systematic review and multidisciplinary consensus. *Br J Sports Med.* 2016 Dec; 50(24):1506-1515.
4. Wellsandt E, Failla MJ, Snyder-Mackler L. Limb Symmetry Indexes Can Overestimate Knee Function After Anterior Cruciate Ligament Injury. *J Orthop Sports Phys Ther.* 2017 Mar 29:1-18.
5. Hoog P, Warren M, Smith CA, Chimera NJ. FUNCTIONAL HOP TESTS AND TUCK JUMP ASSESSMENT SCORES BETWEEN FEMALE DIVISION I COLLEGIATE ATHLETES PARTICIPATING IN HIGH VERSUS LOW ACL INJURY PRONE SPORTS: A CROSS SECTIONAL ANALYSIS. *Int J Sports Phys Ther.* 2016 Dec; 11(6):945-953.
6. Moreno, M. La técnica aplicada al alto rendimiento. Curso nivel-3 entrenador nacional de fútbol, técnico deportivo superior. 3ª ed. España: Real Federación Española de Fútbol, Escuela Nacional; 2003.