

Neck and Arm Pain

Mechanical Traction and Exercises Prove an Effective Treatment

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A condition called cervical radiculopathy develops when a nerve in the neck region becomes irritated. This type of neck problem frequently causes neck pain, pain down the arm, and sometimes a loss of feeling or decreased strength in the arm. If you have cervical radiculopathy, your hands may also feel clumsy or uncoordinated. Treatments are designed to lessen the irritation around the affected nerve in your neck. Physical therapists often use a combination of exercise and traction to reduce pain and improve function.

There are 2 kinds of traction: mechanical and over the door. Mechanical traction is applied to the neck in a physical therapy clinic; the patient lies on his or her back, and a machine gently stretches the neck to decrease pressure on the irritated nerve. Over-the-door traction is accomplished with the patient in a sitting position; here, a weight-and-pulley system attached to a door is used to gradually stretch the neck. A research report published in the February 2014 issue of *JOSPT* explores which traction method works best.



CERVICAL RADICULOPATHY AND TREATMENT. Cervical radiculopathy involves pain in the neck and arm with the possible loss of feeling or decreased strength in the arm. Mechanical traction and exercises were found to be most helpful in lessening pain and disability at 4 weeks, 6 months, and 1 year. Only 2 of the exercises used in this study are shown here.

This *JOSPT Perspectives for Patients* is based on an article by Fritz et al, titled "Exercise Only, Exercise With Mechanical Traction, or Exercise With Over-Door Traction for Patients With Cervical Radiculopathy, With or Without Consideration of Status on a Previously Described Subgrouping Rule: A Randomized Clinical Trial," *J Orthop Sports Phys Ther* 2014;44(2):45-57. Epub 9 January 2014. doi:10.2519/jospt.2014.5065.

This Perspectives article was written by a team of *JOSPT*'s editorial board and staff, with Deydre S. Teyhen, PT, PhD, Editor, and Jeanne Robertson, Illustrator.

NEW INSIGHTS

In this study, researchers treated 86 patients for 4 weeks. About one third of these patients received exercise alone, one third were given exercise and mechanical traction, and one third were prescribed exercise and over-the-door traction. In addition, all patients were given exercises designed to strengthen their neck and upper back muscles and were told to stay as active as possible. Results were measured at 4 weeks, 6 months, and 1 year. At the end of 4 weeks, all patients felt better. However, only the patients treated with mechanical traction maintained their improvements at 6 months and 1 year. Specifically, patients treated with mechanical traction had a 20% improvement in disability at 6 months and 1 year. Patients treated with over-the-door traction only had a 15% improvement at these same points in time. The researchers concluded that the combination of exercise and mechanical traction was more effective at 6 months and 1 year after treatment than the combination of exercise and over-the-door traction or exercise without traction.

PRACTICAL ADVICE

Patients with cervical radiculopathy may benefit from a physical therapy program that includes mechanical traction and exercise. Potential benefits are less pain and improved ability to perform daily activities. Although this treatment was very successful for this particular group of patients with neck and arm pain, it may not be effective or even appropriate for all patients with neck pain. Your physical therapist can perform a thorough evaluation to help determine whether you are a good candidate for this treatment. For more information on the treatment of neck and arm pain, contact your physical therapist specializing in musculoskeletal disorders.

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