Chiropractic Update

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The Cervical Spine, Balance, and Risk of Falling in the Elderly

This review paper is very interesting from the point of view of practicing chiropractors who are continually striving to broaden the focus of their clinical encounters from the narrow view of dealing with symptom resolution to the broader perspective that takes in functional and quality of life concerns.

The authors point out that in Australia over the past century there has been a trend towards an increasingly aged population such that by early 2000 over 20% of the Australian population was over 60 years of age. They also highlight that a decline in balance has been identified as a significant risk factor for falls, that there is a growing body of evidence that links spinal function to balance, and that the problem of falls amongst older Australians is a major health issue.

The authors suggest that it can be postulated that the presence of dysfunction in the neck may lead to changes in postural control mechanisms that may cause a decrease in the ability to maintain balance. The authors then present a review the literature pertaining to the link between the cervical spine and balance.

They then briefly describe 3 different clinically useful tests, of acceptable validity and reliability that quantify balance: -

- The **Berg Balance Scale** rates performance from 0 to 4 on 14 different tasks (ability to sit, stand, reach, lean over, turn and look over shoulder, turn in a complete circle, and step.);
- The **Functional Reach** test measures the furthest one can reach beyond arms length in the standing position while maintaining a fixed base of support; and
- The **Timed Up and Go Test** times subjects as they stand from an armchair, walk a line 3 meters away, turn, return to chair and sit down again.

Regarding the role of chiropractic the authors contend that, "The cervical spine ... has a significant role in postural control and thus is likely to affect risk of falling. A pilot study is presently being conducted by the authors to see if there is a difference in balance between people over 60 years with neck pain and those without neck pain."

ASRF Chiropractic Update Editor's comment - We look forward to the results of the authors' pilot study. In particular it will be interesting to see if and how the authors operationally define neck dysfunction (vertebral subluxation) and whether such dysfunction is in any way associated with changes in balance and/or risk of falls.

Reference:

Walsh MJ, Polus BI, Webb MN. The role of the cervical spine in balance and risk of falling in the elderly. Chiropr J Aust 2004; 34: 19-22.