

# RESEARCH DIRECTIONS

## Hamstring injury prevention

**Dr Ric Lovell, Dr Jason Siegler and Dr Paul Marshall from Sport and Exercise Science in the School of Science and Health have been awarded funding from the NSW Sporting Injuries. The research program is to optimize current injury prevention schemes that attempt to address the high incidence of hamstring injuries suffered by soccer players.**

'Epidemiological studies have consistently shown a high incidence of hamstring injury strains in many sports, including running, Australian Rules football and soccer', says Dr Lovell. 'This particular injury is also considered to be one of the most prevalent causes of missed playing or training time in team-sports players. 47% of all hamstring strains occur during the latter stages of the first and second halves of soccer matches, which suggests that fatigue is a major risk factor. This project will investigate whether performing injury prevention exercises in a fatigued state after training, rather than before, may improve the players' responses to hamstring injury prevention regimes, potentially making the players more resistant to hamstring injury during the latter stages of training sessions and matches.'

This study will consist of two stages. The first stage will examine the muscles' response to a hamstring strengthening exercise recommended by soccer's world governing body (FIFA), when incorporated into either the warm-up or the cool-down of simulated training sessions. The second stage of the study will involve a 12-week training period using players from three soccer clubs who will be randomly allocated to different injury prevention programs to assess the adaptation of the hamstring muscles and their resistance to injury.



Information from this research is likely to lead to more effective injury prevention programs being developed for players participating at both grass-roots and professional levels, resulting in considerable savings from reduced player down-time and treatment costs. The importance of improved prevention strategies to current and future athletes will be the minimisation of injury risks.

**Project Title:** Hamstring Injury Prevention in Soccer: Before or After Training?

**Funding has been set at:** \$30,418

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