



Project Title: What intensity of eccentric exercise is effective at producing pain and decreasing muscle force?		Code: SOMS1
Host School / Institute: School of Medical Sciences		Address: RC Mills Building, Camperdown Campus and NeuRA, Randwick
Certificates & Clearances required: No		
Primary Supervisor: Dr Joanna Diong		
Phone: 02 8627 5491	Email: joanna.diong@sydney.edu.au	
Co-Supervisor/team: Dr Martin Héroux		
Project Type: Laboratory based		
Project Category: Neuroscience; Physiology		
Skills / Attributes of a successful student: Willing to learn new techniques, attention to detail, broad interest in the topic.		
Project Keywords: eccentric exercise; muscle; force; angle		
Project Description: <p>Brief description: Loss of passive joint range of motion (contracture) is a common impairment after stroke and spinal cord injury, and results in loss of function, disability and pain. It is thought that eccentric exercise can increase lower limb flexibility, measured using joint range of motion or muscle fascicle length. However, it is not known what components of eccentric exercise are most effective at increasing joint range of motion. This study first aims to examine different intensities of eccentric exercise training to determine which protocol is sufficiently intensive to produce delayed onset muscle soreness.</p> <p>Proposed method: Experimental, repeated-measures, study. Outcomes: joint range of motion, amount and time course of delayed onset muscle soreness. Outcomes will be compared using paired t-tests.</p> <p>Specific information: This study is part of a broader series of laboratory studies to determine types of eccentric exercise that are effective at increasing joint range of motion. In our research team, we have supervised a number of Honours students and overseas visiting medical students in research on muscle physiology, neurological rehab, neuroscience and motor control. In this project, you will learn to conduct laboratory-based research, collect data, analyse results and interpret the findings. We are passionate about good science, and will endeavour to teach you good research skills in a stimulating environment, to give you a good experience in research.</p>		