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CADTH Reference List

Massage Therapy for Musculoskeletal Pain

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Summary of Abstracts

CADTH

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About CADTH: CADTH is an independent, not-for-profit organization responsible for providing Canada's health care decision-makers with objective evidence to help make informed decisions about the optimal use of drugs, medical devices, diagnostics, and procedures in our health care system.

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Key Message

Eight systematic reviews were identified regarding the clinical effectiveness of massage therapy for the treatment of musculoskeletal pain.

Research Question

What is the clinical effectiveness of massage therapy for the treatment of musculoskeletal pain?

Methods

Literature Search Methods

A limited literature search was conducted by an information specialist on key resources including MEDLINE, the Cochrane Database of Systematic Reviews, the international HTA database, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The search strategy comprised both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. The main search concepts were massage therapy and musculoskeletal pain. CADTH-developed search filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, or network meta-analyses. Where possible, retrieval was limited to the human population. The search was also limited to English-language documents published between January 1st, 2016 and October 19th, 2021. Internet links were provided, where available.

Selection Criteria and Summary Methods

One reviewer screened literature search results (titles and abstracts) and selected publications according to the inclusion criteria presented in Table 1. Full texts of study publications were not reviewed. The Overall Summary of Findings was based on information available in the abstracts of selected publications.

Results

Eight systematic reviews were identified regarding the clinical effectiveness of massage therapy for the treatment of musculoskeletal pain.[1-8] No health technology assessments were identified.

Additional references of potential interest that did not meet the inclusion criteria are provided in Appendix 1.

Table 1: Selection Criteria

Criteria	Description
Population	People with musculoskeletal pain
Intervention	Massage therapy
Comparator	Pharmacological interventions; non-pharmacological interventions (e.g., exercise); no treatment (e.g., waitlist); placebo (e.g., sham interventions)
Outcomes	Clinical effectiveness (e.g., pain, quality of life, functional status or disability, safety [e.g., adverse events])
Study designs	Health technology assessments, systematic reviews

Overall Summary of Findings

Eight systematic reviews were identified regarding the clinical effectiveness of massage therapy for the treatment of musculoskeletal pain.[1-8] A systematic review found massage therapy to be effective in pain reduction and in improving function, compared to no treatment, in healthy individuals with induced muscle damage and pain associated with delayed onset muscle soreness.[2] However, the strength of the evidence was considered low quality.[2] Two systematic reviews conducted by the Neck Pain Task Force evaluated the impact of massage therapy in individuals with whiplash-associated disorders and neck pain and associated disorders.[7,8] The Neck Pain Task Force concluded that clinical massage was an effective treatment and recommended against the use of relaxation massages to manage neck pain.[7] Furthermore, massage therapy was found to be less or equally effective to structured patient education interventions in managing whiplash-associated disorders and neck pain and associated disorders.[8]

Five systematic reviews[1,3-6] evaluated the effect of massage therapy in individuals with low back pain, with 1 specific to accupressure.[1] Although the quality of evidence ranged from low to moderate, 2 systematic reviews found massage therapy to be effective for chronic low back pain when compared to comparator groups.[4,5] Another systematic review found massages to significantly improve pain when compared to inactive treatments in the short-term for acute low back pain, as well as pain and function for sub-acute and chronic low back pain.[6] Moreover, when compared to other active controls, massage therapy significantly improved pain in the short- and long-term.[6] However, authors of the systematic review deemed the strength of evidence to be of very low to low quality.[6] One systematic review concluded massage therapy to be associated with short- and intermediate-term pain reduction and short-term improvements in function for individuals with chronic low back pain.[3] The same study evaluated the effects of myofascial release massage for patients with fibromyalgia and concluded that it resulted in slight improvement in function in the intermediate term.[3] Authors deemed the evidence to be of low to moderate quality. Detailed summaries of the systematic reviews are provided in Table 2.

Table 2: Summary of Included Systematic Reviews

First author (year)	Review population	Relevant intervention and comparators	Outcomes of interest	Author's conclusion
Li et al. (2021)[1]	Individuals with LBP 23 RCTs N = 2,400	Intervention: Acupressure Comparator: Tui Na massage, physical therapy, and usual care	Pain reduction, improvement in function (Oswestry Disability Index)	Acupressure was superior to Tui Na massage, physical therapy, and usual care in pain reduction. Acupressure significantly improved Oswestry Disability Index scores when compared to usual care. However, substantial heterogeneity was observed across all studies.
Nahon et al. (2021)[2]	Healthy individuals with DOMS 121 RCTs	Intervention: Massage Comparator: No intervention	Level of DOMS-related pain	Low-quality evidence suggested that massage therapy had a positive effect compared to the control group in managing DOMs-related pain.
Skelly et al. (2018)[3]	Individuals with chronic LBP, chronic neck pain, osteoarthritis (i.e., knee, hip or hand), fibromyalgia, or tension headache 202 RCTs	Intervention: Massage Comparator: Usual care, no treatment, wait list, placebo, or sham intervention; compared with pharmacological therapy or compared with exercise	Pain reduction and improvement in function at short, intermediate, and longterm	Moderate quality of evidence suggested that massage is associated with slight improvements in the short term for function and pain. This effect continued in the intermediate term for pain, but evidence was assessed to be of low quality. Further, low-quality evidence indicated myofascial release massage slightly improved function in the intermediate term for participants with fibromyalgia.
Chou et al. (2017)[4]	Individuals with acute or chronic non-radicular or radicular back pain Number of studies for evaluated therapies ranged from 2 to 121	Intervention: Massage Comparator: Sham treatment, wait list, or usual care, or of 1 nonpharmacologic option versus another	Pain reduction, improvement in function	Low to moderate evidence indicated that massage was effective for chronic LBP.
Chou et al. (2016)[5]	Individuals with LBP 156 RCTs	Intervention: Massage Comparator: Placebo, no treatment, usual care, sham therapy, inactive therapy, or another active therapy	Pain reduction, improvement in function	Low-quality evidence indicated massage to be more effective for chronic LBP than placebo, sham, no treatment, usual care, or wait list.

First author (year)	Review population	Relevant intervention and comparators	Outcomes of interest	Author's conclusion
Farber and Wieland (2016)[6]	Individuals with acute, sub-acute, and chronic LBP 25 RCTs N = 3,096	Intervention: Massage Comparator: Inactive controls (i.e., sham therapy, wait list, or no treatment), active controls (i.e., manipulation, mobilization, TENs, acupuncture, traction, relaxation, physical therapy, and exercises or self-care education)	Pain reduction, improvement in function	For participants with acute LBP, massage significantly reduced pain in the short term compared to inactive controls. Massage also significantly reduced pain and improved function for participants with sub-acute and chronic LBP compared to inactive controls. When compared to active controls, massage was better for short-term and long-term pain but not for function. Strength of evidence was deemed to be of very low to low quality.
Wong et al. (2016)[7]	Individuals with WAD or NAD 38 studies	Intervention: Massage Comparator: Other interventions, placebo or sham, or no intervention	Pain intensity, HRQoL, self-rated or functional recovery, psychological outcomes, or adverse events	Swedish or clinical massage added benefit to self-care advice. Clinical massage is an effective intervention for the management of neck pain. However, relaxation massage is not effective and should not be used to manage neck pain.
Yu et al. (2016)[8]	Individuals with WAD or NAD 4 RCTs	Intervention: Structured patient education with other conservative interventions Comparator: Massage	Self-rated recovery, functional recovery, pain intensity, HRQoL, psychological outcomes, or adverse events	Structured patient education intervention was equal or less effective than other conservative treatments, including massage.

DOMS = delayed onset muscle soreness; HRQoL = health-related quality of life; LBP = low back pain; NAD = neck pain and associated disorders; RCT = randomized controlled trial; TENS = transcutaneous electrical nerve stimulation; WAD = whiplash-associated disorders.

References

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

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7. Wong JJ, Shearer HM, Mior S, et al. Are manual therapies, passive physical modalities, or acupuncture effective for the management of patients with whiplash-associated disorders or neck pain and associated disorders? An update of the Bone and Joint Decade Task Force on Neck Pain and Its Associated Disorders by the OPTIMa collaboration. *Spine J.* 12 2016; 16(12): 1598-1630. PubMed
8. Yu H, Cote P, Southerst D, et al Does structured patient education improve the recovery and clinical outcomes of patients with neck pain? A systematic review from the Ontario Protocol for Traffic Injury Management (OPTIMa). *Collaboration Spine J.* 12 2016; 16(12): 1524-1540. PubMed

Appendix 1: References of Potential Interest

Previous CADTH Reports

9. Manual therapy for recent-onset or persistent neck pain: a review of clinical effectiveness and guidelines. *(CADTH Rapid response report: summary with critical appraisal)*. Ottawa (ON): CADTH; 2017: https://www.cadth.ca/sites/default/files/pdf/htis/2017/RC0910%20Chiropractic%20Interventions%20for%20Neck%20Pain%20Grade%20III%20Final%20revised.pdf. Accessed 2021 Oct 22.

10. Manual therapy for the treatment of shoulder pain: clinical effectiveness. *(CADTH Rapid response report: reference list)*. Ottawa (ON): CADTH; 2017: https://www.cadth.ca/sites/default/files/pdf/htis/2017/RA0915%20Chiropractic%20Interventions%20for%20Shoulder%20Pain%20Final.pdf. Accessed 2021 Oct 22.

Systematic Reviews and Meta-Analyses

Comparator Not Specified

11. Chou R, Wagner J, Ahmed AY, et al. Treatment for acute pain: a systematic review. *Agency for Healthcare Research and Quality (US).* 12 2020; 20(21): 12. PubMed

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13. Cuenca-Martinez F, Cortes-Amador S, Espi-Lopez GV. Effectiveness of classic physical therapy proposals for chronic non-specific low back pain: a literature review. *Phys Ther Res.* 2018; 21(1): 16-22. PubMed

14. Barreto DM, Batista MVA. Swedish massage: a systematic review of its physical and psychological benefits. *Adv. Mind. Body Med.* Spring 2017; 31(2): 16-20. PubMed

15. Yeun YR. Effectiveness of massage therapy for shoulder pain: a systematic review and meta-analysis. *J Phys Ther Sci* May 2017; 29(5): 936-940. PubMed

Not Specific to People With Musculoskeletal Pain

16. Crawford C, Boyd C, Paat CF, et al. The Impact of massage therapy on function in pain populations-a systematic review and meta-analysis of randomized controlled trials: part I, patients experiencing pain in the general population. *Pain Med.* 2016;17(7):1353-1375. PubMed

Not Specific to Massage Therapy

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Review Articles

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