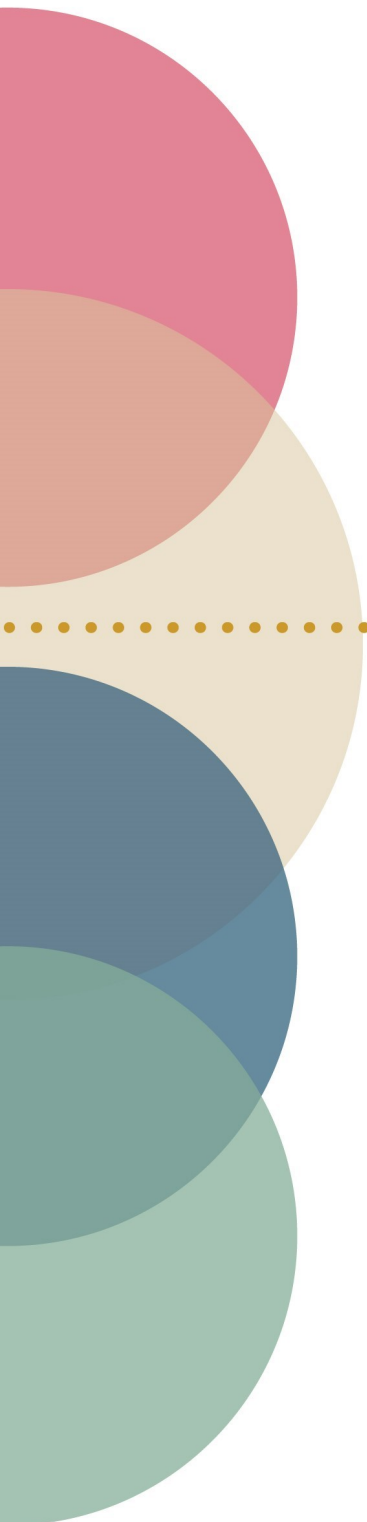




CLINICAL GUIDELINES

Massage Therapy

Version 1.0

Effective May 15, 2021



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MT-1.0: Criteria for the Provision of Massage Therapy Services

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MT-1.1: Definitions

Activities of Daily Living

- Activities of Daily Living include Basic Activities of Daily Living and Instrumental Activities of Daily Living.
 - ◆ **Basic Activities of Daily Living** are oriented towards taking care of one's own physical needs. These activities include walking, changing positions, dressing, and personal hygiene.
 - ◆ **Instrumental Activities of Daily Living** are more complex and support independent living within the home and community. These activities may include driving, housecleaning, meal preparation, and shopping.

Massage Therapy Services

- Massage Therapy Services are those within the scope of a licensed/certified provider in the applicable jurisdiction.

Exacerbation

- An Exacerbation occurs when previously improved functional deficits recur following a plateau in the ability to perform Activities of Daily Living. This results in a significant decline in the ability to perform Activities of Daily Living when compared to the pre-exacerbation levels of function. A significant decline must be quantified. This decline can be demonstrated by a worsening of equal or greater value than an established Minimally Clinical Important Difference (MCID) or Minimum Detectable Change (MDC) on a standardized assessment for the individual's condition.

Generally Accepted Standards of Practice

- Generally Accepted Standards of Practice are widely-accepted clinical concepts and practices based on credible scientific evidence published in the peer-reviewed literature and/or evidence-based guidelines.

Maintenance Massage Therapy Services

- Maintenance Massage Therapy Services are those that are performed to maintain the individual's current condition or to prevent or slow deterioration of the individual's condition. Maintenance Massage Therapy Services are not considered Medically Necessary.

Medically Necessary Massage Therapy Services

- Medically Necessary Massage Therapy Services are those that are reasonable and necessary, based on Generally Accepted Standards of Practice, for the evaluation, diagnosis and treatment to restore lost function resulting from an injury or illness. Medically Necessary Massage Therapy Services are not primarily for the convenience of the individual, the health care provider, or other physicians or health care providers.

Minimally Clinical Important Difference (MCID)

- Minimally Clinical Important Difference (MCID) is the smallest change in the score of a standardized assessment tool that is identified to be beneficial. The MCID is a statistical value established in published, peer-reviewed research.

Minimum Detectable Change (MDC)

- Minimum Detectable Change (MDC) is a change in the score of a standardized assessment tool that is greater than measurement error. The MDC is a statistical value established in published, peer-reviewed research.

Palliative Massage Therapy Services

- Palliative Massage Therapy Services are those performed to alleviate symptoms without providing corrective benefit to the condition. An individual receiving Palliative Massage Therapy Services, in most instances, demonstrates varying lapses between treatments. Palliative Massage Therapy Services are not considered Medically Necessary. Please review **MT-3.3 Condition Specific Considerations** for condition specific considerations of Massage Therapy Services for Cancer Pain.

Preventative Massage Therapy Services

- Preventative Massage Therapy Services are those performed in the management of the asymptomatic individual. Preventative Massage Therapy Services are not considered Medically Necessary.

Red Flags

- Red flags are signs or symptoms that suggest the presence of life or limb threatening conditions and require additional evaluation, immediate referral, or medical co-management. Red flags are likely to reflect a serious underlying disease. Red flags include findings that may indicate conditions such as:
 - ◆ Aneurysm or dissection
 - ◆ Cancer
 - ◆ Cauda equina syndrome
 - ◆ Fracture
 - ◆ Infection
 - ◆ Progressive neurologic conditions
 - ◆ Suicidal ideation

MT-1.2: Indications for Treatment

Massage Therapy Services will be considered Medically Necessary when current information is submitted to demonstrate that ALL of the following criteria have been met:

- Massage Therapy Services are safe and effective for the individual's condition based on Generally Accepted Standards of Practice as defined in **MT-1.1 Definitions**.

- Massage Therapy Services are for the treatment of a condition that is musculoskeletal in origin, or a select non-musculoskeletal condition specifically included in **MT-3.1 Included Conditions**.
- There must be a direct therapeutic relationship between the complaint and treatment.
- Any Red Flags have been appropriately addressed based on Generally Accepted Standards of Practice as defined in **MT-1.1 Definitions**.
- Massage Therapy Services for the treatment of a non-musculoskeletal condition listed in **MT-3.1 Included Conditions** must include confirmation of medical evaluation and diagnosis.
- Massage Therapy Services for the treatment of minors must include confirmation of medical evaluation and diagnosis.
- Massage Therapy Services address quantified pain or quantified deficits in the ability to perform Activities of Daily Living that necessitate Massage Therapy Services based on Generally Accepted Standards of Practice as defined in **MT-1.1 Definitions**. A list of recommended standardized assessments to quantify restrictions in Activities of Daily Living and to track functional progress is included in **MT-2.2 Recommended Standardized Assessments** for musculoskeletal conditions and **MT-3.2 Recommended Standardized Assessments** for non-musculoskeletal conditions.
- Massage Therapy Services are expected to result in significant, measurable, progressive improvement in Pain and/or Activities of Daily Living within a reasonable and generally predictable period of time based on Generally Accepted Standards of Practice as defined in **MT-1.1 Definitions**
- The frequency, duration, and quantity of Massage Therapy Services performed must be based on:
 - ◆ The severity of clinical findings
 - ◆ The presence or absence of complicating factors
 - ◆ The natural history of the condition
 - ◆ The expectation for progressive improvement in the ability to perform Activities of Daily Living
 - ◆ Generally Accepted Standards of Practice as defined in **MT-1.1 Definitions**
- As the individual improves with treatment, less frequent Massage Therapy Services are needed. Massage Therapy Services can be supplemented with a self-care program.
- The complexity of the individual's condition requires the clinical judgment and knowledge of a qualified provider.
- The submitted clinical information must establish the individual's current condition and Medical Necessity for Massage Therapy Services based on Generally Accepted Standards of Practice as defined in **MT-1.1 Definitions**.

Additional Indications for Continuation of Massage Therapy Services

In addition to the requirements listed above, requests for Continuation of Massage Therapy Services (after the initial request) must include current information to demonstrate that ANY of the following criteria have been met:

- An Exacerbation occurs as defined in **MT-1.1 Definitions**, and Massage Therapy Services are expected to result in a return to the pre-exacerbation ability to perform Activities of Daily Living.
- Quantified measures of pain and/or function indicate significant improvement in the ability to perform Activities of Daily Living attributable to recent Massage Therapy Services for the condition. A significant response within a reasonable and generally predictable period of time may be demonstrated through ANY of the following:
 - ◆ An improvement of equal or greater value than an established MCID, as defined in **MT-1.1 Definitions**, on a standardized assessment for the individual's condition.
 - ◆ An improvement of equal or greater value than an established MDC, as defined in **MT-1.1 Definitions**, on a standardized assessment for the individual's condition.
 - ◆ Significant and quantified improvement in the ability to perform Activities of Daily Living as defined in **MT-1.1 Definitions**.

Additional Requirements for Retrospective Review of Massage Therapy Services

In addition to the requirements listed above, when retrospective reviews (for Massage Therapy Services rendered in the past) are allowed, the submitted information must adequately support that the Massage Therapy Services were performed on each date of service being requested.

MT-1.3: Non-Indications

The following Massage Therapy Services are considered NOT Medically Necessary:

- Maintenance Massage Therapy Services, Preventative Massage Therapy Services, and Palliative Massage Therapy Services as defined in **MT-1.1 Definitions**.
- Massage Therapy Services provided for individuals without quantified pain, quantified deficits in the ability to perform Activities of Daily Living, or a standardized assessment demonstrating the Medical Necessity of care for an included non-musculoskeletal condition to necessitate initial or continued Massage Therapy Services as described in **MT-1.2 Indications for Treatment**.
- Massage Therapy Services following a plateau or lack of improvement in quantified pain, quantified deficits in the ability to perform Activities of Daily Living, or a standardized assessment demonstrating improvement in the condition as described in **MT-1.2 Indications for Treatment**.

- Massage Therapy Services for the treatment of disorders that are non-musculoskeletal in origin (e.g. systemic, visceral, central nervous system, or infectious conditions), other than those described in **MT-3.1 Included Conditions**.
- Massage Therapy Services performed at a frequency, duration, or quantity that exceeds the amount of Medically Necessary Massage Therapy Services for the individual's condition as described in **MT-1.2 Indications for Treatment**.
- Massage Therapy Services related to recreational activities or sport-specific performance in the absence of quantified deficits in the ability to perform Activities of Daily Living as described in **MT-1.2 Indications for Treatment**.
- Massage Therapy Services that are performed in the presence of Red Flags that have not been appropriately addressed based on Generally Accepted Standards of Practice as defined in **MT-1.1 Definitions**.
- Massage Therapy Services that replace or delay other medically necessary care based on Generally Accepted Standards of Practice as defined in **MT-1.1 Definitions**.
- Massage Therapy Services rendered when the complexity of the individual's condition does not require the clinical judgment and knowledge of a qualified provider. Massage Therapy Services for conditions of lesser complexity, which do not require treatment by a qualified provider are not considered Medically Necessary Massage Therapy Services, even if they are performed by a qualified provider.
- Retrospective Massage Therapy Services that lack adequate submitted information to support that Massage Therapy Services were performed on each date of service requested and/or do not meet the other requirements outlined in **MT-1.2 Indications for Treatment**.
- Massage Therapy Services that are provided under the same or related body-part or diagnosis as other more efficacious services are considered duplicate care. Duplicate Massage Therapy Services may not be Medically Necessary, as the individual's condition can improve with care provided under one treatment plan and by one provider.

MT-1.4: Benefits, Coverage Policies, and Eligibility

Benefits, coverage policies, and eligibility issues pertaining to each health plan and/or jurisdiction may take precedence over eviCore's medical necessity criteria. The final determination of reimbursement for Massage Therapy Services is the decision of the health plan and is based on the individual's policy or benefit entitlement structure as well as claims processing rules. Providers should reference health plan policies for covered and non-covered Massage Therapy Services.

MT-1.5: Administrative Rules

The following submission time frames generally apply for health plans that require authorization:

- **Initial Concurrent Requests:** While time frames may change based on jurisdiction and/or health plan rules, initial requests are typically submitted within seven (7) calendar days of the requested date of service.
- **Concurrent Continuation of Treatment Requests:** While time frames may vary based on jurisdiction and/or health plan rules, any subsequent concurrent request must generally be submitted within seven (7) calendar days of the requested date of service.
- **Retrospective Requests:** While this type of review is dependent upon jurisdiction and/or health plan rules, dates of service greater than seven (7) calendar days in the past are generally considered a retrospective review.

MT-2.0: Clinical Considerations for Musculoskeletal Conditions

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MT-2.1: Etiology

Submitted information must show symptoms are caused by a condition that is musculoskeletal in origin (as opposed to symptoms originating from systemic, visceral, central nervous system or infectious conditions).

MT-2.2: Recommended Standardized Assessments

Standardized assessment tools are used to assess and track changes in pain levels or in restrictions of Activities of Daily Living. Recommended standardized assessment tools are listed below:

Measure of Function	Reference
Disabilities of Arm, Shoulder, Hand (DASH and QuickDASH)	Franchignoni 2014; Angst 2011; Rysstad 2020
Headache Disability Index (HDI)	Jacobson 1994; Jacobson 1995
Hip Disability and Osteoarthritis Outcome Score (HOOS)	Ornetti 2009
Knee Injury and Osteoarthritis Outcome Score (KOOS)	Roos 2003; Ornetti 2009
Lower Extremity Functional Scale (LEFS)	Binkley 1999; Williams 2012
Neck Disability Index (NDI)	Young 2019; MacDermid 2009
Oswestry Disability Index (ODI)	Davidson 2002; Maughan 2010; Clohesy 2018
Patient Specific Functional Scale (PSFS)	Horn 2012; Hefford 2012; Maughan 2010; Rysstad 2020
Roland-Morris Disability Questionnaire (RMDQ)	Stratford 1996; Ostelo 2004; Maughan 2010; Clohesy 2018
Shoulder Pain and Disability Index (SPADI)	Schmidt 2014; Angst 2011
Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC)	Williams 2012; Whitehouse 2003; Whitehouse 2008; Clement 2018
Visual Analog Scale, Numeric Rating Scale (VAS, NRS)	Thong 2018; Turner 2004; Young 2019; Maughan 2010; Farrar 2001
Defense and Veterans Pain Rating Scale (DVPRS)	Young 2019; Maughan 2010; Farrar 2001; Polomano 2016; Nassif 2014

MT-2.3: Mental Health Considerations

Referral to a qualified mental health professional is required when there are signs of an unmanaged behavioral health disorder. Immediate referral to a counselor or helpline is required if there are ANY indications of thoughts or plans for self-harm. The National Suicide Prevention Lifeline is available 24 hours every day at 1-800-273-8255.

MT-3.0: Clinical Considerations for Non-Musculoskeletal Conditions

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MT-3.1: Included Conditions

- Submitted information must show that Massage Therapy Services are primarily and directly focused on care for one of the following non-musculoskeletal conditions:
 - ◆ Cancer Pain
 - ◆ Fibromyalgia

MT-3.2: Recommended Standardized Assessments

- Standardized assessment tools are used to assess and track changes in symptoms and/or condition status. Recommended standardized assessment tools are listed below:

Assessment	Reference
Quality Of Life Questionnaire Core 30 (QLQ-C30)	Aaronson 1993
Fibromyalgia Impact Questionnaire (FIQ)	Williams 2011; Bennett 2009
Patient Specific Functional Scale (PSFS)	Horn 2012; Hefford 2012; Maughan 2010; Rysstad 2020
Visual Analog Scale, Numeric Rating Scale (VAS, NRS)	Thong 2018; Turner 2004; Young 2019; Maughan 2010; Farrar 2001
Defense and Veterans Pain Rating Scale (DVPRS)	Young 2019; Maughan 2010; Farrar 2001; Polomano 2016; Nassif 2014

MT-3.3: Condition Specific Considerations

Cancer Pain

- Massage Therapy Services for **cancer pain** must be an adjunct to a comprehensive treatment program as directed by the oncologist and cancer care team. Confirmation of appropriate medical co-management is required. Dates of previous and upcoming surgery, chemotherapy, or radiation treatments should also be noted as this information affects expectations for results of care with Massage Therapy Services. While adjunctive Massage Therapy Services may ease symptoms during a cancer treatment program, it is not an equivalent or replacement for any aspect of the standard cancer treatment program. Please consult the health plan in cases of hospice care or inpatient services, as eviCore does not manage inpatient services.

Fibromyalgia

- Massage Therapy Services requests for **fibromyalgia** must include confirmation of medical diagnosis. Accurate diagnosis is important because fibromyalgia symptoms may occur in many other physical disorders which require diagnosis and care beyond massage therapy.

MT-3.4: Mental Health Considerations

Referral to a qualified mental health professional is required when there are signs of an unmanaged behavioral health disorder. Immediate referral to a counselor or helpline is required if there are ANY indications of thoughts or plans for self-harm. The National Suicide Prevention Lifeline is available 24 hours every day at 1-800-273-8255.

References

1. Aaronson NK, Ahmedzai S, Bergman B, et al. The European Organization for Research and Treatment of Cancer QLQ-C30: a quality-of-life instrument for use in international clinical trials in oncology. *J Natl Cancer Inst.* 1993;85(5):365-376. doi:10.1093/jnci/85.5.365.
2. Angst F, Schwyzer HK, Aeschlimann A, Simmen BR, Goldhahn J. Measures of adult shoulder function: Disabilities of the Arm, Shoulder, and Hand Questionnaire (DASH) and its short version (QuickDASH), Shoulder Pain and Disability Index (SPADI), American Shoulder and Elbow Surgeons (ASES) Society standardized shoulder assessment form, Constant (Murley) Score (CS), Simple Shoulder Test (SST), Oxford Shoulder Score (OSS), Shoulder Disability Questionnaire (SDQ), and Western Ontario Shoulder Instability Index (WOSI). *Arthritis Care Res (Hoboken)*. 2011;63 Suppl 11:S174-S188. doi:10.1002/acr.20630.
3. Beck, Mark. *Theory and Practice of Therapeutic Massage* (6th). Boston, MA: Milady. 2017.
4. Bennett RM, Bushmakin AG, Cappelleri JC, Zlateva G, Sadosky AB. Minimal clinically important difference in the fibromyalgia impact questionnaire. *J Rheumatol.* 2009;36(6):1304-1311. doi:10.3899/jrheum.081090.
5. Bertozzi L, Valdes K, Vanti C, Negrini S, Pillastrini P, Villafañe JH. Investigation of the effect of conservative interventions in thumb carpometacarpal osteoarthritis: systematic review and meta-analysis. *Disabil Rehabil.* 2015;37(22):2025-2043. doi:10.3109/09638288.2014.996299.
6. Bervoets D, Luijsterburg P, Alessie J, Buijs M, Verhagen A. Massage therapy has short-term benefits for people with common musculoskeletal disorders compared to no treatment: a systematic review. *Journal of Physiotherapy*. Volume 61, Issue 3, July 2015, Pages 106-116. doi: 10.1016/j.jphys.2015.05.018.
7. Binkley JM, et al. The lower Extremity Functional Scale (LEFS): scale development, measurement properties, and clinical application. *Physical Therapy* 1999; 79:371–383.
8. Boyd C, Crawford 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 II, Cancer Pain Populations. *Pain Med.* 2016;17(8):1553-1568. doi:10.1093/pm/pnw100.
9. Boyd C, Crawford 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 III, Surgical Pain Populations. *Pain Med.* 2016;17(9):1757-1772. doi:10.1093/pm/pnw101.
10. Bredow J, Bloess K, Oppermann J, Boese CK, Löhner L, Eysel P. [Conservative treatment of nonspecific, chronic low back pain : Evidence of the efficacy - a systematic literature review]. *Orthopade.* 2016 Jul;45(7):573-8. doi: 10.1007/s00132-016-3248-7.
11. Bronfort G, Haas M, Evans R, Leininger B, Triano J. Effectiveness of manual therapies: the UK evidence report. *Chiropr Osteopat.* 2010 Feb 25;18:3. doi: 10.1186/1746-1340-18-3.
12. Brosseau L, Wells GA, Poitras S, et al. Ottawa Panel evidence-based clinical practice guidelines on therapeutic massage for low back pain. *Journal of Bodywork and Movement Therapies.* 2012;16(4):424-455. doi:10.1016/j.jbmt.2012.04.002.
13. Calcagni N, Gana K, Quintard B. A systematic review of complementary and alternative medicine in oncology: Psychological and physical effects of manipulative and body-based practices. *PLoS One.* 2019;14(10):e0223564. Published 2019 Oct 17. doi:10.1371/journal.pone.0223564.
14. Calixtre LB, Moreira RF, Franchini GH, Albuquerque-Sendin F, Oliveira AB. Manual therapy for the management of pain and limited range of motion in subjects with signs and symptoms of temporomandibular disorder: a systematic review of randomised controlled trials. *J Oral Rehabil.* 2015 Nov;42(11):847-61.
15. Ceballos-Laita L, Estébanez-de-Miguel E, Martín-Nieto G, Bueno-Gracia E, Fortún-Agúd M, Jiménez-Del-Barrio S. Effects of non-pharmacological conservative treatment on pain, range of motion and physical function in patients with mild to moderate hip osteoarthritis. A systematic review. *Complement Ther Med.* 2019;42:214-222. doi:10.1016/j.ctim.2018.11.021.
16. Chaibi A, Russell MB. Manual therapies for primary chronic headaches: a systematic review of randomized controlled trials. *J Headache Pain.* 2014 Oct 2;15:67. doi: 10.1186/1129-2377-15-67.
17. Charles D, Hudgins T, MacNaughton J, Newman E, Tan J, Wigger M. A systematic review of manual therapy techniques, dry cupping and dry needling in the reduction of myofascial pain and myofascial trigger points. *J Bodyw Mov Ther.* 2019;23(3):539-546. doi:10.1016/j.jbmt.2019.04.001.
18. Cherkin DC, Sherman KJ, Kahn J, Wellman R, Cook AJ, Johnson E, Erro J, Delaney K, Deyo RA. A

- comparison of the effects of 2 types of massage and usual care on chronic low back pain: a randomized, controlled trial. *Ann Intern Med.* 2011 Jul 5;155(1):1-9. doi: 10.7326/0003-4819-155-1-201107050-00002.
19. Chou R, Deyo R, Friedly J, Skelly A, Hashimoto R, Weimer M, et al. Nonpharmacologic Therapies for Low Back Pain: A Systematic Review for an American College of Physicians Clinical Practice Guideline. *Ann Intern Med.* 2017;166:493–505. doi: 10.7326/M16-2459.
 20. Chou R, Deyo R, Friedly J, Skelly A, Hashimoto R, Weimer M, Fu R, Dana T, Kraegel P, Griffin J, Grusing S, Brodt E. Noninvasive Treatments for Low Back Pain [Internet]. AHRQ Comparative Effectiveness Reviews. Rockville (MD): Agency for Healthcare Research and Quality (US); 2016 Feb. Report No.: 16-EHC004-EF.
 21. Clement ND, Bardgett M, Weir D, Holland J, Gerrand C, Deehan DJ. What is the Minimum Clinically Important Difference for the WOMAC Index After TKA? [published correction appears in *Clin Orthop Relat Res.* 2020 Apr;478(4):922]. *Clin Orthop Relat Res.* 2018;476(10):2005-2014. doi:10.1097/CORR.0000000000000444.
 22. Clohesy NC, Schneiders AG, Eaton S. Utilization of Low Back Pain Patient Reported Outcome Measures Within Chiropractic Literature: A Descriptive Review. *Journal of Manipulative and Physiological Therapeutics.* 2018;41(7):628-639. doi:10.1016/j.jmpt.2017.11.007.
 23. Cohen Steven P, Hooten W Michael. Advances in the diagnosis and management of neck pain *BMJ* 2017; 358 :j3221.
 24. Cook, Andrea J., Robert D. Wellman, Daniel C. Cherkin, Janet R. Kahn, and Karen J. Sherman. "Randomized Clinical Trial Assessing Whether Additional Massage Treatments for Chronic Neck Pain Improve 12- and 26-week Outcomes." *The Spine Journal* 15.10 (2015): 2206-215. Web.
 25. 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. doi:10.1093/pm/pnw099.
 26. da Silva, Alyssa Conte et al. The Effectiveness of Ischemic Compression Technique on Pain and Function in Individuals With Shoulder Pain: A Systematic Review. *Journal of Manipulative & Physiological Therapeutics.* <https://doi.org/10.1016/j.jmpt.2019.10.013>.
 27. Davidson M, Keating JL. A comparison of five low back disability questionnaires: reliability and responsiveness. *Phys Ther.* 2002;82(1):8-24. doi:10.1093/ptj/82.1.8.
 28. de Melo LA, Bezerra de Medeiros AK, Campos MFTP, Bastos Machado de Resende CM, Barbosa GAS, de Almeida EO. Manual Therapy in the Treatment of Myofascial Pain Related to Temporomandibular Disorders: A Systematic Review. *J Oral Facial Pain Headache.* 2020;34(2):141-148. doi:10.11607/ofph.2530.
 29. Edemekong PF, Bomgaars DL, Sukumaran S, Levy SB. Activities of Daily Living (ADLs). In: *StatPearls.* Treasure Island (FL): StatPearls Publishing; 2020.
 30. Espí-López GV, Zurriaga-Llorens R, Monzani L, Falla D. The effect of manipulation plus massage therapy versus massage therapy alone in people with tension-type headache. A randomized controlled clinical trial. *Eur J Phys Rehabil Med.* 2016 Oct;52(5):606-617. Epub 2016 Mar 18.
 31. Falsiroli Maistrello L, Geri T, Gianola S, Zaninetti M, Testa M. Effectiveness of Trigger Point Manual Treatment on the Frequency, Intensity, and Duration of Attacks in Primary Headaches: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Front Neurol.* 2018;9:254. Published 2018 Apr 24. doi:10.3389/fneur.2018.00254.
 32. Falsiroli Maistrello L, Rafanelli M, Turolla A. Manual Therapy and Quality of Life in People with Headache: Systematic Review and Meta-analysis of Randomized Controlled Trials. *Curr Pain Headache Rep.* 2019;23(10):78. Published 2019 Aug 10. doi:10.1007/s11916-019-0815-8.
 33. Farrar JT, et al. Clinical importance of changes in chronic pain intensity measured on an 11-point numerical rating scale. *Pain* 2001;94:149–158.
 34. Field T, Diego M, Delgado J, Garcia D, Funk CG. Hand pain is reduced by massage therapy. *Complementary Therapies in Clinical Practice.* Volume 17, Issue 4, November 2011, Pages 226-229. <https://doi.org/10.1016/j.ctcp.2011.02.006>.
 35. Field T, Diego M, Gonzalez G, Funk CG. Neck arthritis pain is reduced and range of motion is increased by massage therapy. *Complement Ther Clin Pract.* 2014 Nov;20(4):219-23. doi: 10.1016/j.ctcp.2014.09.001. Epub 2014 Sep 28.

36. Franchignoni F, Vercelli S, Giordano A, Sartorio F, Bravini E, Ferriero G. Minimal Clinically Important Difference of the Disabilities of the Arm, Shoulder and Hand Outcome Measure (DASH) and Its Shortened Version (QuickDASH). *Journal of Orthopaedic & Sports Physical Therapy*. 2014;44(1):30-39. doi:10.2519/jospt.2014.4893.
37. Fritz, Sandy. *Mosby's Fundamentals of Therapeutic Massage*. (6th). St. Louis, MO: Elsevier, Inc. 2017.
38. Furlan AD, Giraldo M, Baskwill A, Irvin E, Imamura M. Massage for low-back pain. *Cochrane Database of Systematic Reviews* 2015, Issue 9. Art. No.: CD001929. DOI: 10.1002/14651858.CD001929.pub3.
39. Furlan AD, Yazdi F, Tsertsvadze A, Gross A, Van Tulder M, Santaguida L, Gagnier J, Ammendolia C, Dryden T, Doucette S, Skidmore B, Daniel R, Ostermann T, Tsouros S: A systematic review and meta-analysis of efficacy, cost-effectiveness, and safety of selected complementary and alternative medicine for neck and low-back pain. *Evidence-Based Complementary and Alternative Medicine*. 2012, doc ID 953139.
40. Happe S, Peikert A, Siegert R, Evers S. The efficacy of lymphatic drainage and traditional massage in the prophylaxis of migraine: a randomized, controlled parallel group study. *Neurol Sci*. 2016 Oct;37(10):1627-32.
41. Häuser, Winfried, Kati Thieme, and Dennis C. Turk. "Guidelines on the Management of Fibromyalgia Syndrome - A Systematic Review." *European Journal of Pain* 14.1 (2010): 5-10.
42. Hefford C, Abbott JH, Arnold R, Baxter GD. The patient-specific functional scale: validity, reliability, and responsiveness in patients with upper extremity musculoskeletal problems. *J Orthop Sports Phys Ther*. 2012;42(2):56-65. doi:10.2519/jospt.2012.3953.
43. Horn KK, Jennings S, Richardson G, Vliet DV, Hefford C, Abbott JH. The patient-specific functional scale: psychometrics, clinimetrics, and application as a clinical outcome measure. *J Orthop Sports Phys Ther*. 2012 Jan;42(1):30-42. doi: 10.2519/jospt.2012.3727.
44. Jacobson, G.P., Ramadan, N.M., Aggarwal, S.K., and Newman, C.W. The Henry Ford Hospital Headache Disability Inventory (HDI). *Neurology* May 1994, 44 (5) 837; DOI: 10.1212/WNL.44.5.837.
45. Jacobson, G.P., Ramadan, N.M., Norris, L. and Newman, C.W. (1995), Headache Disability Inventory (HDI): Short-term Test-Retest Reliability and Spouse Perceptions. *Headache: The Journal of Head and Face Pain*, 35: 534-539. doi:10.1111/j.1526-4610.1995.hed3509534.x.
46. Keeratitanont K, Jensen MP, Chatchawan U, Auvichayapat P. The efficacy of traditional Thai massage for the treatment of chronic pain: A systematic review. *Complement Ther Clin Pract*. 2015;21(1):26-32. doi:10.1016/j.ctcp.2015.01.006.
47. Kendall JC, Vindigni D, Polus BI, Azari MF, Harman SC. Effects of manual therapies on stability in people with musculoskeletal pain: a systematic review. *Chiropr Man Therap*. 2020;28(1):13. Published 2020 Feb 18. doi:10.1186/s12998-020-0300-9.
48. Kong LJ, Zhan HS, Cheng YW, Yuan WA, Chen B, and Fang M: Massage therapy for neck and shoulder pain: a systemic review and meta-analysis. *Evid Based Complementary and Alternative Medicine*. 2013;2013:613279. doi: 10.1155/2013/613279.
49. La Touche R, Boo-Mallo T, Zarzosa-Rodríguez J, Paris-Alemany A, Cuenca-Martínez F, Suso-Martí L. Manual therapy and exercise in temporomandibular joint disc displacement without reduction. A systematic review [published online ahead of print, 2020 Jun 26]. *Cranio*. 2020;1-11. doi:10.1080/08869634.2020.1776529.
50. La Touche R, Martínez García S, Serrano García B, et al. Effect of Manual Therapy and Therapeutic Exercise Applied to the Cervical Region on Pain and Pressure Pain Sensitivity in Patients with Temporomandibular Disorders: A Systematic Review and Meta-analysis [published online ahead of print, 2020 Mar 17]. *Pain Med*. 2020;pnaa021. doi:10.1093/pm/pnaa021.
51. Lawler SP, Cameron LD. A randomized, controlled trial of massage therapy as a treatment for migraine. *Ann Behav Med*. 2006 Aug;32(1):50-9.
52. Lee SH, Kim JY, Yeo S, Kim SH, Lim S. Meta-Analysis of Massage Therapy on Cancer Pain. *Integr Cancer Ther*. 2015;14(4):297-304. doi: 10.1177/1534735415572885.
53. Li YH, Wang FY, Feng CQ, Yang XF, Sun YH. Massage therapy for fibromyalgia: a systematic review and meta-analysis of randomized controlled trials. *PLoS One*. 2014;9(2):e89304. Published 2014 Feb 20. doi:10.1371/journal.pone.0089304.

54. Lin I, Wiles L, Waller R, et al. What does best practice care for musculoskeletal pain look like? Eleven consistent recommendations from high-quality clinical practice guidelines: systematic review. *Br J Sports Med.* 2020;54(2):79-86. doi:10.1136/bjsports-2018-099878.
55. MacDermid JC, et al. Measurement properties of the Neck Disability Index: a systematic review. *Journal of Orthopaedic & Sports Physical Therapy* 2009; 39:400–417.
56. Macfarlane GJ, Kronisch C, Dean LE et al. EULAR revised recommendations for the management of fibromyalgia. *Ann Rheum Dis.* 2016 Jul 4. pii: annrheumdis-2016-209724. doi: 10.1136/annrheumdis-2016-209724.
57. Mallets E, Turner A, Durbin J, Bader A, Murray L. Short-term outcomes of conservative treatment for femoroacetabular impingement: a systematic review and meta-analysis. *Int J Sports Phys Ther.* 2019;14(4):514-524.
58. Maughan EF, Lewis JS. Outcome measures in chronic low back pain. *Eur Spine J.* 2010;19(9):1484-1494. doi:10.1007/s00586-010-1353-6.
59. Miake-Lye IM, Mak S, Lee J, et al. Massage for Pain: An Evidence Map. *J Altern Complement Med.* 2019;25(5):475-502. doi:10.1089/acm.2018.0282.
60. Moraska AF, Schmiede SJ, Mann JD, Butryn N, Kruttsch JP. Responsiveness of Myofascial Trigger Points to Single and Multiple Trigger Point Release Massages: A Randomized, Placebo Controlled Trial. *Am J Phys Med Rehabil.* 2017 Sep;96(9):639-645.
61. Nassif T, Norris D, Soltes K, Blackman M, Chapman, J, Sandbrink F. Evaluating the Effectiveness of Mindfulness Meditation for Chronic Musculoskeletal Pain in U.S. Veterans Using the Defense and Veterans Pain Rating Scale (DVPRS): *Pain Medicine.* 15(3):529-530, March 2014.
62. Nelson NL, Churilla JR. Massage Therapy for Pain and Function in Patients with Arthritis: A Systematic Review of Randomized Control Trials. *Am J Phys Med Rehabil.* 2017 Sep;96(9):665-672. doi:10.1097/PHM.0000000000000712.
63. Ostelo RW, de Vet HC, Knol DL, van den Brandt PA. 24-item Roland-Morris Disability Questionnaire was preferred out of six functional status questionnaires for post-lumbar disc surgery. *Journal of Clinical Epidemiology* 2004;57(3):268–276.
64. Ornetti P, Perruccio AV, Roos EM, Lohmander LS, Davis AM, Maillefert JF. Psychometric properties of the French translation of the reduced KOOS and HOOS (KOOS-PS and HOOS-PS). *Osteoarthritis Cartilage.* 2009;17(12):1604-1608. doi:10.1016/j.joca.2009.06.007.
65. Pan CX, Morrison RS, Ness J, Fugh-Berman A, Leipzig RM. Complementary and alternative medicine in the management of pain, dyspnea, and nausea and vomiting near the end of life. A systematic review. *J Pain Symptom Manage.* 2000;20(5):374-387. doi:10.1016/s0885-3924(00)00190-1.
66. Parnell Prevost C, Gleberzon B, Carleo B, Anderson K, Cark M, Pohlman KA. Manual therapy for the pediatric population: a systematic review. *BMC Complement Altern Med.* 2019;19(1):60. Published 2019 Mar 13. doi:10.1186/s12906-019-2447-2.
67. Pasyar N, Rambod M, Kahkhaee FR. The Effect of Foot Massage on Pain Intensity and Anxiety in Patients Having Undergone a Tibial Shaft Fracture Surgery: A Randomized Clinical Trial. *J Orthop Trauma.* 2018;32(12):e482-e486. doi:10.1097/BOT.0000000000001320.
68. Patel KC, Gross A, Graham N, Goldsmith CH, Ezzo J, Morien A, Peloso PMJ: Massage for mechanical neck disorders (Review). *Cochrane Database* 2012, Issue 9.
69. Peek AL, Miller C, Heneghan NR. Thoracic manual therapy in the management of non-specific shoulder pain: a systematic review. *J Man Manip Ther.* 2015;23(4):176-187. doi:10.1179/2042618615Y.0000000003.
70. Pehlivan S, Karadakovan A. Effects of aromatherapy massage on pain, functional state, and quality of life in an elderly individual with knee osteoarthritis. *Jpn J Nurs Sci.* 2019;16(4):450-458. doi:10.1111/jjns.12254.
71. Perlman AI, Sabina A, Williams AL, Njike VY, Katz DL. Massage therapy for osteoarthritis of the knee: a randomized controlled trial. *Arch Intern Med.* 2006;166(22):2533-2538. doi:10.1001/archinte.166.22.2533.
72. Pinheiro da Silva F, Moreira GM, Zomkowski K, Amaral de Noronha M, Flores Sperandio F. Manual Therapy as Treatment for Chronic Musculoskeletal Pain in Female Breast Cancer Survivors: A Systematic Review and Meta-Analysis. *J Manipulative Physiol Ther.* 2019;42(7):503-513. doi:10.1016/j.jmpt.2018.12.007.

73. Piper S, Shearer HM, Côté P, et al. The effectiveness of soft-tissue therapy for the management of musculoskeletal disorders and injuries of the upper and lower extremities: A systematic review by the Ontario Protocol for Traffic Injury management (OPTIMA) collaboration. *Man Ther.* 2016;21:18-34. doi:10.1016/j.math.2015.08.011.
74. Polomano RC, Galloway KT, Kent ML, Brandon-Edwards H, Kwon KN, Morales C, Buckenmaier C' 3rd. Psychometric Testing of the Defense and Veterans Pain Rating Scale (DVPRS): A New Pain Scale for Military Population. *Pain Med.* 2016 Aug;17(8):1505-19. doi: 10.1093/pm/pnw105. Epub 2016 Jun 6. PMID: 27272528.
75. Rodríguez-Mansilla J, González-Sánchez B, Torres-Piles S, Martín JG, Jiménez-Palomares M, Bellino, MN. Effects of the application of therapeutic massage in children with cancer: a systematic review. *Rev Lat Am Enfermagem.* 2017;Jun 8;25:e2903. doi: 10.1590/1518-8345.1774.2903.
76. Rooks, DS. Fibromyalgia Treatment Update. *Current Opinion in Internal Medicine.* 2007; 19(2): 111-117.
77. Roos EM, Lohmander LS. The Knee injury and Osteoarthritis Outcome Score (KOOS): from joint injury to osteoarthritis. *Health Qual Life Outcomes.* 2003;1:64. Published 2003 Nov 3. doi:10.1186/1477-7525-1-64.
78. Rossy LA, Buckelew SP, Dorr N, Hagglund KJ, Thayer JF, McIntosh MJ, Hewett JE, and Johnson JC. A Meta-analysis of Fibromyalgia Treatment Interventions. *Annals of Behavioral Medicine Ann. Behav. Med.* 1999; 21.2:180-91. <https://doi.org/10.1007/BF02908299>.
79. Rysstad T, Grotle M, Klok LP, Tveter AT. Responsiveness and minimal important change of the QuickDASH and PSFS when used among patients with shoulder pain. *BMC Musculoskelet Disord.* 2020;21(1):328. Published 2020 May 27. doi:10.1186/s12891-020-03289-z.
80. Saban B, Deutscher D, Ziv T. Deep massage to posterior calf muscles in combination with neural mobilization exercises as a treatment for heel pain: a pilot randomized clinical trial. *Man Ther.* 2014 Apr;19(2):102-8. doi: 10.1016/j.math.2013.08.001.
81. Schmidt S, Ferrer M, González M, et al. Evaluation of shoulder-specific patient-reported outcome measures: a systematic and standardized comparison of available evidence. *J Shoulder Elbow Surg.* 2014;23(3):434-444. doi:10.1016/j.jse.2013.09.029.
82. Sherman KJ, Cherkin DC, Hawkes RJ, Miglioretti DL, and Deyo RA: Randomized trial of therapeutic massage for chronic neck pain. *The Clinical Journal of Pain.* 2009 Mar-Apr; 25(3):233-8.
83. Shi X, Han J, Witchalls J, Waddington G, Adams R. Does treatment duration of manual therapy influence functional outcomes for individuals with chronic ankle instability: A systematic review with meta-analysis. *Musculoskelet Sci Pract.* 2019;40:87-95. doi:10.1016/j.msksp.2019.01.015.
84. Skelly AC, Chou R, Dettori JR, et al. Noninvasive Nonpharmacological Treatment for Chronic Pain: A Systematic Review Update. Rockville (MD): Agency for Healthcare Research and Quality (US); April 2020.
85. Stanton TR, Latimer J, Maher CG, Hancock MJ. A modified Delphi approach to standardize low back pain recurrence terminology. *Eur Spine J.* 2011;20(5):744-752. doi:10.1007/s00586-010-1671-8.
86. Stratford PW, Binkley J, Solomon P, Finch E, Gill C, Moreland J. Defining the minimum level of detectable change for the Roland-Morris questionnaire. *Phys Ther.* 1996;76(4):359-368. doi:10.1093/ptj/76.4.359.
87. Sumpton JE and Moulin DE. Fibromyalgia: Presentation and management with a focus on pharmacological treatment. *Pain Res Manag.* 2008 Nov-Dec; 13(6): 477–483.
88. Thompson, Diana. *Hands Heal: Communication, documentation, and Insurance Billing for Manual Therapists (4th).* Philadelphia, PA: Wolters Kluwer. 2012.
89. Thong ISK, Jensen MP, Miró J, Tan G. The validity of pain intensity measures: what do the NRS, VAS, VRS, and FPS-R measure?. *Scand J Pain.* 2018;18(1):99-107. doi:10.1515/sjpain-2018-0012.
90. Tsao JC: Effectiveness of massage therapy for chronic, non-malignant pain: a review. *Evidence-based Complementary and Alternative Medicine.* 2007 Jun; 4(2):165-79. Epub 2007 Feb 5. doi:10.1093/ecam/nel109.
91. Turner, Judith A., Gary Franklin, Patrick J. Heagerty, Rae Wu, Kathleen Egan, Deborah Fulton-Kehoe, Jeremy V. Gluck, Thomas M. Wickizer, The association between pain and disability. *Pain*, Volume 112, Issue 3, 2004, Pages 307-314. <https://doi.org/10.1016/j.pain.2004.09.010>.

92. Vaillant J, Rouland A, Martigné P, Braujou R, Nissen MJ, Caillat-Miosse JL, Vuillerme N, Nougier V, and Juvin R: Massage and mobilization of the feet and ankles in elderly adults: effect on clinical balance performance. *Manual Therapy*. 2009 Dec; 14(6):661-4. Epub 2009 May 8. doi:10.1016/j.math.2009.03.004.
93. van den Dolder PA, Ferreira PH, and Refshauge KM: Effectiveness of soft tissue massage and exercise for the treatment of non-specific shoulder pain: a systematic review with meta-analysis. *British Journal of Sports Medicine*. 2012 Jul;48(16):1216-1226. doi:10.1136/bjsports-2011-090553.
94. Walach H, Güthlin C, and König M: Efficacy of massage therapy in chronic pain: a pragmatic randomized trial. *Journal of Alternative and Complementary Medicine*. 2003 Dec; 9(6):837-46. doi:10.1089/107555303771952181.
95. Walton, Tracy. *Medical Conditions and Massage Therapy: A Decision Tree Approach (1st)*. Baltimore, MD: Wolters Kluwer. 2011.
96. Wasserman JB, Copeland M, Upp M, Abraham K. Effect of soft tissue mobilization techniques on adhesion-related pain and function in the abdomen: A systematic review. *J Bodyw Mov Ther*. 2019;23(2):262-269. doi:10.1016/j.jbmt.2018.06.004.
97. Whitehouse SL, Crawford RW, Learmonth ID. Validation for the reduced Western Ontario and McMaster Universities Osteoarthritis Index function scale. *J Orthop Surg (Hong Kong)*. 2008;16(1):50-53. doi:10.1177/230949900801600113.
98. Whitehouse SL, Lingard EA, Katz JN, Learmonth ID. Development and testing of a reduced WOMAC function scale. *J Bone Joint Surg Br*. 2003;85(5):706-711.
99. Williams DA, Arnold LM. Measures of fibromyalgia: Fibromyalgia Impact Questionnaire (FIQ), Brief Pain Inventory (BPI), Multidimensional Fatigue Inventory (MFI-20), Medical Outcomes Study (MOS) Sleep Scale, and Multiple Ability Self-Report Questionnaire (MASQ). *Arthritis Care Res (Hoboken)*. 2011;63 Suppl 11(0 11):S86-S97. doi:10.1002/acr.20531.
100. Williams VJ, Piva SR, Irrgang JJ, Crossley C, Fitzgerald GK. Comparison of reliability and responsiveness of patient-reported clinical outcome measures in knee osteoarthritis rehabilitation. *J Orthop Sports Phys Ther*. 2012;42(8):716-723. doi:10.2519/jospt.2012.4038.
101. Yang JL, Chen SY, Hsieh CL, and Lin JJ: Effects and predictors of shoulder muscle massage for patients with posterior shoulder tightness. *BMC Musculoskeletal Disorders*. 2012 Mar 27; 13:46. doi:10.1186/1471-2474-13-46.
102. Yeun YR. Effectiveness of massage therapy for shoulder pain: a systematic review and metaanalysis. *J Phys Ther Sci*. 2017;29(5):936–940. doi:10.1589/jpts.29.936.
103. Yeun YR. Effectiveness of massage therapy on the range of motion of the shoulder: a systematic review and meta-analysis. *J Phys Ther Sci*. 2017;29(2):365–369. doi:10.1589/jpts.29.365.
104. Young I, Dunning J, Butts R, Mourad F, Cleland J. Reliability, construct validity, and responsiveness of the neck disability index and numeric pain rating scale in patients with mechanical neck pain without upper extremity symptoms. *Physiother Theory Pract*. 2019;35(12):1328-1335. doi:10.1080/09593985.2018.1471763.
105. Yuan SL, Matsutani LA, Marques AP. Effectiveness of different styles of massage therapy in fibromyalgia: a systematic review and meta-analysis. *Man Ther*. 2015;20(2):257-264. doi:10.1016/j.math.2014.09.003.