EDITH COWAN UNIVERSITY

PROJECT DETAILS

Project Title:

How are sprint running mechanics affected by the intensity and duration of prior, fatiguing running exercise?

Project Summary:

A series of studies will be conducted to determine how **intensities and durations of fatiguing running exercise affect the mechanics of an ensuing sprint running effort** in individuals with different running training backgrounds.

Fatigue is a common outcome of prolonged or intense exercise and was a **burden carried by our ancestors** who needed to sprint to capture prey, or avoid capture themselves, following prolonged periods of running/walking activity. It also **critically affects both performance and injury risk in modern athletes**. We and our international collaborators will conduct detailed experiments to test the ways in which we coordinate the complex task of running at maximum speed whilst fatigued. The results will provide **new insights into how we locomote whilst fatigued** and reveal potential **mechanisms by which injuries can occur**.

Preferred Applicant Skillset:

The successful PhD candidate will have an excellent work ethic and display strong problem-solving and scientific writing skills. The candidate should have a previous experience in biomechanics testing in humans, use of motion analysis tools, and an interest in injury prevention, rehabilitation, and sports biomechanics. Experience in, or desire to learn, computer modeling and simulation techniques is desirable.

Internship Opportunity:

No. However, we have had discussions with RugbyWA, Western Force Rugby, and the Western Australian Institute of Sport (West Coast Eagles may also be a target), and we will continue these discussions once a PhD student is selected, and their experiences and future goals are known.

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