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# Immediate and Short-term Effects of Thoracic Spine Manipulation in Patients With Cervical Radiculopathy: A Randomized Controlled Trial.

[Young IA](https://www.ncbi.nlm.nih.gov/pubmed/?term=Young%20IA%5BAuthor%5D&cauthor=true&cauthor_uid=31021691), [Pozzi F](https://www.ncbi.nlm.nih.gov/pubmed/?term=Pozzi%20F%5BAuthor%5D&cauthor=true&cauthor_uid=31021691), [Dunning J](https://www.ncbi.nlm.nih.gov/pubmed/?term=Dunning%20J%5BAuthor%5D&cauthor=true&cauthor_uid=31021691), [Linkonis R](https://www.ncbi.nlm.nih.gov/pubmed/?term=Linkonis%20R%5BAuthor%5D&cauthor=true&cauthor_uid=31021691), [Michener LA](https://www.ncbi.nlm.nih.gov/pubmed/?term=Michener%20LA%5BAuthor%5D&cauthor=true&cauthor_uid=31021691).

***Links:***

JOSPT:

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***Introduction***

Recent evidence supports the use of high-velocity, low-amplitude thrust manipulation to the thoracic spine in patients with neck pain. Studies show immediate and short-term improvements in pain and cervical spine range of motion in patients with neck pain after a thoracic manipulation. However, there is limited evidence of its effectiveness in patients with neck and arm pain due to cervical radiculopathy where thoracic manipulation may be a good treatment option especially early in treatment when cervical manual interventions may not be tolerated well by this patient population.

The primary purpose of the above study was to assess the immediate and short-term effects of one session of thoracic manipulation in patients with cervical radiculopathy, compared to those of a sham thoracic manipulation, on the primary outcomes of neck and upper extremity pain and patient-perceived changes in neck and upper extremity symptoms. Secondary outcomes included neck disability, active cervical spine motion, deep neck flexor muscle endurance, upper extremity numbness and tingling, and symptom distribution.

***Methods***

In this multicenter randomized controlled trial, participants with cervical radiculopathy were randomized to receive either manipulation (n = 22) or sham manipulation (n = 21) of the thoracic spine. The manipulation was performed in supine and directed bilaterally to the upper thoracic (C7-T3) and mid thoracic (T4-T9) spine (full description and visual provided in the article). The sham manipulation was performed in the same position but with an open hand and no thrust delivered. Outcomes were measured at baseline, immediately after treatment, and at a follow-up 48 to 72 hours after manipulation.

***Results***

Immediately after treatment and at the 48-to-72-hour follow-up, the manipulation group had lower neck pain, better cervical ROM, lower disability, and better deep neck flexor endurance compared to the sham group. At 48 to 72 hours after treatment, a greater proportion of participants in the manipulation group reported improvement in neck and upper extremity symptoms, and centralization of symptoms.

***Relevance***

The results suggest that thoracic manipulation in patients with cervical radiculopathy is an effective early treatment option for immediate and short term benefits. Although long term benefits were not studied in this article even the short term pain reduction and increased cervical ROM could allow the therapist to progress treatment.