

Kaiser Foundation Health Plan of Washington

Clinical Review Criteria Dry Needling for Myofascial Pain

NOTICE: Kaiser Foundation Health Plan of Washington and Kaiser Foundation Health Plan of Washington Options, Inc. (Kaiser Permanente) provide these Clinical Review Criteria for internal use by their members and health care providers. The Clinical Review Criteria only apply to Kaiser Foundation Health Plan of Washington and Kaiser Foundation Health Plan of Washington Options, Inc. Use of the Clinical Review Criteria or any Kaiser Permanente entity name, logo, trade name, trademark, or service mark for marketing or publicity purposes, including on any website, or in any press release or promotional material, is strictly prohibited.

Kaiser Permanente Clinical Review Criteria are developed to assist in administering plan benefits. These criteria neither offer medical advice nor guarantee coverage. Kaiser Permanente reserves the exclusive right to modify, revoke, suspend or change any or all of these Clinical Review Criteria, at Kaiser Permanente's sole discretion, at any time, with or without notice. **Member contracts differ in health plan benefits. Always consult the patient's Evidence of Coverage or call Kaiser Permanente Member Services at 1-888-901-4636 (TTY 711), Monday through Friday, 8 a.m. to 5 p.m. to determine coverage for a specific medical service.**

Criteria

For Medicare Members

Source	Policy
CMS Coverage Manuals	None
National Coverage Determinations (NCD)	Acupuncture (30.3)
	Acupuncture for Fibromyalgia (30.3.1)
	Acupuncture for Osteoarthritis (30.3.2)
	Acupuncture for Chronic Lower Back Pain (cLBP) (30.3.3)
Local Coverage Determinations (LCD)	None
Local Coverage Article	None

For Non-Medicare Members

There is insufficient evidence in the published medical literature to show that this service/therapy is as safe as standard services/therapies and/or provides better long-term outcomes than current standard services/therapies.

If requesting this service, please send the following documentation to support medical necessity:

• Last 6 months of clinical notes from requesting provider &/or specialist

The following information was used in the development of this document and is provided as background only. It is provided for historical purposes and does not necessarily reflect the most current published literature. When significant new articles are published that impact treatment option, Kaiser Permanente will review as needed. This information is not to be used as coverage criteria. Please only refer to the criteria listed above for coverage determinations.

Background

Myofascial pain syndrome (MPS) is a fairly common form of pain that arises from muscles or related fascia. The syndrome is usually characterized by palpable muscle tenderness and trigger points (myofascial trigger points or MTrPs). These are highly localized, hyperirritable spots in a palpable taut band of skeletal muscle fibers. When compressed, MTrPs can cause local and/or referred tenderness and pain, aggravation of existing pain, and /or autonomic phenomena. They can also contribute to impaired range of motion and increased sensitivity to stretch. Active MTrPs are associated with spontaneous local or referred pain and/or pain on movement, while latent MTrPs require direct stimulation to trigger pain symptoms. Palpating a trigger point or inserting a needle into it may elicit a localized twitch response, a brisk contraction of muscle fibers in and around the MTrPs. Trigger points may develop anywhere in the body in response to sudden injury, muscle overload, or repetitive microtrauma. Frequently affected sites include trapezius, supraspinatus, infraspinatus, teres muscle, lumbar paraspinals, gluteus, and pectoralis muscles. It is postulated that the injured muscle fibers shorten forming taut bands in response to the excessive amounts of calcium released from the damaged fibers or to the excessive amounts of acetyl choline released from the corresponding motor end plate. There are no laboratory or imaging tests to establish the diagnosis of MPS or to locate the trigger points. It has been suggested that spot tenderness, taut band, and pain recognition are the three important criteria for the diagnosis of MTrP, and that referred pain and local twitch response can be confirmatory signs for the diagnosis (Chou 2012, Diraçoğlu 2012, Furlan 2005, Kietrys 2013, Ay 2010, Tekin 2013 Tough 2009).

The primary goal of treating MPS is to inactivate the trigger points and loosen the taut bands. The most important strategy is to treat the underlying etiological lesion that causes activation of MTrPs. If the underlying pathology is not appropriately and completely treated, the MTrP is inactivated only temporarily not completely. Several treatment modalities have been used to alleviate the chronic myofascial pain, but no single strategy proved to be universally successful. These include the use of non-steroidal anti-inflammatory drugs (NSAIDs), NSAID gel or patch, thermotherapy, massage, physical therapy, spray and stretch techniques, exercise, ischemic compression, laser therapy, acupuncture, or local injections of substances as steroids or lidocaine. Trigger point injection with local anesthetic, saline, steroid, botulinum toxin, or even dry needling is believed to be the most effective method for treating MPS (Ay 2010, Chou 2012, Kalichman 2010).

Dry needling (DN) was initially developed to treat musculoskeletal disorders. It was widely used for the treatment of MTrPs in the last three decades after some investigators indicated that needling effect is distinct from that of the injected substance. Trigger-point DN (also called biomedical acupuncture) is different from acupuncture and is not based on the insertion of needles in traditional acupuncture meridian sites. DN is a procedure in which an acupuncture-like needle is inserted into the skin and muscle in the location of an MTrPs without the use of saline or any other liquid agent or medication. The needle is not left in situ but is removed after the muscle has finished twitching and the trigger point inactivated. This should be followed by exercises, usually stretching or ergonomic adjustments, in order to establish a painless full range of motion. It has been suggested that DN is most effective when local twitch responses are elicited, probably because of rapid depolarization of the involved muscle fibers which manifest as local twitches. The actual mechanism by which DN may produce an effect is being debated and several explanations were postulated. Some investigators explain that the localized twitch response that often occurs may interrupt the motor end-plate noise, producing an analgesic effect, while others suggest that eliciting a localized twitch response and stretching exercises relax the actin-myosin bonds in the tight bands. It is also postulated that the mechanical damage of the muscle fibers and nerve terminations leads to an increase of extracellular potassium, depolarization of nerve fibers, inhibition of central feedback mechanisms, local dilution of nerve-sensitizing substances, increasing vasodilatation, and formation of necrosis in trigger point area. A number of other mechanisms were postulated by different researchers. Adverse events associated with the DN include soreness after needling. local hemorrhages at the needling site, and syncopal responses (Ay 2010, Furlan 2005, Kalichman 2010, Kietrys 2013).

Several schools and theoretical models of DN have been developed during the last three decades. The most common are the radiculopathy (also known as intramuscular stimulation) and MTrP models. Dry needling techniques include superficial or deep needling and needling with or without paraspinal needling. In the superficial needling the needle is only inserted into the tissue overlying the MTrP to a depth of 5-10 mm for 30 seconds. At this level the needle does not necessarily reach the MTrP and local twitches are not expected. In the technique that involved paraspinal needling, needles are inserted at the trigger point as well as in the paraspinal muscle of the same segment that innervates the painful muscles. These last two techniques were the least investigated (Kalichman 2010).

DN is a minimally invasive skilled intervention performed by physical therapists (where allowed by state law) and requires advanced training. The states allowing the procedure to have to follow guidelines for education and competency standards for performing it.

Medical Technology Assessment Committee (MTAC)

Dry Needling for Myofascial Pain

02/10/2014: MTAC REVIEW

Evidence Conclusion :There is insufficient published evidence to determine that dry needling has a superior or equivalent effect as acupuncture, other therapies, or injections in reducing pain and improving range of motion (ROM) in patients with myofascial pain syndrome (MPS). The results of trials comparing DN to sham needling are conflicting, and may only provide weak evidence that DN performed by experienced physiatrists may be superior to sham needling in reducing the pain, but not improving the ROM. There is insufficient published evidence to determine the appropriate number of points to be injected. There is insufficient published evidence to determine the duration of pain relief after the injection. There is insufficient evidence to determine whether the patients would need to undergo another needling procedure, and the most appropriate interval between re-injections if needed.

<u>Articles:</u> The literature search revealed a number of small randomized controlled trials and 4 systematic reviews with or without meta-analyses (MA) on the use of DN in the management of myofascial pain. Kietrys and colleagues' 2013 meta-analysis examined the effectiveness of DN for the treatment of upper quarter myofascial pain. Tough et al's 2009 MA updated an earlier 2001 MA on the effect of DN on MPS in any location in the body. A Cochrane review (Furlan et al, 2005) pooled the results of studies on acupuncture and DN for low back pain.

© 2014 Kaiser Foundation Health Plan of Washington. All Rights Reserved.

The three meta-analyses included the majority of the published RCTs that compared DN to sham needling, physical therapy, or injection of local anesthesia used for the treatment of myofascial syndrome in different locations in the body. The following most recent and larger meta-analysis and selected RCTs included or not included in the meta-analyses were critically appraised. Selection of the RCTs was based on their size, control groups, and methodological quality. Ay S, Evcik D, Tur BS. Comparison of injection methods in myofascial pain syndrome: a randomized controlled trial. Clin Rheumatol. 2010; 29:19-23. Dıracoğlu D, Vural M, Karan A, et al. Effectiveness of dry needling for the treatment of temporomandibular myofascial pain: a double-blind, randomized, placebo-controlled study. J Back Musculoskelet Rehabil. 2012; 25:285-290. Irnich D, Behrens N, Gleditsch JM, et al. Immediate effects of dry needling and acupuncture at distant points in chronic neck pain: results of a randomized, double-blind, sham-controlled crossover trial. Pain. 2002; 99:83-89. Kietrys DM, Palombaro KM, Azzaretto E, et al. Effectiveness of Dry Needling for Upper-Quarter Myofascial Pain: A Systematic Review and Meta-analysis. J Orthop Sports Phys Ther. 2013; 43:620-34. Rayegani SM, Bayat M, Bahrami MH, et al. Comparison of dry needling and physiotherapy in treatment of myofascial pain syndrome. Clin Rheumatol.2013 Dec 19.DOI 10.1007/s10067-013-2448-3.Tough EA. White AR. Cummings TM, et al. Acupuncture and dry needling in the management of myofascial trigger point pain: a systematic review and metaanalysis of randomised controlled trials. Eur J Pain. 2009; 13:3-10. Tekin L, Akarsu S, Durmus O, et al. The effect of dry needling in the treatment of myofascial pain syndrome: a randomized double-blinded placebo-controlled trial. Clin Rheumatol. 2013; 32:309-315.

The use of dry needling for myofascial pain does not meet the *Kaiser Permanente Medical Technology Assessment Criteria.*

Hayes Technology Assessment

For dry needling (DN), typically coupled with exercise or stretching, for the treatment of adults with mechanical neck and/or trapezius muscle pain associated with trigger points (TrPs).

Conclusion

An overall low-quality body of evidence suggests that DN appears to be safe and may be somewhat effective for the treatment of neck and/or trapezius pain when combined with exercise, but it is unclear whether it provides additional benefits beyond those provided by standard therapy alone.

- Two sham-controlled trials found no difference in improvement in pain or physical function between DN
 plus exercise relative to sham DN plus exercise. This suggests that DN does not confer benefits beyond
 those attained by exercise or stretching.
- In 6 studies, DN coupled with exercise resulted in statistically and clinically significant improvement in pain relative to pretreatment levels; findings in 5 of these studies were mixed as to whether use of DN improved physical function relative to baseline.
- In 4 studies, DN coupled with exercise resulted in improved pain and function relative to exercise alone, but there were no differences between DN alone or coupled with exercise and manual therapy relative to manual therapy alone. The clinical significance of these results is unclear.

Additional studies are needed to address the remaining questions regarding the clinical significance of DN treatment, its long-term effectiveness, and its effectiveness versus other standard therapies.

Hayes Rating: C

Hayes. Hayes Technology Assessment. Dry Needling for Mechanical Neck and/or Trapezius Muscle Pain in Adults. May 18, 2023. Retrieved May 23, 2023, from https://evidence.hayesinc.com/report/dir.needling2835

Applicable Codes

<u>Medicare</u> - Considered Medically Necessary when criteria in the applicable policy statements listed above are met

Non-Medicare - Considered Not Medically Necessar
--

	- Oblishered Not medically Necessary
CPT®	Description
Codes	
20560	Needle insertion(s) without injection(s); 1 or 2 muscle(s)

© 2014 Kaiser Foundation Health Plan of Washington. All Rights Reserved.

20561 Needle insertion(s) without injection(s); 3 or more muscles

*Note: Codes may not be all-inclusive. Deleted codes and codes not in effect at the time of service may not be covered.

**To verify authorization requirements for a specific code by plan type, please use the Pre-authorization Code Check.

CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). HCPCS codes, descriptions and materials are copyrighted by Centers for Medicare Services (CMS).

Date Created	Date Reviewed	Date Last Revised
04/01/2014	04/01/2014 ^{MPC} , 12/01/2015 ^{MPC} , 10/04/2016 ^{MPC} , 08/01/2017 ^{MPC} , 06/05/2018 ^{MPC} , 06/04/2019 ^{MPC} , 06/02/2020 ^{MPC} , 06/01/2021 ^{MPC} , 06/07/2022 ^{MPC} , 06/06/2023 ^{MPC} , 03/12/2024 ^{MPC} , 03/04/2025 ^{MPC}	05/23/2023

MPC Medical Policy Committee

Revision History	Description
06/02/2020	Added NCD's: Acupuncture for Chronic Lower Back Pain (cLBP) (30.3.3) and Acupuncture (30.3)
05/23/2023	Added Hayes Technology Assessment for Dry Needling for Mechanical Neck and/or Trapezius
	Muscle Pain in Adults