Dry Needling

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DESCRIPTION

Dry needling/Functional Dry Needling (FDN) refers to a procedure in which a fine needle is inserted into the skin and muscle at a site of myofascial pain to diminish persistent peripheral pain and reduce impairments of body structure and function. It is proposed to treat dysfunctions in skeletal muscles, fascia, and connective tissue; diminish persistent peripheral pain; and reduce impairments of body structure and function. The needle may be performed with a fine needle (acupuncture or standard hypodermic needles) inserted into the skin to induce a twitch response and relieve 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 targets a trigger point but differs from a trigger point injection because there is no injection of medication or fluid (e.g., anesthetics or corticosteroids). Trigger points are associated with local ischemia and hypoxia, a significantly lowered pH, local and referred pain and altered muscle activation patterns. Trigger points can be visualized by magnetic resonance imaging and elastography. The reliability of manual identification of trigger points has not been established.

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

Deep Dry Needling
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
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.

Clinical Context and Therapy Purpose
The purpose of dry needling in patients who have pain is to provide a treatment option that is an alternative to or an improvement on existing therapies.

The question addressed in this evidence review is: Does dry needling improve the net health outcome in patients with pain?

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 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.

According to the American Society of Regional Anesthesia and Pain Medicine, Myofascial pain is a common, non-articular musculoskeletal disorder characterized by symptomatic myofascial trigger points - hard, palpable, localized nodules within taut bands of skeletal muscle that are painful upon compression. MPS is a chronic condition affecting the connective tissue (i.e., fascia) surrounding the muscles; sensitive points in your muscles (trigger points) cause referred pain in seemingly unrelated parts of the body. MPS typically occurs after a muscle has been contracted repetitively. The large upper back muscles are prone to developing myofascial pain, as well as the neck, shoulders, heel and temporomandibular joint.

Interventions
The therapy being considered is dry needling.

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.

Outcomes
The outcomes of interest are symptoms, functional outcomes, quality of life, and treatment-related morbidity.

Review of Evidence

Dry Needling as a Treatment for Headaches
(2021) Pourahmadi et al. completed a systematic review/meta-analysis reporting of 2715 identified studies, 11 randomized clinical trials were eligible for qualitative synthesis and 9 for meta-analysis. Only 4 trials were of high quality. Very low-quality evidence suggested that dry needling is not statistically better than other interventions for improving headache pain intensity in the short term in patients with TTH (SMD -1.27, 95% CI = -3.56 to 1.03, n = 230), CGH (SMD -0.41, 95% CI = -4.69 to 3.87, n = 104), or mixed headache (TTH and migraine; SMD 0.03; 95% CI = -0.42 to 0.48, n = 90). Dry needling provided significantly greater improvement in related disability in the short term in patients with TTH (SMD -2.28, 95% CI = -2.66 to -1.91, n = 160) and CGH (SMD -0.72, 95% CI = -1.09 to -0.34, n = 144). The synthesis of results showed that dry needling could significantly improve headache frequency, health-related quality of life, trigger point tenderness, and cervical range of motion in TTH and CGH.

Dry needling produces similar effects to other interventions for short-term headache pain relief, whereas dry needling seems to be better than other therapies for improvement in related disability in the short term. The systematic review suggested that for every one or two patients with TTH treated by dry needling, one patient will likely show decreased headache intensity (number needed to treat [NNT] = 2; large effect) and improved related disability (NNT = 1; very large effect). In CGH, for every three or four patients treated by dry needling, one patient will likely exhibit decreased headache intensity (NNT = 4; small effect) and improved related disability (NNT = 3; medium effect). Further high-methodological quality studies are warranted to provide a more robust conclusion.

Dry Needling as a Treatment for Pelvic Pain
(2018) George et al. reported two women, 72 and 62 years of age, were referred to physical therapy with CPP. The patients reported substantial functional limitations secondary to pelvic pain and previous treatments had been unsuccessful. In both patients, familiar pain was elicited with palpation of pelvic floor muscles, particularly obturator internus. Dry needling treatment to obturator internus was a primary focus of treatment in both women with secondary DN to their pelvic floor and gluteal muscles in addition to traditional physical therapy interventions.

Patient A demonstrated resolution of symptoms, increased range of motion, and improved mobility after 7 treatments. Her Hip Outcome Score improved from 45.31 to 97.06. Patient B reported resolution of her pelvic pain by the fifth treatment. Her Modified Oswestry Disability Index improved from 46% to 2% and her Pelvic Floor Disability Index score improved by 62.5 points. Both patients demonstrated substantial improvement following physical therapy with focused DN to the obturator internus, pelvic floor, and gluteal muscles. These outcomes suggest that physical therapy management using DN may prove to be a powerful treatment technique for patients with CPP. Further evaluation of DN in treating pelvic pain is warranted.

Dry Needling as a Treatment for Tendinopathy

(2020) Stoychev et al. reported the effectiveness of dry needling for treatment of tendinopathy has been evaluated in three systematic reviews, seven randomized controlled trials, and six cohort studies. The following sites were studied: wrist common extensor origin, patellar tendon, rotator cuff, and tendons around the greater trochanter. There is considerable heterogeneity of the needling techniques, and the studies were inconsistent about the therapy used after the procedure. Most systematic reviews and randomized controlled trials support the effectiveness of tendon needling. There was a statistically significant improvement in the patient-reported symptoms in most studies. Some studies reported an objective improvement assessed by ultrasound. Two studies reported complications. Current research provides initial support for the efficacy of dry needling for tendinopathy treatment. It seems that tendon needling is minimally invasive, safe, and inexpensive, carries a low risk, and represents a promising area of future research. In further high-quality studies, tendon dry needling should be used as an active intervention and compared with appropriate sham interventions. Studies that compare the different protocols of tendon dry needling are also needed.

Dry Needling as a Treatment for Whiplash-Associated Disorders

(2015) Sterling et al. completed a randomized controlled trial investigated the effectiveness and cost-effectiveness of dry-needling and exercise compared with sham dry-needling and exercise for chronic whiplash-associated disorders (WAD). The setting was a single university centre and 4 physiotherapy practices in Queensland, Australia. Eighty patients with chronic WAD (>3 months) were enrolled between June 2009 and August 2012 with 1-year follow-up completed in August 2013. The interventions were 6 weeks of dry-needling to posterior neck muscles (n = 40) and exercise or sham dry-needling and exercise (n = 40). The primary outcomes of the Neck Disability Index (NDI) and self-rated recovery were measured at baseline, 6 and 12 weeks, 6 and 12 months by a blinded assessor. Analysis was intention to treat. An economic evaluation was planned but missing data deemed further analysis unwarranted. Seventy-nine patients (99%) were followed up at 6 weeks, 78 (98%) at 12 weeks, 74 (93%) at 6 months, and 73 (91%) at 12 months. The dry-needling and exercise intervention was more effective than sham dry-needling and exercise in reducing disability at 6 and 12 months but not at 6 and 12 weeks. The treatment effects were small and not clinically worthwhile. At 6 weeks, the treatment effect on the 0-100 NDI was -0.3 (95% confidence interval -5.4 to 4.7), 12 weeks -0.3 (-5.2 to 4.9), 6 months -4.4 (-9.6 to -0.74), and 12 months -3.8 (-9.1 to -0.5).

There was no effect for self-rated recovery. In patients with chronic WAD, dry-needling and exercise has no clinically worthwhile effects over sham dry-needling and exercise.

Dry Needling of Myofascial Trigger Points Associated with Neck and/or Shoulder Pain

Clinical Context and Therapy Purpose
The purpose of dry needling in patients 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 question addressed in this evidence review is: Does dry needling improve the net health outcome in patients with myofascial neck and/or shoulder pain?

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.

Outcomes
The outcomes of interest are symptoms, functional outcomes, quality of life, and treatment-related 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.

Review of Evidence: Dry Needling of Myofascial Trigger Points Associated with Neck and/or Shoulder Pain

(2020) Navarro-Santana et al. 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. 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 form of dry needling, but not with manual therapy or other physical therapy interventions.

(2020) Navarro-Santana et al. also conducted a systematic review and meta-analysis of dry needling for shoulder pain. 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 (0–10) 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.

(2019) Charles et al. conducted a systematic review of different techniques for treatment of myofascial pain. 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.

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

Clinical Context and Therapy Purpose
The purpose of dry needling in patients who have plantar heel myofascial pain is to provide a treatment option that is an alternative to or an improvement on existing therapies.

The question addressed in this evidence review is: Does dry needling improve the net health outcome in patients with plantar heel myofascial pain?

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.

Outcomes
The outcomes of interest are symptoms, functional outcomes, quality of life, and treatment-related 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.

Review of Evidence: Dry Needling of Myofascial Trigger Points Associated with Plantar Heel Pain
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 1 to 3). 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 1. Trials Included in Systematic Review

Study	Llurda-Almuzara et al. (2021)
Bagcier et al. (2020)	●
Cotchett et al. (2014)	●
Eftekharsadat et al. (2016)	●
Rahbar et al. (2018)	●
Rastegar et al. (2017)	●
Uygur et al. (2019)	●

Table 2. Systematic Review Characteristics

Study	Dates	Trials	Participants	N (Range)	Design	Duration

Llurda-Almuzara et al. (2021)	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 3. Systematic Review Results

Study	Overall Pain Intensity	Pain Intensity (at least 3 Sessions)	Long-term Pain Intensity	Pain-related Disability
Llurda-Almuzara et al. (2021)				
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)
I^2	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 patients who have temporomandibular myofascial pain is to provide a treatment option that is an alternative to or an improvement on existing therapies.

The question addressed in this evidence review is: Does dry needling improve the net health outcome in patients with temporomandibular myofascial pain?

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.

Outcomes
The outcomes of interest are symptoms, functional outcomes, quality of life, and treatment-related 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.

Review of Evidence: Dry Needling of Myofascial Trigger Points Associated with Temporomandibular Pain
(2012) Diracoglu et al. completed a double-blind, sham-controlled trial of dry needling for the treatment of temporomandibular myofascial pain. Patients (N=52) with symptoms for at least six weeks with two 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 one 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=0.478). 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=0.411). The mean pain pressure threshold was significantly higher in the treatment group (3.21 kg/cm^2) than in the control group (2.75 kg/cm^2; p<0.001).

Section Summary: Temporomandibular Myofascial Pain
One RCT evaluating dry needling for the treatment of temporomandibular myofascial pain was identified; this 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 single 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.

Adverse Events
A prospective survey (2014) of 39 physical therapists, providing 7,629 dry needling treatments, reported 1,463 (19.18%) mild adverse events (bruising, bleeding, pain) and no serious adverse events.

Summary of Evidence
For individuals who have myofascial trigger points associated with neck and/or shoulder pain who receive dry needling of trigger points, the evidence includes randomized controlled trials (RCTs) and systematic reviews. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. A systematic review of techniques to treat 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. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have myofascial trigger points associated with plantar heel pain who receive dry needling of trigger points, the evidence includes a systematic review of randomized trials. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. The systematic review 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 evidence as low to moderate. The evidence for dry needling in patients with plantar heel pain is limited by small patient populations and lack of blinding; therefore, additional RCTs are needed to strengthen the

evidence base. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Dry needling is minimally invasive procedure that appears to be safe (carrying a low risk) and represents a promising area of future research as a treatment option for pain management. Based on review of the medical literature dry needling has been studied in individuals as a treatment and/or therapy for headaches, pelvic pain, tendinopathy, whiplash - associated disorders, and temporomandibular pain. Several randomized controlled trails (RCTs), quasi-experimental studies, and systematic reviews have evaluated the efficacy of dry needling. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. While some studies noted there were no statistically significant differences between groups in pain scores or function between the two identified groups, there was a significantly higher pain pressure threshold in some treatment groups, however, additional RCTs, especially those with a sham-control group, are needed. Also, further high-quality studies utilizing dry needling in pain management should be used as an active intervention and compare the different protocols of dry needling. The evidence is insufficient to determine that the technology results in an improvement in the net health outcomes.

Professional Guidelines and Position Statements

American Academy of Orthopaedic Manual Physical Therapists (AAOMPT)
(2009) AAOMPT issued a statement that dry needling fell within the scope of physical therapist practice. In support of this position, the Academy stated, "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." (*Accessed October 2022*)

American Physical Therapy Association (APTA)
In 2012, an educational resource paper by the American Physical Therapy Association defined dry needling as "an invasive technique used by physical therapists (where allowed by state law) to treat myofascial pain that uses a dry needle, without medication or injection, which is inserted into areas of the muscle known as trigger points." (*Accessed October 2022*)

Canadian Agency for Drugs and Technologies in Health (CADTH)
(2016) The CADTH notes, evidence on the effectiveness of dry needling is mixed. Limited evidence suggests that wet needling (injection) is more effective than dry needling in the treatment of musculoskeletal or joint pain. Our literature search found no information on the cost-effectiveness of dry needling for patients with musculoskeletal or joint disorders, or on the cost-effectiveness of dry needling plus injection vs. injection alone for patients with these conditions. No evidence-based guidelines were identified on the use dry needling in the treatment of musculoskeletal or joint disorders. While there

are some statements on this treatment issued by physiotherapy and other healthcare professional associations, these are practitioner guides outlining competencies and safe practices for providing this procedure.

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

PRIOR APPROVAL

Not applicable.

POLICY

Dry needling is considered **investigational** for all indications because the evidence is insufficient to determine the technology results in an improvement in the net health outcomes.

PROCEDURE CODES AND BILLING GUIDELINES

To report provider services, use appropriate CPT* codes, Alpha Numeric (HCPCS level 2) codes, Revenue codes, and/or ICD diagnosis codes.

- 20560 Needle insertion(s) without injection(s); 1 or 2 muscle(s)
- 20561 Needle insertion(s) without injection(s); 3 or more muscles

SELECTED REFERENCES

- Dommerholt, J., Grieve, R., Layton, M., Hooks, T. (2015) An evidence-informed review of the current myofascial pain literature. Journal of Bodywork & Movement Therapies, 19, 126-137
- American Physical Therapy Association (APTA). (2013) Educational resource paper: Description of Dry Needling in Clinical Practice. 2013; http://www.aaompt.org/documents/dryneedlinginptclinicalpracticeeducationalresourcepaper.pdf
- American Physical Therapy Association (APTA). (2012) Physical Therapists and the Performance of Dry Needling. 2012; http://www.apta.org/StateIssues/DryNeedling/ResourcePaper/
- American Academy of Orthopaedic Physical Therapists.(2009) AAOMPT position statement on dry needling. 2009; https://www.aaompt.org/about/statements.cfm
- Canadian Agency for Drugs and Technologies in Health (CADTH). Dry needling and injection for musculoskeletal and Joint disorders: A review of the clinical

effectiveness, cost-effectiveness, and guidelines. (2016) Rapid response. Available at www.cadth.ca/
- De Meulemeester KE, Castelein B, Coppieters I, et al. Comparing trigger point dry needling and manual pressure technique for the management of myofascial neck/shoulder pain: a randomized clinical trial. J Manipulative Physiol Ther. Jan 2017;40(1):11-20. PMID 28017188.
- American Physical Therapy Association (APTA). Educational resource paper: Description of Dry Needling in Clinical Practice. 2013; http://www.apta.org/StateIssues/DryNeedling/ClinicalPracticeResourcePaper/.
- American Physical Therapy Association (APTA). Dry Needling. n.d.; https://www.apta.org/patient-care/interventions/dry-needling
- Alvarez DJ, Rockwell PG. Trigger points: diagnosis and management. Am Fam Physician. Feb 15 2002; 65(4): 653-60. PMID 11871683
- 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, Fernandez-de-Las-Penas 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
- Navarro-Santana MJ, Gomez-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
- Cotchett MP, Landorf KB, Munteanu SE. Effectiveness of dry needling and injections of myofascial trigger points associated with plantar heel pain: a systematic review. J Foot Ankle Res. Sep 01 2010; 3: 18. PMID 20807448
- 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
- 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
- Diracoglu 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
- American Academy of Orthopaedic Physical Therapists. AAOMPT position statement on dry needling. 2009; http://aaompt.org/Main/About_Us/Position_Statements/Main/About_Us/Position_Statements.aspx?hkey=03f5a33 3-f28d-4715-b355-cb25fa9bac2c

- American Physical Therapy Association (APTA). Physical Therapists and the Performance of Dry Needling. 2012; http://www.apta.org/StateIssues/DryNeedling/ResourcePaper/
- Stoychev, Vladimir et al. "Dry Needling as a Treatment Modality for Tendinopathy: a Narrative Review." Current reviews in musculoskeletal medicine vol. 13,1 (2020): 133-140. doi:10.1007/s12178-020-09608-0
- Sterling, Michele et al. "Dry-needling and exercise for chronic whiplash-associated disorders: a randomized single-blind placebo-controlled trial." Pain vol. 156,4 (2015): 635-643. doi:10.1097/01.j.pain.0000460359.40116.c1
- Pourahmadi, Mohammadreza et al. "Dry Needling for the Treatment of Tension-Type, Cervicogenic, or Migraine Headaches: A Systematic Review and Meta-Analysis." Physical therapy vol. 101,5 (2021): pzab068. doi:10.1093/ptj/pzab068
- George, A., VanEtten, L., Briggs M., Dry Needling for Female Chronic Pelvic Pain: A Case Series, Journal of Women's Health Physical Therapy: January/April 2018 - Volume 42 - Issue 1 - p 8-16 doi: 10.1097/JWH.0000000000000093
- American Physical Therapy Association (APTA). Dry Needling. n.d.; https://www.apta.org/patient-care/interventions/dry-needling.
- 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, Fernandez-de-Las-Penas 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
- Navarro-Santana MJ, Gomez-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
- 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. Jul 2020; 59(4): 689-693. PMID 32340838
- 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
- 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.
- 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, Aktas 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
- Diracoglu 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 Orthopaedic Physical Therapists. AAOMPT position statement on dry needling. 2009; http://aaompt.org/Main/About_Us/Position_Statements/Main/About_Us/Position_Statements.aspx?hkey=03f5a33 3-f28d-4715-b355-cb25fa9bac2c.
- American Physical Therapy Association (APTA). Physical Therapists and the Performance of Dry Needling. 2012; https://www.mptalliance.com/wp-content/uploads/2015/12/APTA-PTs-and-Dry-Needling-Resource-Paper.pdf.

POLICY HISTORY

Date	Reason	Action
November 2022	Annual Review	Policy Renewed
November 2021	Annual Review	Policy Revised
November 2020	Annual Review	Policy Revised
November 2019	Annual Review	Policy Revised
November 2018		New Policy

New information or technology that would be relevant for Wellmark to consider when this policy is next reviewed may be submitted to:

Wellmark Blue Cross and Blue Shield
Medical Policy Analyst
PO Box 9232
Des Moines, IA 50306-9232

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