Collected Scientific Research Relating to the Use of Osteopathy with Fracture-related swelling

Important:

1) Osteopathy involves helping people's own self-healing abilities to work better, rather that 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: 4

Clinically and statistically significant results

Number of studies: 4

Systematic reviews

Number of studies: 2

Majewski-Schrage T, Snyder K 2016 **The Effectiveness of Manual Lymphatic Drainage in Patients With Orthopedic Injuries.** J Sport Rehabil Feb;25(1):91-7 *http://www.ncbi.nlm.nih.gov/pubmed/26458244*

> "CLINICAL SCENARIO: Managing edema after trauma or injury is a primary concern for health care professionals, as it is theorized that delaying the removal of edema will increase secondary injury and result in a longer recovery period. The inflammatory process generates a series of events, starting with bleeding and ultimately leading to fluid accumulation in intercellular spaces and the formation of edema. Once edema is formed, the lymphatic system plays a tremendous role in removing excess interstitial fluid and returning the fluid to the circulatory system. Therefore, rehabilitation specialists ought to use therapies that enhance the uptake of edema via the lymphatic system to manage edema; however, the modalities commonly used are ice, compression, and elevation. Modalities such as these may be effective at preventing swelling but present limited evidence to suggest that the function of the lymphatic system is enhanced. Manual lymphatic drainage (MLD) is a manual therapy technique that assists the lymphatic system function by promoting variations in interstitial pressures by applying light pressure using different hand movements."
> "The literature was searched for level 2 evidence or higher that investigated the effects of MLD techniques on patients with orthopedic injuries.
> • A systematic review was published in 20097 that examined the evidence to support MLD techniques in sports medicine. The review included 2 level 1studies and I level 2 study8-10 that compared outcomes after MLD treatments with a control treatment. The findings revealed significant decreases in edema and pain,8volume,9and aspartate aminotransferase and lactate dehydrogenase10in patients who received MLD treatment compared with those who received the control treatment.
> • The literature search revealed 4 possible studies related to the clinical question that were not included in the systematic review published in 2009. One study was excluded because it was rated as level 4 evidence, using 5 participants in a single-subject A-B design. Therefore, 3 met the inclusion criteria12-14 and were included."
> "There is moderate evidence to support the use of MLD techniques for improving patient- and disease-oriented outcomes, including edema, range of motion, and activi ties of daily living in patients with orthopedic injuries. Patients who received MLD treatment experienced significant improvements in at least I outcome in all 3 studies. Those who did not receive MLD also experienced significant improvements in other measured outcomes. Due of the lack of homogeneity between studies, we cannot conclude that MLD is superior over no treatment; however, it may help decrease edema and increase range of motion and activities of living. Strength of Recommendation: Level 2 evidence6 supports the use of MLD for improving both patient- and disease-oriented outcomes for orthopedic conditions."

Vairo GL, Miller SJ, McBrier NM, Buckley WE. 2009 **Systematic review of efficacy for manual**

lymphatic drainage techniques in sports medicine and rehabilitation: an evidence-based practice approach. J Man Manip Ther 17(3):e80-9. *http://www.ncbi.nlm.nih.gov/pubmed/20046617*

> "When combined with concomitant musculoskeletal therapy, pilot and case studies demonstrate MLDT [manual lymphatic drainage technique]'s effectiveness. The best evidence suggests that efficacy of MLDT in sports medicine and rehabilitation is specific to resolution of enzyme serum levels associated with acute skeletal muscle cell damage as well as reduction of edema following acute ankle joint sprain and radial wrist fracture. "

Randomised controlled trials

Number of studies: 2

Knygsand-Roenhoej K, Maribo T. 2011 **A randomized clinical controlled study comparing the effect of modified manual edema mobilization treatment with traditional edema technique in patients with a fracture of the distal radius.** J Hand Ther Jul-Sep;24(3):184-93; quiz 194 *http://www.ncbi.nlm.nih.gov/pubmed/21193287*

> "A statistically significant improvement was observed in ADL [activities of daily living] after three weeks after inclusion (p=0.03) in the modified MEM [manual edema mobilisation] group compared with the control group. Furthermore, fewer edema treatment sessions were needed (p=0.03) in the modified MEM group. At six weeks, we observed a difference between the two groups' needs for further edema treatment (p=0.04)."

Härén K, Backman C, Wiberg M 2000 **Effect of manual lymph drainage as described by Vodder on oedema of the hand after fracture of the distal radius: a prospective clinical study.** Scand J Plast Reconstr Surg Hand Surg Dec;34(4):367-72 *http://www.ncbi.nlm.nih.gov/pubmed*

> "The aim of this study was to evaluate the efficacy of manual lymph drainage, as described by Vodder, in reducing oedema in the hand after a traumatic injury. During a period of 10 months in 1996-7, a total of 26 consecutive patients with a fracture of the distal radius that was treated by external fixation were included in the study. Patients were randomised into an experimental (n = 12) and a control group (n = 14). Treatment started 11 days after application of the external fixator. All patients had the same conventional treatment with exercises, movement, oedema control, and education. The experimental group was given 10 treatments of manual lymph drainage in addition. Oedema was measured four times with the volumeter, and the injured hand was always compared with the uninjured one. The first measurement was made three days after removal of the external fixation. The difference in hand volume showed that the experimental group had significantly less oedema in the injured hand. This result indicates that manual lymph drainage is a useful method for reducing post-traumatic oedema in the hand."