

Collected Scientific Research Relating to the Use of Osteopathy with Frozen shoulder (adhesive capsulitis)

Important:

1) Osteopathy involves helping people's own self-healing abilities to work better, rather than focussing primarily on particular conditions.

2) Each person is different, and osteopathy treats them differently.

Therefore people respond to osteopathic treatment in different ways. Treatments that work for one person cannot be guaranteed to work for another person in the same way. The fact that there is scientific research supporting a treatment in a group of people does not mean that it will always work in the same way (which is probably true of all research).

A number of things make research into osteopathy challenging. These include the two aspects of osteopathy mentioned above, and also the lack of major commercial interests to provide funding in expectation of financial returns. At the same time, there is an emerging body of research demonstrating the usefulness of osteopathic treatment.

More research is being done all of the time. I am not aware of any research which shows that osteopathic treatment, delivered by a qualified osteopath, is ineffective in relation to this area. If you are aware of any studies that show that, please bring them to my attention.

Please note: there is room for debate about the classifications used for these studies. Please let John Smartt know if you believe that any of these classifications are incorrect.

These studies are from peer-reviewed journals

Number
of studies:
5

Clinically and statistically significant results

Number
of studies:
4

Randomised controlled trials

Number of studies: 2

Gutiérrez Espinoza HJ, Pavez F, Guajardo C, Acosta M 2015 **Glenohumeral posterior mobilization versus conventional physiotherapy for primary adhesive capsulitis: a randomized clinical trial [article in Spanish]** Medwave Sep 22;15(8):e6267 <https://www.ncbi.nlm.nih.gov/pubmed/26485477>

"This is a randomized clinical trial conducted at Hospital Clinico San Borja Arriaran in Chile. Fifty-seven patients with an age range of 50 to 58 years old were enrolled in two groups. Both groups were randomized to receive a treatment of 10 sessions: the experimental group (n=29) received a glenohumeral posterior mobilization technique after training with a cycle ergometer, and the control group (n=28) received conventional physiotherapy. The primary outcome measure was range of passive movement in external rotation; secondary outcomes were forward flexion and shoulder abduction, pain perception using the visual analogue scale and functionality test using the Constant-Murley Score."

"The experimental group was treated with 15 minutes of upper extremity ergometer and then the subsequent mobilization glenohumeral technique was performed with the patient supine, with 30 to 40 degrees of abduction and slight external rotation of the shoulder as tolerance. First an axial distraction was performed inferiorly grade III according to Kaltenborn followed by a glide or later kept sliding, no wobbling, for a minute. This maneuver was repeated 15 times, with one minute rest between each. The control group received conventional physiotherapy treatment program consisting of ultrasound (1 MHz, 1.5 W / cm² continuously for 10 minutes, treatment within 4 cm²), self - paced exercises, active exercises type Codman, exercises cane and isometrics, as tolerated [26]. Both groups performed 10 sessions at intervals of two to three times a week."

"The study had the statistical power to detect a difference of four degrees between the groups in the improvement of the range of external rotation at the end of the treatment period. The experimental group showed a significant improvement with a mean difference of 46.3 degrees (SD=8.7) compared to 18.1 (SD=7.2) in the control group (p<0.0001). There was also a decrease in the perception of pain (p= 0.0002) and improved function (p< 0.0001) in the group treated with glenohumeral posterior mobilization technique."

"The glenohumeral posterior mobilization technique applied after training with cycle ergometer is an effective short-term technique to treat primary adhesive capsulitis decreasing the severity of pain and improving joint function compared with conventional physiotherapy treatment. The degree of increase in shoulder external rotation is more than 20 degrees beyond the increase achieved with conventional treatment."

Johnson AJ, Godges JJ, Zimmerman GJ, Ounanian LL 2007 **The effect of anterior versus posterior glide joint mobilization on external rotation range of motion in patients with shoulder adhesive capsulitis.** J Orthop Sports Phys Ther Mar;37(3):88-99 <https://www.ncbi.nlm.nih.gov/pubmed/17416123>

"Randomized clinical trial.

OBJECTIVE:

To compare the effectiveness of anterior versus posterior glide mobilization techniques for improving shoulder external rotation range of motion (ROM) in patients with adhesive capsulitis.

BACKGROUND:

Physical therapists use joint mobilization techniques to treat motion impairments in patients with adhesive capsulitis. However, opinions of the value of anterior versus posterior mobilization procedures to improve external rotation ROM differ.

METHODS AND MEASURES:

Twenty consecutive subjects with a primary diagnosis of shoulder adhesive capsulitis and exhibiting a specific external rotation ROM deficit were randomly assigned to 1 of 2 treatment groups. All subjects received 6 therapy sessions consisting of application of therapeutic ultrasound, joint mobilization, and upper-body ergometer exercise. Treatment differed between groups in the direction of the mobilization technique performed. Shoulder external rotation ROM measured initially and after each treatment session was compared within and between groups and analyzed using a 2-way ANOVA, followed by paired and independent t tests.

RESULTS:

There was no significant difference in shoulder external rotation ROM between groups prior to initiating the treatment program. A significant difference between groups ($P = .001$) was present by the third treatment. The individuals in the anterior mobilization group had a mean improvement in external rotation ROM of 3.0 degrees (SD, 10.8 degrees; $P = .40$), whereas the individuals in the posterior mobilization group had a mean improvement of 31.3 degrees (SD, 7.4 degrees; $P < .001$).

CONCLUSIONS:

A posteriorly directed joint mobilization technique was more effective than an anteriorly directed mobilization technique for improving external rotation ROM in subjects with adhesive capsulitis. Both groups had a significant decrease in pain."

Other controlled clinical trials

Number of studies: 1

Niel-Asher S, Hibberd S, Bentley S, Reynolds J 2014 **Adhesive capsulitis: Prospective observational multi-center study on the Niel-Asher technique (NAT)** International Journal of Osteopathic Medicine Dec, Volume 17, Issue 4, Pages 232–242 [http://www.journalofosteopathicmedicine.com/article/S1746-0689\(14\)00057-1/abstract](http://www.journalofosteopathicmedicine.com/article/S1746-0689(14)00057-1/abstract)

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In this study the "control" was the (well-established) "natural history" of adhesive capsulitis (how long it usually takes people to recover with no external intervention). The results need to be replicated, ideally with a control group within the study itself.

"All patients demonstrated a significant improvement in AROM [arm range of motion] for both flexion and abduction. The data supports the notion that NAT [Niel-Asher technique] is autonomously reproducible. NAT demonstrated significant improvement in AROM for both flexion and abduction with a consistent average of twelve degrees improvement per treatment session. The mean number of treatments was 7. NAT expedites both pain reduction and increased mobility for adhesive capsulitis over and above the natural history."

Case reports

Number of studies: 1

Boucher JD, Figueroa J 2018 **Restoration of Full Shoulder Range of Motion After Application of the Fascial Distortion Model** J Am Osteopath Assoc March 5 <http://jaoa.org/article.aspx?preview=true&articleid=2674377>

"Decreased active and passive range of motion (ROM) accompanied by pain in the shoulder is a common presentation for patients with frozen shoulder, and it can be difficult to restore normal function. Through the fascial distortion model, physicians can apply a manual technique to rapidly and effectively increase ROM and decrease pain. A 28-year-old man presented 18 months after sustaining a shoulder hyperextension injury. On active and passive ROM examination, he had approximately 90° of shoulder abduction and moderately reduced internal rotation associated with 8/10 pain. After 2 applications of the fascial distortion model, his shoulder restored to full abduction and internal rotation with no pain."

Mixed results (significant for some outcomes, not others)

Number
of studies:
1

Systematic reviews

Number of studies: 1

Ho CY, Sole G, Munn J 2009 **The effectiveness of manual therapy in the management of musculoskeletal disorders of the shoulder: a systematic review.** Manual Ther <https://www.ncbi.nlm.nih.gov/pubmed/19467911>

There has been a considerable amount of research into shoulder conditions since this review was undertaken.

"A systematic review of randomised controlled trials (RCTs) was conducted to determine the effectiveness of manual therapy (MT) techniques for the management of musculoskeletal disorders of the shoulder. Seven electronic databases were searched up to January 2007, and reference lists of retrieved articles and relevant MT journals were screened. Fourteen RCTs met the inclusion criteria and their methodological qualities were assessed using the PEDro scale. Results were analyzed within diagnostic subgroups (adhesive capsulitis (AC), shoulder impingement syndrome [SIS], non-specific shoulder pain/dysfunction) and a qualitative analysis using levels of evidence to define treatment effectiveness was applied. For SIS, there was no clear evidence to suggest additional benefits of MT to other interventions. MT was not shown to be more effective than other conservative interventions for AC, however, massage and Mobilizations-with-Movement may be useful in comparison to no treatment for short-term outcomes for shoulder dysfunction."