Acute effects of manual therapy on respiratory parameters in thoracic outlet syndrome
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Setting the scene:
This study aims to investigate the acute effects of manual therapy on pain perception and respiratory parameters in patients with thoracic outlet syndrome.

What did they do?
Study included 10 patients with thoracic outlet syndrome. Patients were accepted in a single session of manual therapy involving the cervical spine and thorax. Stretching of scalene, upper trapezius, sternocleidomastoid, rectus abdominis, hip flexor muscles; and mobilization of first rib, cervical and thoracic spine, sacroiliac joints and thorax were applied as manual therapy program. Pain perceptions of upper arm and neck were assessed with visual analog scale. Measurements were performed before and immediately after of a 30-minute session of manual therapy. Pulmonary function testing was performed with a spirometer. Respiratory muscle strength (inspiratory and expiratory muscle strength, maximal inspiratory pressure and maximal expiratory pressure, respectively) was measured. Respiratory muscle endurance was recorded using sustained threshold loading of 35% maximal inspiratory pressure.

Takeaway message:
A 30-minute single manual therapy session improved inspiratory muscle strength and respiratory muscle endurance but not pulmonary function and expiratory muscle strength in patients with thoracic outlet syndrome. Manual therapy may facilitate functional breathing and support use of primary respiratory muscles more effectively together with rapid pain reduction.