

Research Paper Review

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Randomised controlled trial of Alexander technique lessons, exercise, and massage (ATEAM) for chronic and recurrent back pain British Medical Journal 2008;337:a884

Little P et al.

Reviewed by Dr. Shawn Thistle DC (Research Review Service)

ABSTRACT

Objective: To determine the effectiveness of lessons in the Alexander technique, massage therapy, and advice from a doctor to take exercise (exercise prescription) along with nurse delivered behavioural counselling for patients with chronic or recurrent back pain.

Design: Factorial randomised trial.

Setting: 64 general practices in England.

Participants: 579 patients with chronic or recurrent low back pain; 144 were randomised to normal care, 147 to massage, 144 to six Alexander technique lessons, and 144 to 24 Alexander technique lessons; half of each of these groups were randomised to exercise prescription.

Interventions: Normal care (control), six sessions of massage, six or 24 lessons on the Alexander technique, and prescription for exercise from a doctor with nurse delivered behavioural counselling.

Main Outcome Measures: Roland Morris disability score (number of activities impaired by pain) and number of days in pain.

Results: Exercise and lessons in the Alexander technique, but not massage, remained effective at one year (compared with control Roland disability score 8.1: massage -0.58, 95% confidence interval -1.94 to 0.77, six lessons -1.40, -2.77 to -0.03, 24 lessons -3.4, -4.76 to -2.03, and exercise -1.29, -2.25 to -0.34). Exercise after six lessons achieved 72% of the effect of 24 lessons alone (Roland disability score -2.98 and -4.14, respectively). Number of days with back pain in the past four weeks was lower after lessons (compared with

control median 21 days: 24 lessons -18, six lessons -10, massage -7) and quality of life improved significantly. No significant harms were reported.

Conclusions: One to one lessons in the Alexander technique from registered teachers have long term benefits for patients with chronic back pain. Six lessons followed by exercise prescription were nearly as effective as 24 lessons.

ANALYSIS

Author's Affiliations

Primary Care Group, Community Clinical Sciences Division, Southampton University, UK

Background Information

Few interventions have substantial evidence to support their use in the treatment of chronic low back pain (CLBP). Previous research demonstrates that moderate improvements in function can be achieved with combined spinal manipulation and physiotherapy-supervised exercise programs. It has also been demonstrated that individual or group classes consisting of spinal stabilization and strengthening exercises can be of some benefit.

The Alexander technique offers an individualized approach to help patients develop skills to recognize, understand, and manage the poor habits that affect their posture and influence their back pain. A small body of literature has suggested that the Alexander method can positively affect postural tone and dynamic adaptability to changes in load and position (1,2,3).

The goal of the Alexander technique is to reduce back pain by limiting muscle spasm, strengthening postural muscles, decompressing the spine, and improving coordination and flexibility (for more information on the Alexander technique, visit: www.alexandertechnique.com).

The purpose of this factorial randomized trial was to examine the effectiveness of the Alexander technique, massage therapy, and physician advice to undertake exercise in conjunction with behavioral counseling in a patient population (n=579) with chronic and recurrent LBP. This was the first randomized trial published on this technique, and had a companion published as a cost-analysis (4).

PERTINENT RESULTS

Of the 579 subjects who entered the study, 81% (469) completed the questionnaires at 3 months, while 80% completed them at 12 months. The responders at 12 months were more likely to have left full time education later, and be self-employed or homemakers (NOTE: including education and employment in the final analysis did not alter the results of this study).

Pertinent results of this study:

- the patients had an average of 243 days of pain in the previous year, representing a chronic population (79% reported more than 90 days of pain)
- overall, little change occurred in the Roland-Morris (RM) scores in the control group
- at 3 months, significant improvements for all interventions (including massage) were noted

compared to the control group for days in pain, and RM scores

- in the group receiving 24 Alexander lessons the effect at 12 months was greater than the effect at 3 months (42% reduction in RM score, and 86% reduction in days with pain at 12 months)
- the effect of only 6 Alexander lessons was maintained at 12 months demonstrating a 17% reduction in RM scores and 48% reduction in days with pain
- 24 Alexander lessons had positive effects on all outcomes, while similar but only slightly smaller improvements were seen with 6 lessons followed by exercise
- 6 lessons of Alexander technique and 6 massage treatments had similar outcomes at three months, but the results of the 6 Alexander lessons lasted through the 12 month point, while the massage benefits did not
- adherence was good overall 91% in the massage group, 94% in the group receiving 6 Alexander lessons and 81% in the group receiving 24
- combining exercise with 24 Alexander lessons did not improve outcomes as much as the addition of exercise to 6 Alexander lessons in fact, the combination of only 6 lessons with exercise was as effective (~72%) at one year as 24 lessons alone
- only one adverse reaction was noted in a massage patient, while none were reported in any other intervention

CLINICAL APPLICATION & CONCLUSIONS

In this study, exercises and lessons in the Alexander technique improved pain and disability levels at one year in a very chronic LBP patient sample, while massage only demonstrated comparable short-term benefits. One on one lessons from registered Alexander teachers can have positive long-term benefits for chronic LBP patients. As this was a large, multi-center, multi-therapist trial, the results are not likely due to the superior skills of a few clinicians.

STUDY METHODS

64 general practices were recruited in England, from which 152 therapists agreed to participate. Each practice contacted a random selection of those who had attended their clinics with back pain in the previous five years, resulting in a study population of 579 patients.

Inclusion criteria:

- presentation in primary care with low back pain more than three months previously (to exclude first episodes)
- currently scoring 4 or more on the Roland disability scale
- current pain for three or more weeks (to exclude recurrence of short duration)

Exclusion criteria:

- previous experience of Alexander technique
- patients under 18 and over 65 (serious spinal disease more likely)
- clinical indicators of serious spinal disease

- current nerve root pain (below knee in dermatomal distribution), previous spinal surgery, pending litigation (outcome may be different, groups too small to analyze)
- history of psychosis or major alcohol misuse (difficulty completing outcomes)
- perceived inability to walk 100m (exercise difficult)

Subjects were randomized to one of four treatment groups (each intervention was applied with or without general exercise prescription from a GP, resulting in 8 possible allocations): normal care (n=144), 6 massage therapy treatments (n=147), 6 lessons of Alexander technique (n=144) or 24 lessons of Alexander technique (n=144).

All outcomes were measured at baseline, 3 months and 12 months. The primary outcomes were the Roland-Morris Disability questionnaire and number of days in pain.

STUDY STRENGTHS / WEAKNESSES

This study involved numerous treatment centers, teachers and therapists using a pragmatic treatment approach. The patient sample was also large for this type of study. The patients included were generally very chronic in nature, reporting a high number of pain days – these patients are traditionally difficult to treat so any quality studies with favorable outcomes should be viewed as influential and important. This study used simple and validated outcomes, achieved good adherence to treatments, and applied appropriate controls during the statistical analysis.

Additional References

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