

Movement Therapies—Alexander Technique, Pilates, and Feldenkrais.

Alexander Technique (AT)

A systematic review from 2012 included 18 trials, 3 RCTs and 15 non-RCT studies. The reviewers 'identified strong evidence for the effectiveness of AT lessons in chronic back pain', based on 2 high quality RCT's.

Woodman JP, Moore NR. Evidence for the effectiveness of Alexander Technique lessons in medical and health-related conditions: a systematic review. *International journal of clinical practice*. 2012;66(1):98-112.

A 2015 RCT (n=517) comparing usual care to acupuncture therapy, or alexander technique plus usual care (a mean of 10 acupuncture sessions or 14 Alexander sessions with same total minutes) for chronic neck pain (median duration of neck pain: 6 years) found both led to significant reductions in neck pain and associate disability compared with usual care with benefit persisting at 12 months following intervention.

MacPherson H, Tilbrook H, Richmond S, et al. Alexander Technique Lessons or Acupuncture Sessions for Persons with Chronic Neck Pain: A Randomized Trial. *Ann Intern Med*. 2015;163(9):653-662.

In an acute hospital, pain management clinic in England, Alexander Technique was evaluated for impact on health status, costs and pain management in 43 chronic back pain service users. The findings suggest that Alexander Technique lessons can help improve self-efficacy for those who are sufficiently motivated, which in turn may have an impact on service utilization level.

McClellan S, Brilleman S, Wye L. What is the perceived impact of Alexander technique lessons on health status, costs and pain management in the real life setting of an English hospital? The results of a mixed methods evaluation of an Alexander technique service for those with chronic back pain. *BMC Health Serv Res*. 2015;15:293.

Pilates

In their 2017 clinical practice guidelines, the American College of Physicians found there was low quality evidence showing no clear differences between Pilates and other types of exercise for pain or function in chronic low back pain.

Qaseem A, Wilt TJ, McLean RM, Forciea MA. Noninvasive Treatments for Acute, Subacute, and Chronic Low Back Pain: A Clinical Practice Guideline from the American College of Physicians. *Ann Intern Med*. 2017

A 2016 systematic review of Pilates for chronic non-specific low back pain (8 RCTs, n=490) found Pilates showed significant improvement in pain relief and functional enhancement. Other exercises showed similar cumulative improvement if they included waist or torso movement and were performed for 20 cumulative hours.

Lin HT, Hung WC, Hung JL, Wu PS, Liaw LJ, Chang JH. Effects of Pilates on patients with chronic non-specific low back pain: a systematic review. *J Phys Ther Sci*. 2016;28(10):2961-2969.

A 2014 systematic review of 14 RCTs concluded Pilates exercise offers greater improvements in pain and functional ability compared to usual care and physical activity in the short term and improvements equivalent to massage therapy and other forms of exercise.

Wells C, Kolt GS, Marshall P, Hill B, Bialocerkowski A. The effectiveness of Pilates exercise in people with chronic low back pain: a systematic review. *PLoS One*. 2014;9(7):e100402.

RCTs

A trial of 101 post-menopausal women with cLBP compared 6 weeks of Pilates plus physiotherapy to physiotherapy alone found improvement in pain management and functional status with benefits persisting after one year.

Cruz-Diaz D, Martinez-Amat A, Osuna-Perez MC, De la Torre-Cruz MJ, Hita-Contreras F. Short- and long-term effects of a six-week clinical Pilates program in addition to physical therapy on postmenopausal women with chronic low back pain: a randomized controlled trial. *Disabil Rehabil.* 2016;38(13):1300-1308.

Feldenkrais

In a RCT, 61 visually impaired subjects with neck/scapular pain were assigned to Feldenkrais (2 sessions per week for 12 weeks) or to no treatment found Feldenkrais improved in pain scores.

Lundqvist LO, Zetterlund C, Richter HO. Effects of Feldenkrais method on chronic neck/scapular pain in people with visual impairment: a randomized controlled trial with one-year follow-up. *Arch Phys Med Rehabil.* 2014;95(9):1656-1661.

Comparing Feldenkrais to Back School, 53 patients experience equal benefit in pain and interoceptive awareness.

Paolucci T, Zangrando F, Iosa M, et al. Improved interoceptive awareness in chronic low back pain: a comparison of Back school versus Feldenkrais method. *Disabil Rehabil.* 2017;39(10):994-1001.