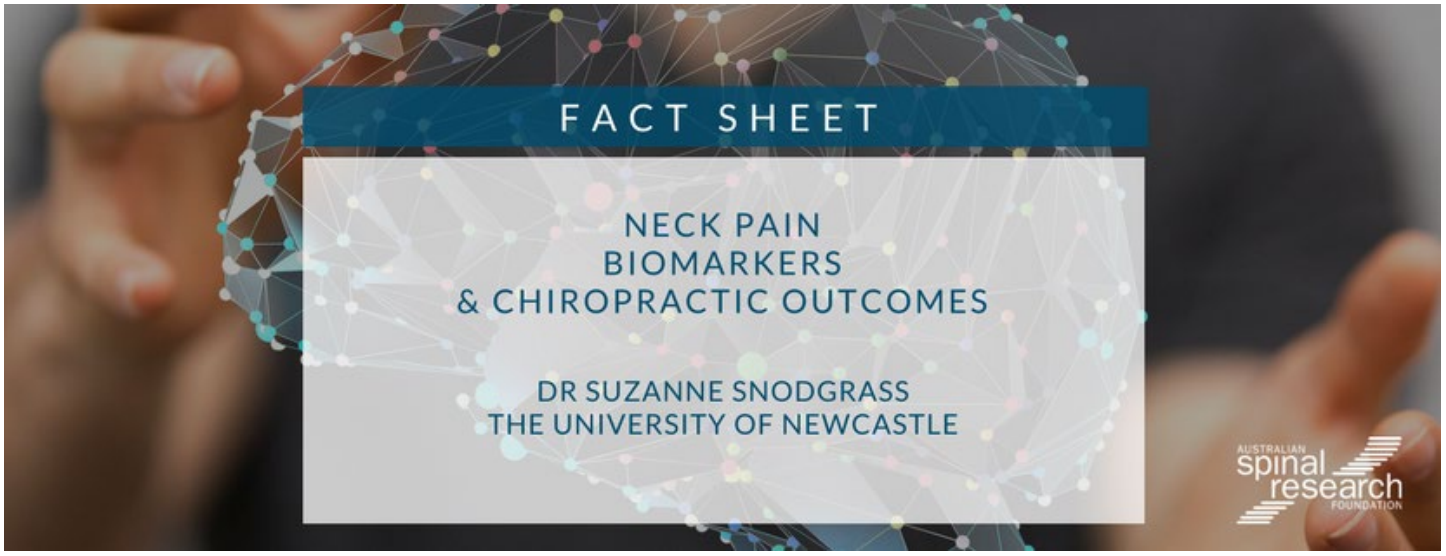

Research Project Summary

Project Complete

Neck pain has been estimated to occur in as many as 4 out of 5 individuals. For many, symptoms do not resolve. Healthcare and societal costs (work absenteeism, reduced productivity) associated with chronic neck pain are high and predicted to rise. Despite the common and successful use of chiropractic in patients with neck pain and some evidence for its effectiveness, the biological mechanisms by which chiropractic care reduces pain are less well understood.

Preliminary evidence indicates that the brain appears and functions differently when pain is present. In this project, we will investigate the effects of chronic neck pain on individuals, and the effects of chiropractic care and management on abnormal spinal function associated with chronic neck pain. We will determine whether we can identify clinical circumstances (from brain imaging and three-dimensional movement analysis) that distinguish patients with chronic neck pain from healthy individuals. This will identify specific physical signs (biomarkers) that clinicians can use to guide their care of patients with neck pain. We will also test whether a specific chiropractic procedure is effective in reducing chronic neck pain, and whether it changes the identified biomarkers, thus possibly providing evidence for their use in clinical practice to evaluate the effectiveness of care.

The results of this project could provide preliminary biological evidence for the potentially pain reducing effects of a chiropractic procedure. This will provide clinicians with knowledge to improve the effectiveness of their care, impacting on the economic costs of spine problems, which are second only to heart disease and stroke in terms of healthcare expenditure.

Impact of Research

Presentations

- International Federation of Orthopaedic Manual Physical Therapists Congress in Glasgow, Scotland July 3-8, 2016