



Evaluating the FIFA 11+ program

Associate Professor Jason Siegler, Dr Richard Lovell and Dr Paul Marshall from the School of Science and Health have partnered with WorkCover NSW to examine the optimal implementation of the FIFA 11+ injury prevention program for young soccer players in training sessions.

'Hamstring injuries are one of the most prevalent injuries among professional and amateur soccer players,' explains Associate Professor Siegler. 'Of the 265 million non-professional players worldwide, approximately 22 million of those are estimated to be under the age of 18. In efforts to reduce the number of lower-leg strains FIFA commissioned the development of the FIFA 11+ injury prevention program. The program involves a range of activities aimed at developing leg and core strength, together with dynamic balance and agility. Since its implementation as a warm-up routine, performance and injury prevention in adults has improved. However, recent research suggest that a part of the program, especially in regards to the Nordic Hamstring Exercise (NHE), may lead to greater injury risk due to intense hamstring fatigue when performed prior to training as opposed to at the end of a training session or match. Because there is not enough data on the suitability of the FIFA 11+ for young players, we aim to examine the acute physiological, performance and hamstring function effects of the NHE in young soccer players.'

The study will use a randomised, cross-over design with approximately 30 participants between 14 - 18 years old. Hamstring strength, rate of torque development and performance measurements will be collected before and after the FIFA 11+ warm-up with and without the NHE followed by a multidirectional running course – SAFT90 – to assess muscle fatigue.



The outcome of this research has the potential to contribute to our understanding and prevention of hamstring injuries as well as determining the usefulness of the FIFA 11+ program as a warm-up routine for young soccer players. This information will assist coaches and practitioners to determine whether the NHE part of the program should be moved from pre-training warm-up into post-training.

Project Title: Optimisation of the FIFA 11+ injury prevention program: implications for youth soccer players

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