



# Research Directions

Office of Research Services

## ***Best Foot / Leg Forward***

**Ms Verona du Toit from the School of Biomedical and Health Sciences is collaborating with Assoc Professor Robert Herbert from Sydney University to explore risk factors and treatments for shin pain through funding from a Podiatry Education and Research Grant with the NSW Podiatrists Registration Board.**



During normal daily activity 'bone is exposed to repetitive low intensity movements which can lead to damage and short term pain', says Ms du Toit. 'In populations where repetitive movements are performed at high intensity, such as physical training in the military and athletes, exercise induced injury to muscles, tendons and ligaments will also occur. Sufferers may often refer to as shin splints. There has been some research into the occurrence of overuse injuries in shins and lower limbs in military personnel, however, it is not clear which treatments or preventative measures work best to reduce such injuries. This project aims to provide evidence of the risk factors, preventative interventions, and most effective treatments for exertional shin pain (EMSP) in physically active military personnel.

All participants in the study are military personnel who visit a medical centre at Holsworthy Army Barracks. Ms du Toit will assess the risks of EMSP associated with fitness level, activity level, type of footwear, training surfaces and lower body biomechanical alignment within this group. A randomised control trial comparing two different shoe inserts (orthoses) - commercially produced inserts or specialised custom-made orthoses for the individual participant, will also be conducted. Results will be analysed to determine whether pain intensity, comfort, and patient specific measures of physical function and capacity differ depending on the shoe insert used.

This project will provide valuable information about the risk factors and best practice measures that could be used by the Army to prevent debilitating shin injuries in military personnel, and the most effective treatments if Defence (Army) personnel do suffer EMSP. This may improve the Army's capacity to look after its most valuable resource, and thereby maintain effective military services.

**Project Title:** Case-control study to analyse risk factors for exertional medial shin pain and the evaluation of an intervention in the treatment of exertional medial shin pain.

**Funding has been set at: \$30,000**

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