



Title: Dry Needling of Myofascial Trigger Points

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Populations	Interventions	Comparators	Outcomes
Individuals:	Interventions of interest	Comparators of interest	Relevant outcomes
 With myofascial 	are:	are:	include:
trigger points	 Dry needling of trigger 	 Standard physical 	 Symptoms
associated with	points	therapy	 Functional outcomes
neck and/or			 Quality of life
shoulder pain			 Treatment-related morbidity
Individuals:	Interventions of interest	Comparators of interest	Relevant outcomes
 With myofascial 	are:	are:	include:
trigger points	 Dry needling of trigger 	 Standard physical 	 Symptoms
associated with	points	therapy	 Functional outcomes
plantar heel pain		 Heel lift(s) 	 Quality of life
			 Treatment-related
			morbidity
Individuals:	Interventions of interest	Comparators of interest	Relevant outcomes
 With myofascial 	are:	are:	include:
trigger points			Symptoms

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Populations	Interventions	Comparators	Outcomes
associated with temporomandibular pain	• Dry needling of trigger points	 Standard physical therapy 	 Functional outcomes Quality of life Treatment-related morbidity

DESCRIPTION

Trigger points are discrete, focal, hyperirritable spots within a taut band of skeletal muscle fibers that produce local and/or referred pain when stimulated. Dry needling refers to a procedure whereby a fine needle is inserted into the trigger point to induce a twitch response and relieve the pain

OBJECTIVE

The objective of this review is to evaluate whether dry needling of myofascial trigger points improves the net health outcome in individuals with myofascial pain.

BACKGROUND

Myofascial Trigger Points

Myofascial pain is defined by the presence of trigger points which are discrete, focal, hyperirritable spots within a taut band of skeletal muscle fibers that produce local and/or referred pain when stimulated. Trigger points are likely a result of injury to muscle fibers, but the pathophysiology is not fully defined.^{1,} Trigger points can be visualized by magnetic resonance imaging and elastography. The reliability of manual identification of trigger points has not been established.

Dry Needling

Dry needling refers to a procedure in which a fine needle is inserted into the skin and muscle at a site of myofascial pain. The needle may be moved in an up-and-down motion, rotated, and/or left in place for as long as 30 minutes. The intent is to stimulate underlying myofascial trigger points, muscles, and connective tissues to manage myofascial pain. Dry needling may be performed with acupuncture needles or standard hypodermic needles but is performed without the injection of medications (eg, anesthetics, corticosteroids). Dry needling is proposed to treat dysfunctions in skeletal muscle, fascia, and connective tissue; diminish persistent peripheral pain; and reduce impairments of body structure and function.

The physiologic basis for dry needling depends on the targeted tissue and treatment objectives. The most studied targets are trigger points.

Deep dry needling is believed to inactivate trigger points by eliciting contraction and subsequent relaxation of the taut band via a spinal cord reflex. This local twitch response is defined as a transient visible or palpable contraction or dimpling of the muscle, and has been associated with alleviation of spontaneous electrical activity; reduction of numerous nociceptive, inflammatory, and immune system-related chemicals; and relaxation of the taut band. Deep dry needling of

trigger points is believed to reduce local and referred pain, improve range of motion, and decrease trigger point irritability.

Superficial dry needling is thought to activate mechanoreceptors and have an indirect effect on pain by inhibiting C-fiber pain impulses. The physiologic basis for dry needling treatment of excessive muscle tension, scar tissue, fascia, and connective tissues is not as well described in the literature.

REGULATORY STATUS

Dry needling is considered a procedure and, as such, is not subject to regulation by the U.S. Food and Drug Administration.

POLICY

Dry needling of trigger points for the treatment of myofascial pain is considered **non-covered** or **experimental / investigational** depending on individual member benefits.

Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

RATIONALE

This evidence review was created using the PubMed database. The most recent literature update was performed through February 13, 2025.

Evidence reviews assess the clinical evidence to determine whether the use of technology improves the net health outcome. Broadly defined, health outcomes are the length of life, quality of life, and ability to function, including benefits and harms. Every clinical condition has specific outcomes that are important to patients and managing the course of that condition. Validated outcome measures are necessary to ascertain whether a condition improves or worsens; and whether the magnitude of that change is clinically significant. The net health outcome is a balance of benefits and harms.

To assess whether the evidence is sufficient to draw conclusions about the net health outcome of technology, 2 domains are examined: the relevance, and quality and credibility. To be relevant, studies must represent one or more intended clinical use of the technology in the intended population and compare an effective and appropriate alternative at a comparable intensity. For some conditions, the alternative will be supportive care or surveillance. The quality and credibility of the evidence depend on study design and conduct, minimizing bias and confounding that can generate incorrect findings. The randomized controlled trial (RCT) is preferred to assess efficacy; however, in some circumstances, nonrandomized studies may be adequate. RCTs are rarely large enough or long enough to capture less common adverse events and long-term effects. Other types of studies can be used for these purposes and to assess generalizability to broader clinical populations and settings of clinical practice.

DRY NEEDLING OF MYOFASCIAL TRIGGER POINTS ASSOCIATED WITH NECK AND/OR SHOULDER PAIN

Clinical Context and Therapy Purpose

The purpose of dry needling in individuals who have myofascial neck and/or shoulder pain is to provide a treatment option that is an alternative to or an improvement on existing therapies.

The following PICO was used to select literature to inform this review.

Populations

The relevant population of interest is individuals with myofascial trigger points associated with myofascial neck and/or shoulder pain. Trigger points are discrete, focal, hyperirritable spots within a taut band of skeletal muscle fibers that produce local and/or referred pain when stimulated.

Interventions

The therapy being considered is dry needling.

Dry needling refers to a procedure whereby a fine needle is inserted into the trigger point to induce a twitch response and relieve the pain. The needle may be moved in an up-and-down motion, rotated, and/or left in place for as long as 30 minutes. The physiologic basis for dry needling depends on the targeted tissue and treatment objectives. Deep dry needling is believed to inactivate trigger points by eliciting contraction and subsequent relaxation of the taut band via a spinal cord reflex. Superficial dry needling is thought to activate mechanoreceptors and have an indirect effect on pain by inhibiting C-fiber pain impulses.

Comparators

Alternative nonpharmacologic treatment modalities for trigger point pain include manual techniques, massage, acupressure, ultrasonography, application of heat or ice, diathermy, transcutaneous electrical nerve stimulation, and spray cooling with manual stretch.^{2,}

Outcomes

The outcomes of interest are symptoms, functional outcomes, quality of life, and treatmentrelated morbidity.

Study Selection Criteria

Methodologically credible studies were selected using the following principles:

- To assess efficacy outcomes, comparative controlled prospective trials were sought, with a preference for RCTs;
- In the absence of such trials, comparative observational studies were sought, with a preference for prospective studies.
- To assess long-term outcomes and adverse events, single-arm studies that capture longer periods of follow-up and/or larger populations were sought.
- Studies with duplicative or overlapping populations were excluded.

REVIEW OF EVIDENCE

Systematic Reviews

Numerous, primarily small, RCTs involving dry needling techniques in neck or shoulder pain have been evaluated in several systematic reviews and meta-analyses (Table 1).

Charles et al (2019) conducted a systematic review of different techniques for treatment of myofascial pain.^{3,} A total of 23 RCTs of dry needling were included. Of these, 15 assessed the technique for neck or shoulder pain. The quality of evidence for dry needling in the management of myofascial pain and trigger points ranged from very low to moderate compared with control groups, sham interventions, or other treatments for changes in pain, pressure point threshold, and functional outcomes. Multiple limitations in the body of the evidence were identified, including high risk of bias, small sample sizes, unclear randomization and concealment procedures, inappropriate blinding, imbalanced baseline characteristics, lack of standardized methodologies, unreliable outcome measures, high attrition rates, unknown long-term treatment effects, lack of effective sham methods, and lack of standardized guidelines in the location of

trigger points. The reviewers concluded that the evidence for dry needling was not greater than placebo.

Navarro-Santana et al (2020) conducted a systematic review and meta-analysis of dry needling of myofascial trigger points associated with neck pain compared to sham needling, no intervention, or other physical interventions.^{4,} A total of 28 RCTs were included. Dry needling reduced pain immediately after the intervention (mean difference [MD] in pain score, -1.53; 95% confidence interval [CI], -2.29 to -0.76) and at the short-term (up to 1 month) (MD, -2.31; 95% CI, -3.64 to -0.99) when compared with sham, placebo, waiting list, or other forms of dry needling, and at the short-term compared with manual therapy (MD, -0.51; 95% CI, -0.95 to -0.06). No differences in comparison with other physical therapy interventions were observed. An effect on pain-related disability at the short-term was found when comparing dry needling with sham, placebo, waiting list, or other forms of other physical therapy interventions.

Navarro-Santana et al (2020) also conducted a systematic review and meta-analysis of dry needling for shoulder pain.^{5,} The meta-analysis found moderate quality evidence for a small effect (MD, -0.49 points; 95% CI, -0.84 to -0.13; standardized mean difference [SMD], -0.25; 95% CI, -0.42 to -0.09) for decreasing shoulder pain intensity, and low quality evidence for a large effect (MD, -9.99 points; 95% CI, -15.97 to -4.01; SMD, -1.14; 95% CI, -1.81 to -0.47) for reducing related disability. The effects on pain intensity were found only in the short term (up to 1 month) and did not reach the minimal clinically important difference of 1.1 points for the numerical pain rating scale (0 to 10) determined for patients with shoulder pain. Confidence intervals of the main effects of dry needling on pain intensity and related disability were wide. Additionally, the trials were heterogeneous with regard to the number and/or frequency of needling sessions and the type of comparator.

Para-Garcia et al (2022) conducted a systematic review and meta-analysis of dry-needling compared with other interventions in patients with subacromial pain syndrome.^{6,} Five RCTs (N=315) published between 2012 and 2022 were included. The intervention group included 3 studies with dry needling in combination with exercise and 2 studies with dry needling alone while the control group had a wide range of interventions including exercise, stretching, massage, heat, and electrotherapy. Dry needling was generally performed for 2 sessions over 3 or 4 weeks, but 1 study had all sessions in 1 week. Minimal information was available on session duration. Short-term pain was reduced with dry needling either alone or when combined with exercise compared with other interventions (SMD, -0.27; 95% CI, -0.49 to -0.05; I^2 =0.00%; p<.02; low quality evidence), but the difference between groups was small and clinical relevance is questionable. Pain intensity was also reduced at mid-term (1 to 12 months) based on low-quality evidence; however, there was no difference in disability between groups. The quality of evidence was low to very-low due to lack of blinding and imprecision.

Study ^a	Charles et al (2019) ^{3,}	Navarro- Santana et al (2020) ^{4,}	Navarro- Santana et al (2020) ^{5,}	Para-Garcia et al (2022) ^{6,}
Arias-Buría et al (2015)	•			
Arias-Buría et al (2017)			•	•

Table 1. Comparison of Studies Included in SRs

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Study ^a	Charles et al (2019) ^{3,}	Navarro- Santana et al (2020) ^{4,}	Navarro- Santana et al (2020) ^{5,}	Para-Garcia et al (2022) ^{6,}
Arias-Buría et al (2020)		•		
Aridici et al (2016)		•		
Ay et al (2010)	•			
Calvo-Lobo et al (2018)			•	
Campa-Moran et al (2015)	•	•		
Chu et al (1997)	•			
De Meulemeester et al (2017)		•		
DiLorenzo et al (2004)	•			
Dogan et al (2019)		•		
Ekici et al (2021)				•
Fernández-Carnero et al (2017)		•		
Ga et al (2007)	•			
García-de-Miguel et al (2020)		•		
Hayta et al (2016)		•		
Ilbuldu et al (2004)	•	•		
Imani et al (2021)				•
Irnich et al (2002)	•			
Itoh et al (2007)	•	•		
Itoh et al (2014)		•		
Jalilipanah et al (2021)				•
Kamali et al (2018)		•		
Kamanli et al (2005)	•			
Llamas-Ramos et al (2014)	•	•		
Luan et al (2019)		•		
Martín-Rodríguez et al (2019)		•		
Manafnezhad et al (2019)		•		

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Study ^a	Charles et al (2019) ^{3,}	Navarro- Santana et al (2020) ^{4,}	Navarro- Santana et al (2020) ^{5,}	Para-Garcia et al (2022) ^{6,}
Mejuto-Vázquez et al (2014)	•	•		
Myburgh et al (2012)		•		
Onat et al (2019)		•		
Pecos-Martín et al (2015)	•	•		
Perez-Palomarez et al (2017)			•	•
Rayegani et al (2014)		•		
Salom-Moreno et al (2017)			•	
Segura-Ortí et al (2016)		•		
Sobhani et al (2017)		•		
Sukareechai et al (2019)		•		
Tabatabaiee et al (2019)		•		
Tekin et al (2012)		•		
Tsai et al (2010)	•			
Valiente-Castrillo et al (2020)		•		
Ziaeifer et al (2014)	•	•		
Ziaeifer et al (2016)		•		
Ziaeifer et al (2019)		•		

RCT: randomized controlled trials; SR: systematic reviews.

^a Only RCTs assessing neck and shoulder pain in each SR were included in the table.

Section Summary: Neck and/or Shoulder Pain

A number of RCTs and systematic reviews of these studies have evaluated dry needling of myofascial trigger points for neck and/or shoulder pain. A systematic review of techniques for myofascial pain included 15 studies of dry needling for neck or shoulder pain published through 2017. Studies had multiple methodological limitations, and the reviewers concluded that the evidence for dry needling was not greater than placebo. In more recent systematic reviews and meta-analyses, dry needling was not associated with clinically important reductions in shoulder or neck pain when compared to other physical therapy modalities.

DRY NEEDLING OF MYOFASCIAL TRIGGER POINTS ASSOCIATED WITH PLANTAR HEEL PAIN

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Clinical Context and Therapy Purpose

The purpose of dry needling in individuals who have plantar heel myofascial pain is to provide a treatment option that is an alternative to or an improvement on existing therapies.

The following PICO was used to select literature to inform this review.

Populations

The relevant population of interest is individuals with myofascial trigger points associated with plantar heel pain. Trigger points are discrete, focal, hyperirritable spots within a taut band of skeletal muscle fibers that produce local and/or referred pain when stimulated.

Interventions

The therapy being considered is dry needling.

Dry needling refers to a procedure whereby a fine needle is inserted into the trigger point to induce a twitch response and relieve the pain. The needle may be moved in an up-and-down motion, rotated, and/or left in place for as long as 30 minutes. The physiologic basis for dry needling depends on the targeted tissue and treatment objectives. Deep dry needling is believed to inactivate trigger points by eliciting contraction and subsequent relaxation of the taut band via a spinal cord reflex. Superficial dry needling is thought to activate mechanoreceptors and have an indirect effect on pain by inhibiting C-fiber pain impulses.

Comparators

Alternative nonpharmacologic treatment modalities for trigger point pain include manual techniques, massage, acupressure, ultrasonography, application of heat or ice, diathermy, transcutaneous electrical nerve stimulation, and spray cooling with manual stretch.^{2,}

Outcomes

The outcomes of interest are symptoms, functional outcomes, quality of life, and treatmentrelated morbidity.

Study Selection Criteria

Methodologically credible studies were selected using the following principles:

- To assess efficacy outcomes, comparative controlled prospective trials were sought, with a preference for RCTs;
- In the absence of such trials, comparative observational studies were sought, with a preference for prospective studies.
- To assess long-term outcomes and adverse events, single-arm studies that capture longer periods of follow-up and/or larger populations were sought.
- Studies with duplicative or overlapping populations were excluded.

REVIEW OF EVIDENCE

Systematic Review

Llurda-Almuzara et al (2021) published a systematic review of 6 randomized trials (N=395) evaluating dry needling for the treatment of plantar fasciitis (Tables 2 to 4).^{7,} None of the included trials were double-blind and, although the authors did find some positive effects of dry

needling, the heterogeneity, lack of blinding, and small number of patients in the trials limits applicability.

Table 2. Trials Included in Systematic Review

Study Llurda-Almuzara et al (202		
Bagcier et al (2020) ^{8,}		
Cotchett et al (2014) ^{9,}		
Eftekharsadat et al (2016) ^{10,}		
Rahbar et al (2018) ^{11,}		
Rastegar et al (2017) ^{12,}	•	
Uygur et al (2019) ^{13,}	•	

Table 3. Systematic Review Characteristics

Study	Dates	Trials	Participants	N (Range)	Design	Duration
Llurda- Almuzara et al (2021) ^{7,}	Inception- 2020	6	Patients with heel pain receiving dry needling or comparator (placebo, no intervention, or active comparator)	395 (10 to 49)	RCT	1 to 6 sessions (mean, 4 sessions)

RCT: randomized controlled trial.

Table 4. Systematic Review Results

Study	Overall Pain Intensity	Pain Intensity (at least 3 Sessions)	Long-term Pain Intensity Pain-related Disa	
Llurda-Almuzara et al (2021) ^{7,}				
Trials (n)	6	4	2	5
SMD (95% CI)	-0.5 (-1.13 to 0.13)	-1.28 (-2.11 to - 0.44)	-1.45 (-2.19 to -0.70)	-0.46 (-0.90 to -0.01)
Ê	94%	>85%	67% to 78%	84%

CI: confidence interval; SMD: standardized mean difference.

Section Summary: Plantar Heel Pain

The evidence base consists of a systematic review of RCTs. The authors included 6 randomized trials enrolling 395 patients and found no overall difference in pain intensity in those treated with dry needling compared with active control, placebo, or no intervention. However, pain intensity after at least 3 sessions, long-term pain intensity, and pain-related disability were improved. The systematic review rated the quality of the studies it assessed as low to moderate. The evidence is limited by small patient populations and lack of blinding; therefore, additional RCTs are needed to strengthen the evidence base.

DRY NEEDLING OF MYOFASCIAL TRIGGER POINTS ASSOCIATED WITH TEMPOROMANDIBULAR PAIN

Clinical Context and Therapy Purpose

The purpose of dry needling in individuals who have temporomandibular myofascial pain is to provide a treatment option that is an alternative to or an improvement on existing therapies.

The following PICO was used to select literature to inform this review.

Populations

The relevant population of interest is individuals with myofascial trigger points associated with temporomandibular myofascial pain. Trigger points are discrete, focal, hyperirritable spots within a taut band of skeletal muscle fibers that produce local and/or referred pain when stimulated.

Interventions

The therapy being considered is dry needling.

Dry needling refers to a procedure whereby a fine needle is inserted into the trigger point to induce a twitch response and relieve the pain. The needle may be moved in an up-and-down motion, rotated, and/or left in place for as long as 30 minutes. The physiologic basis for dry needling depends on the targeted tissue and treatment objectives. Deep dry needling is believed to inactivate trigger points by eliciting contraction and subsequent relaxation of the taut band via a spinal cord reflex. Superficial dry needling is thought to activate mechanoreceptors and have an indirect effect on pain by inhibiting C-fiber pain impulses.

Comparators

Alternative nonpharmacologic treatment modalities for trigger point pain include manual techniques, massage, acupressure, ultrasonography, application of heat or ice, diathermy, transcutaneous electrical nerve stimulation, and spray cooling with manual stretch.^{2,}

Outcomes

The outcomes of interest are symptoms, functional outcomes, quality of life, and treatmentrelated morbidity.

Study Selection Criteria

Methodologically credible studies were selected using the following principles:

- To assess efficacy outcomes, comparative controlled prospective trials were sought, with a preference for RCTs;
- In the absence of such trials, comparative observational studies were sought, with a preference for prospective studies.
- To assess long-term outcomes and adverse events, single-arm studies that capture longer periods of follow-up and/or larger populations were sought.
- Studies with duplicative or overlapping populations were excluded.

REVIEW OF EVIDENCE

Randomized Controlled Trial

Garcia-de-la-Banda-Garcia et al (2023) conducted an RCT that compared dry needling to manual therapy in 50 individuals with temporomandibular disorders.^{14,} Participants and physical therapists were unblinded and each patient received 3 sessions, each 4 days apart. Patients were followed until 2 weeks after the last treatment. Both groups experienced improvements from baseline to the end of the study but there was no difference between groups in pain intensity, maximal mouth opening, or disability (using the Neck Disability Index). The study may have lacked a sufficient number of participants to detect differences between groups; a power/sample size calculation was not reported.

A double-blind, sham-controlled trial of dry needling for the treatment of temporomandibular myofascial pain was reported by Diracoglu et al (2012).^{15,} Patients (N=52) with symptoms for at least 6 weeks with 2 or more myofascial trigger points in the temporomandibular muscles were included in the trial. Trigger points were stimulated once weekly over 3 weeks. The sham condition involved dry needling in areas away from the trigger points. Patients were evaluated 1 week after the last needling. At follow-up, there was no significant difference between groups in pain scores assessed by a 10-point visual analog scale. Mean visual analog scale scores were 3.88 in the treatment group and 3.80 in the control group (p=.478). Also, the difference in unassisted jaw opening without pain did not differ significantly between the treatment group (40.1 mm) and the control group (39.6 mm; p=.411). The mean pain pressure threshold was significantly higher in the treatment group (3.21 kg/cm²) than in the control group (2.75 kg/cm²; p<.001).

Section Summary: Temporomandibular Myofascial Pain

Two RCTs evaluating dry needling for the treatment of temporomandibular myofascial pain were identified. One trial was double-blind and sham-controlled. One week after completing the intervention, there were no statistically significant differences between groups in pain scores or function (unassisted jaw opening without pain). There was a significantly higher pain pressure threshold in the treatment group. This RCT does not provide sufficient evidence on which to draw conclusions about the impact of dry needling on health outcomes in patients with temporomandibular myofascial pain. The second RCT was active-controlled, but quality is limited by lack of blinding and a small sample size.

Adverse Events

A prospective survey (2014) of 39 physical therapists, providing 7629 dry needling treatments, reported 1463 (19.18%) mild adverse events (bruising, bleeding, pain) and no serious adverse events.^{16,}

SUPPLEMENTAL INFORMATION

The purpose of the following information is to provide reference material. Inclusion does not imply endorsement or alignment with the evidence review conclusions.

Practice Guidelines and Position Statements

Guidelines or position statements will be considered for inclusion in 'Supplemental Information' if they were issued by, or jointly by, a US professional society, an international society with US representation, or National Institute for Health and Care Excellence (NICE). Priority will be given to guidelines that are informed by a systematic review, include strength of evidence ratings, and include a description of management of conflict of interest.

American Academy of Orthopaedic Manual Physical Therapists

In 2009, the American Academy of Orthopaedic Manual Physical Therapists issued a statement that dry needling fell within the scope of physical therapist practice.^{17,} In support of this position, the Academy stated that "dry needling is a neurophysiological evidence-based treatment technique that requires effective manual assessment of the neuromuscular system.... Research supports that dry needling improves pain control, reduces muscle tension, normalizes biochemical and electrical dysfunction of motor endplates, and facilitates an accelerated return to active rehabilitation."

American Physical Therapy Association

In 2023, the American Physical Therapy Association published an updated guideline on nonarthritic heel pain (plantar fasciitis).^{18,} The guideline stated that dry needling of myofascial trigger points in the following areas should be used: gastrocnemius, soles, and plantar muscles of the foot. The evidence supports the efficacy of this technique for pain and long-term function and improved disability, especially in patients with chronic heel pain (defined as lasting more than 1 month). The recommendation was based in part on the systematic review conducted by Llurda-Almuzara discussed above, and more recent studies with methodological limitations including lack of a sham control comparison group.

U.S. Preventive Services Task Force Recommendations

Not applicable.

Ongoing and Unpublished Clinical Trials

Some currently unpublished trials that might influence this review are listed in Table 5.

NCT No.	Trial Name	Planned Enrollment	Completion Date
Ongoing			
NCT04726683	Trigger Point Dry Needling vs Injection in Patients With Temporomandibular Disorders: A Randomized Placebo- controlled Trial		Dec 2024
NCT06074640	Effects of Post Isometric Relaxation With and Without Dry Needling in Triceps Surae With Chronic Heel Pain	42	Apr 2024
NCT05915091	Comparative Effects of Dry Needling and Cross Friction Massage on Patients With Plantar Fascitis, a Randomized Controlled Trial	60	Aug 2023
NCT05810818	Effectiveness Of Dry Needling and Soft Tissue Mobilization Combined With Self-Stretching for Management of Calf and Heel Pain	54	Aug 2023
NCT05868512	Effectiveness of Dry Needling Versus Therapeutic Ultrasound Along With Routine Physical Therapy in Patients With for Chronic Neck Pain; a Randomized Control Trial	31	Aug 2023

Table 5. Summary of Key Trials

NCT No.	Trial Name	Planned Enrollment	Completion Date
Ongoing			
NCT05532098	Comparative Efficacy of Platelet Rich Plasma and Dry Needling in Management of Anterior Disc Displacement of Temporomandibular Joint	78	Mar 2023
Unpublished			
NCT04851067	Dry Needling Versus Manual Therapy in Patients With Mechanical Neck Pain: A Randomized Control Trial	75	Mar 2022 (status unknown)
NCT03844802 Effectiveness of Real or Placebo Dry Needling Combined With Therapeutic Exercise in Adults With Chronic Neck Pain		58	Jul 2023
NCT05624515 Efficacy of Dry Needling and Ischaemic Compression of the Scapula Angularis Muscle in Patients With Cervicalgia. Randomised Clinical Trial		80	Jan 2023
NCT06023264	Randomized, Open Clinical Trial to Evaluate the Effect of Dry Needling on the Temporomandibular Joint in Subjects Who Have Suffered a Whiplash as a Result of a Traffic Accident	50	Sep 2024

NCT: national clinical trial.

CODING

The following codes for treatment and procedures applicable to this policy are included below for informational purposes. This may not be a comprehensive list of procedure codes applicable to this policy.

Inclusion or exclusion of a procedure, diagnosis or device code(s) does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

The code(s) listed below are medically necessary ONLY if the procedure is performed according to the "Policy" section of this document.

CPT/HCPCS		
20560	Needle insertion, 1 or 2 muscles without injection	
20561	Needle insertion, 3 or more muscles	

REVISIONS	6
07-08-2016	Policy published 06-08-2016. Policy effective 07-08-2016.
01-01-2017	Policy published 12-20-2016. Policy effective 01-01-2017.
	In Policy section
	 Added "non-covered or" and "depending on individual member benefits" to read "Dry
	needling of trigger points for the treatment of myofascial pain is considered non-covered
	or experimental / investigational depending on individual member benefits."
06-09-2017	Description section updated
	Rationale section updated
	In Coding section:
	Coding notations updated
	References updated
07-01-2019	Description section updated
	Rationale section updated
	References updated
01-01-2020	In Coding section:
	• Added CPT Codes: 20560, 20561
	Updated Coding Notations
08-21-2020	Description section updated
	Rationale section updated
	References updated
	Description section updated
	Rationale section updated
05 20 2022	References updated
05-20-2022	Updated Description Section
	Updated Rationale Section
	Updated References Section
05-23-2023	Updated Description Section
	Updated Rationale Section
	Updated Coding Section
	 Removed ICD-10 Diagnoses box

REVISIONS	
	Updated References Section
05-28-2024	Updated Description Section
	Updated Rationale Section
	Updated Coding Section
	 Removed 20999 and 97799
	Updated References Section
05-28-2025	Updated Description Section
	Updated Rationale Section
	Updated Reference Section

REFERENCES

1. Bernstein CD, Yonter S, Pradeep A, Shah JP, Weiner DK. Fibromyalgia and Myofascial Pain Syndromes. In: Halter JB, Ouslander JG, Studenski S, High KP, Asthana S, Supiano MA, Ritchie CS, Schmader K. eds. Hazzard's Geriatric Medicine and Gerontology, 8e. McGraw Hill; 2022.

https://accessmedicine.mhmedical.com/content.aspx?sectionid=266882376&bookid=3201 &Resultclick=2. Accessed February 13, 2025.

- 2. Alvarez DJ, Rockwell PG. Trigger points: diagnosis and management. Am Fam Physician. Feb 15 2002; 65(4): 653-60. PMID 11871683
- 3. Charles D, Hudgins T, MacNaughton J, et al. 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. Jul 2019; 23(3): 539-546. PMID 31563367
- Navarro-Santana MJ, Sanchez-Infante J, Fernández-de-Las-Peñas C, et al. Effectiveness of Dry Needling for Myofascial Trigger Points Associated with Neck Pain Symptoms: An Updated Systematic Review and Meta-Analysis. J Clin Med. Oct 14 2020; 9(10). PMID 33066556
- 5. Navarro-Santana MJ, Gómez-Chiguano GF, Cleland JA, et al. Effects of Trigger Point Dry Needling for Nontraumatic Shoulder Pain of Musculoskeletal Origin: A Systematic Review and Meta-Analysis. Phys Ther. Feb 04 2021; 101(2). PMID 33340405
- Para-García G, García-Muñoz AM, López-Gil JF, et al. Dry Needling Alone or in Combination with Exercise Therapy versus Other Interventions for Reducing Pain and Disability in Subacromial Pain Syndrome: A Systematic Review and Meta-Analysis. Int J Environ Res Public Health. Sep 02 2022; 19(17). PMID 36078676
- Llurda-Almuzara L, Labata-Lezaun N, Meca-Rivera T, et al. Is Dry Needling Effective for the Management of Plantar Heel Pain or Plantar Fasciitis? An Updated Systematic Review and Meta-Analysis. Pain Med. Jul 25 2021; 22(7): 1630-1641. PMID 33760098
- Bagcier F, Yilmaz N. The Impact of Extracorporeal Shock Wave Therapy and Dry Needling Combination on Pain and Functionality in the Patients Diagnosed with Plantar Fasciitis. J Foot Ankle Surg. 2020; 59(4): 689-693. PMID 32340838
- Cotchett MP, Munteanu SE, Landorf KB. Effectiveness of trigger point dry needling for plantar heel pain: a randomized controlled trial. Phys Ther. Aug 2014; 94(8): 1083-94. PMID 24700136
- 10. Eftekharsadat B, Babaei-Ghazani A, Zeinolabedinzadeh V. Dry needling in patients with chronic heel pain due to plantar fasciitis: A single-blinded randomized clinical trial. Med J Islam Repub Iran. 2016; 30: 401. PMID 27683642

- 11. Rahbar M, Kargar A, Eslamian F, Dolatkhah N. Comparing the efficacy of dry needling and extracorporeal shock wave therapy in treatment of plantar fasciitis. J Mazandaran Univ Med Sci. 2018;28(164):53-62.
- 12. Rastegar S, Baradaran Mahdavi S, Hoseinzadeh B, et al. Comparison of dry needling and steroid injection in the treatment of plantar fasciitis: a single-blind randomized clinical trial. Int Orthop. Jan 2018; 42(1): 109-116. PMID 29119296
- Uygur E, Aktaş B, Eceviz E, et al. Preliminary Report on the Role of Dry Needling Versus Corticosteroid Injection, an Effective Treatment Method for Plantar Fasciitis: A Randomized Controlled Trial. J Foot Ankle Surg. Mar 2019; 58(2): 301-305. PMID 30850099
- García-de la-Banda-García R, Cortés-Pérez I, Ibancos-Losada MDR, et al. Effectiveness of Dry Needling versus Manual Therapy in Myofascial Temporomandibular Disorders: A Single-Blind Randomized Controlled Trial. J Pers Med. Sep 21 2023; 13(9). PMID 37763182
- 15. Dıraçoğlu 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(4): 285-90. PMID 23220812
- Brady S, McEvoy J, Dommerholt J, et al. Adverse events following trigger point dry needling: a prospective survey of chartered physiotherapists. J Man Manip Ther. Aug 2014; 22(3): 134-40. PMID 25125935
- American Academy of Manual Orthopaedic Physical Therapists. AAOMPT position statement on dry needling. 2009; http://aaompt.org/Main/About_Us/Position_Statements/Main/About_Us/Position_Stateme nts.aspx?hkey=03f5a33 3-f28d-4715-b355-cb25fa9bac2c. Accessed February 13, 2025.
- 18. Koc TA, Bise CG, Neville C, et al. Heel Pain Plantar Fasciitis: Revision 2023. J Orthop Sports Phys Ther. Dec 2023; 53(12): CPG1-CPG39. PMID 38037331