



ABSTRACT EXAMPLES

Platform Papers, Rapid Five and Posters

Abstract max 250 words

Background: Patients with neck pain often report difficulty with moving the neck fully, quickly and accurately relating to functional tasks such as driving. It is not known if this is related to neck kinematics.

Purpose: The aim of this study was to determine relationships between self reported difficulty moving the head to altered kinematics. A secondary aim was to determine other factors associated with both altered kinematics and self reported difficulties.

Methods: Kinematics were measured in 70 subjects with chronic neck pain using a customized virtual reality system. Range, velocity and accuracy in the sagittal and horizontal plane were derived. Correlations between these measures to self-reported difficulty with moving the neck as well as levels of pain (neck pain intensity, disability, pain on movement), fear of motion, dizziness, and visual disturbances were conducted.

Results: Self reported difficulty with neck motion was significantly correlated to range of motion kinematics ($r=.32-.39$), pain on movement pain and disability, age and fear of motion ($r=.24-.45$). Selected neck kinematics were significantly correlated to age ($r=.4-.44$), pain on movement and fear of movement ($r=.3-.41$).

Conclusions: Self reported difficulty moving the neck fully, quickly and accurately does not seem to relate well to kinematic deficits. However, self reported difficulty with neck motion and kinematics seem to have some relationship to pain during movement and fear of motion.

Implications: Future research should consider the effects of addressing these factors on functional complaints and neck kinematics and vice versa to aid functional recovery in those with neck pain.

Keywords: Neck pain; RCT; kinematics.



Abstract max 250 words

Background: Therapeutic exercise is recommended for musculoskeletal conditions. The evidence on benefit of exercise across the spectrum of conditions treated by physiotherapists is not known.

Purpose: To determine whether therapeutic exercise, the prescription of a program that involves undertaking voluntary muscle contraction and/or body movement to relieve symptoms, improve function or improve, retain or slow deterioration of health, is of benefit across broad areas of physiotherapy practice

Methods: The study involved a variety of participants with neurological, musculoskeletal, cardiopulmonary and other conditions who would be expected to consult a physiotherapist and measured the effect of therapeutic exercise in terms of impairment, activity limitations, or participation restriction.

Results: The search yielded 38 systematic reviews of reasonable quality. The results provided high level evidence that therapeutic exercise was beneficial across broad areas of physiotherapy practice, including people with conditions such as multiple sclerosis, osteoarthritis of the knee, chronic low back pain, coronary heart disease, chronic heart failure, and chronic obstructive pulmonary disease. Therapeutic exercise was more likely to be effective if it was relatively intense and there were indications that more targeted and individualised exercise programs might be more beneficial than standardised programs. There were few adverse events reported.

Conclusion: Therapeutic exercise was beneficial for patients across broad areas of physiotherapy practice.

Implications: Indications are that targeted, individualised exercise programs are more beneficial. High quality evidence is needed in emerging areas of practice. Therapeutic exercise is more likely to be effective if relatively intense.

Keywords: Therapeutic; exercise; movement



Abstract max 250 words

Background: Chronic primary headache disorders are associated with frequent, severe pain and significant functional impairment, with treatment remaining challenging. Direct current stimulation may prove a useful tool.

Purpose: To determine the effect of a combined brain and spinal cord direct current stimulation treatment on chronic headache frequency, intensity, duration and pain sensitivity.

Methods: Participants were five individuals, three that suffered from chronic tension type headache and two individuals with chronic migraine. Five consecutive daily sessions of a 20-minute brain stimulation treatment delivered to the primary motor cortex, followed by a 20-minute spinal cord stimulation treatment delivered over the 10th thoracic vertebrae at 1mA intensity. Pain sensitivity was recorded immediately before and after treatment using a pressure algometer to record pressure pain threshold. Headache symptoms of frequency, intensity and duration were recorded via a headache diary four weeks before and after treatment.

Results: Headache frequency reduced in all participants (mean number of headaches across participants pre 16.6 ± 4.9 ; post 7.4 ± 4.6). Headache duration and intensity, and pressure-pain sensitivity, were unaltered in all participants.

Conclusions: These preliminary data indicate that a combined brain and spinal cord stimulation may reduce headache frequency in headache sufferers, but when a headache is triggered, duration and intensity are unaltered.

Implications: Non-invasive combined brain and spinal cord stimulation is safe and feasible and has potential to be useful in the management of headache. More research is required.

Keywords: headache; stimulation