

FACT SHEET

RANDOMISED CONTROLLED TRIAL OF THE EFFECTS OF SIXTEEN WEEKS OF CHIROPRACTIC CARE ON OBJECTIVE MARKERS OF SENSORIMOTOR FUNCTION IN OLDER PEOPLE

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Research Project Summary

Project Complete

One of the biggest predictors of a loss of quality of life in older people is a fall. A fall in an older person is associated with large increases in their risk of morbidity and mortality. In people over the age of 65 80% of injury related hospital admissions are caused by falls and they are the leading cause of injury related death.

The research literature shows that falls often happen in association with a decline in nervous system function with ageing. What sort of difference could chiropractic make here? Could we deliver on our promise to “add years to your life and life to your years?” Some of the statistics relating to falls are:

- In New Zealand and Australia 30% of older Australians have a fall each year. This is even greater in other parts of the world where rates are as high as 40%.
- Every second fall causes an injury.
- Serious injuries occur in around 30% of falls.
- 5-10% of falls cause a fracture.
- Costs of falls in the US estimated to be \$32 billion by 2020.
- The proportion of the population over 65 is expected to double in the next 50 years.

There is also a huge social cost of falls in terms of loss of independence, depression and overall quality of life. Many clinical studies are criticised by field practitioners for having too short a period of care to expect to see much physiological change. This study utilises 16 weeks of chiropractic care. It is also based on assessment and correction of vertebral subluxation. The outcome measures for this study are objective markers of sensorimotor function. In other words, they are established measures of how well the brain and nervous system process information.

Some of the outcome measures are:

- Choice stepping reaction time. A testing approach that uses special platform that tests the ability to control foot placement. It has been previously shown to predict fallers vs non-fallers.
- Joint Position sense of the ankle.
- Postural stability using computerised posturography.
- SF 36

Impact of Research

Presentations

- Holt KR. Effectiveness of Chiropractic Care in Improving Sensorimotor Function Associated with Falls Risk in Older People Auckland: General Practice and Primary Healthcare, University of Auckland; 2014
- Holt K, Haavik H, Lee ACL, Murphy B & Raina Elley R. (2014) Effectiveness of Chiropractic Care to Improve Sensorimotor Function Associated with Falls Risk in Older People: A Randomized Controlled Trial. Association of Chiropractic Colleges Research Agenda Conference, Meeting in Orlando, Florida, USA, March.

Publications

- Holt KR, Haavik H, Lee AC, Murphy B, Elley CR. Effectiveness of Chiropractic Care to Improve Sensorimotor Function Associated With Falls Risk in Older People: A Randomized Controlled Trial. *J Manipulative Physiol Ther.* 2016;39(4):267-78.