

Systematic-review evidence table

Principal-intervention reviews are shown chronologically. Conclusions are condensed from the source table and should not substitute for reading each full review.

Year	Review / citation	Studies	Condition / population	Comparators	Main conclusion	Review / evidence quality
2001	Cummings & White. <i>Needling therapies in the management of myofascial trigger point pain</i> . Arch Phys Med Rehabil. PMID 11441390.	23*	Myofascial trigger-point pain	DN, acupuncture-type needling, injections, other care	Needling appeared beneficial; injecting a substance was not clearly superior to needling alone.	Early review; heterogeneous, generally weak primary literature.
2009	Tough et al. <i>Acupuncture and dry needling in the management of myofascial trigger point pain</i> . Eur J Pain. PMID 18395479.	7 RCTs*	Myofascial trigger-point pain	Sham, no treatment, other care	Some benefit versus no treatment; evidence limited and heterogeneous.	Few trials; cautious conclusions.
2012	Kim et al. <i>Intramuscular stimulation therapy for healthcare</i> . PMID 22871295.	4 RCTs*	Chronic pain conditions	Control, other therapies	Positive signals, but evidence inadequate for firm conclusions.	Small, methodologically limited evidence base.
2013	Kietrys et al. <i>Dry needling for upper-quarter myofascial pain</i> . JOSPT. PMID 23756457.	12 RCTs	Upper-quarter MPS	Sham/placebo, other treatment, injections	Reduced pain immediately and at about 4 weeks versus sham; active-comparator findings varied.	Quality varied; stronger evidence versus sham than active care.
2015	Liu et al. <i>Dry needling for neck/shoulder trigger points</i> . Arch Phys Med Rehabil. PMID 25576642.	20 / 839	Neck/shoulder MTrP pain	Sham, acupuncture, wet needling, other care	Reduced short- and medium-term pain; wet needling was superior for some outcomes.	Considerable heterogeneity; comparator-dependent.
2015	Boyles et al. <i>Trigger point dry needling for multiple body regions</i> . J Man Manip Ther. PMID 26955257.	19*	Multiple MSK regions	Sham, no treatment, other PT	Generally favorable pain/tenderness effects; results varied by region and comparator.	Variable trial quality.
2015	Fogelman et al. <i>Efficacy of dry needling for myofascial pain syndrome</i> . J Back Musculoskelet Rehabil. PMID 25322743.	NR	Myofascial pain	Various	Supportive signals for DN/IMS, with important heterogeneity and limitations.	Underlying evidence methodologically limited.
2016	Morihisa et al. <i>Dry needling for lower-quarter muscular trigger points</i> . Int J Sports Phys Ther. PMID 26900495.	6*	Lower-quarter MTrPs	Sham, control, other care	Pain reduction suggested; no clear functional, ROM, strength, QoL or mood benefit.	Small evidence base.
2017	Gattie, Cleland & Snodgrass. <i>Trigger point dry needling for musculoskeletal conditions</i> . JOSPT. PMID 28158962.	13 RCTs	Broad MSK disorders	Sham/control, other care	Improved pain and pressure-pain threshold mainly through 12 weeks; long-term superiority uncertain.	PEDro 4-9 (median 7); later review-level bias concerns.
2017	Espejo-Antúnez et al. <i>Dry needling in management of myofascial trigger points</i> . Complement Ther Med. PMID 28735825.	15 RCTs	MTrPs	Sham/placebo, no intervention, other care	Short-term pain, ROM and QoL improvements; several secondary outcomes uncertain.	Primary-study heterogeneity.
2018	Hall et al. <i>Dry needling trigger point therapy in the shoulder region</i> . Physiotherapy. PMID 29439829.	11*	Shoulder/upper-extremity pain	Sham, other PT	Some short-term pain/function benefit; heterogeneous studies limited confidence.	Methodological limitations noted.
2018	Hu et al. <i>Is dry needling effective for low back pain?</i> Medicine. PMID 29952980.	16 RCTs*	Low-back pain	Acupuncture, sham, other PT	Some post-treatment outcomes favored DN; follow-up evidence uncertain.	Many trials at substantial/unclear risk of bias.
2018/19	Vier et al. <i>Dry needling for orofacial pain associated with TMD</i> . Braz J Phys Ther. PMID 30146108.	7	TMD/orofacial MPS	Sham, other intervention	May reduce pain and improve pressure-pain threshold; effects small.	Very-low-quality evidence; some trials high risk of bias.
2018	Machado et al. <i>Substance injection and dry needling for temporomandibular myofascial pain</i> . Int J Oral Maxillofac Surg. PMID 29801994.	NR	Myogenous TMD	DN vs anesthetic, botulinum toxin, other injections	Symptoms may improve; no technique or substance clearly superior.	Heterogeneous protocols; limited evidence.
2019	Callejas-Marcos et al. <i>Dry needling in neck pain compared with other physiotherapy</i> . PMID 31370946.	NR	Neck pain	Other PT	Short-term benefit; superiority over other PT inconsistent.	Heterogeneous evidence.
2020	Navarro-Santana et al. <i>Dry needling for trigger points associated with neck pain</i> . J Clin Med. PMID 33066556.	28	Neck pain	Sham/no treatment, other PT	Low-to-moderate evidence for short-term pain and disability reduction.	Heterogeneity/imprecision lowered certainty.

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2020	Navarro-Santana et al. <i>Trigger point dry needling for lateral epicondylalgia</i> . Clin Rehabil. PMID 32576044.	7 / 320	Lateral epicondylalgia	Sham, other intervention	Large short-term pain/disability/PPT effects; smaller grip-strength effect.	Generally low trial bias; low-to-moderate certainty.
2020	Rahou-El-Bachiri et al. <i>Trigger point dry needling for knee pain syndromes</i> . J Clin Med. PMID 32610659.	10	PFP, knee OA, postsurgical pain	Control, other therapy	Short-term improvement mainly in patellofemoral pain; no clear durable benefit.	Low-to-moderate certainty.
2020	Valencia-Chulián et al. <i>Dry needling after stroke</i> . Complement Ther Med. PMID 32951759.	16; 7 RCTs	Stroke	Control, rehabilitation	Most studies reported short-term improvements in tone, pain or ROM.	Few trials; methodological diversity.
2020	Núñez-Cortés et al. <i>Dry needling in whiplash/cervical conditions</i> . PMID 33066920.	NR	Whiplash/cervical disorders	PT, control	Possible short-term benefit; insufficient for strong recommendations.	Limited evidence base.
2020	Sarmiento-Hernández et al. <i>Invasive techniques in fibromyalgia</i> . PMID 33156331.	NR	Fibromyalgia	Acupuncture, DN, control	Needling approaches may improve pain and related outcomes.	Small heterogeneous trials.
2021	Sánchez-Infante et al. <i>Dry needling by physical therapists for musculoskeletal pain</i> . Phys Ther. PMID 33609356.	42 (meta-analysis)	Broad MSK pain	Sham/no treatment, other PT	Large pooled pain effects across several follow-up intervals.	Substantial heterogeneity downgraded certainty.
2021	Fernández-de-Las-Peñas et al. <i>Dry needling added to other interventions for neck pain trigger points</i> . PMID 33603940.	NR	Neck pain	Same multimodal care without DN	Small-to-moderate added benefit, predominantly short term.	Low-to-moderate evidence.
2021	Pourahmadi et al. <i>Dry needling for tension-type, cervicogenic or migraine headache</i> . Phys Ther. PMID 33609358.	11 RCTs / 14 reports*	TTH, CGH, migraine	Sham, PT, medication, acupuncture	Not clearly superior for short-term pain; clinically relevant disability/secondary-outcome effects in TTH/CGH.	ROBIS low risk - only low-risk review in Jenkins sample.
2021	Ughreja et al. <i>Dry needling techniques in knee osteoarthritis</i> . PMID 34391253.	9	Knee OA	Sham/control, other care	Contradictory MTRP-DN evidence; moderate short-term periosteal-stimulation evidence; IMES uncertain.	Higher-quality DN/IMES trials needed.
2021	Bynum et al. <i>Dry needling on spasticity and range of motion</i> . Am J Occup Ther. PMID 33399051.	NR	Neurological spasticity	Control, rehabilitation	Appeared to reduce spasticity and increase ROM.	Small heterogeneous evidence base.
2021	Fernández-de-Las-Peñas et al. <i>Dry needling in post-stroke patients</i> . Pain Med. PMID 33338222.	7 RCTs*	Stroke	Sham, control	Moderate evidence for lower-extremity spasticity reduction; pain/motor effects inconclusive.	Imprecision downgraded evidence.
2021	Llurda-Almuzara et al. <i>Dry needling for plantar heel pain/plantar fasciitis</i> . Pain Med. PMID 33760098.	6 RCTs	Plantar heel pain	Sham/control, other care	Positive short-term pain, function and PPT effects; evidence limited.	Small N/heterogeneity reduced certainty.
2021	Lew et al. <i>Dry needling versus trigger point manual therapy</i> . J Man Manip Ther. PMID 32962567.	6 RCTs*	Neck/upper-back MPS	Trigger-point manual therapy	Both improved pain/function; neither consistently superior.	Few heterogeneous studies.
2022	Jiménez-del-Barrio et al. <i>Dry needling in hip or knee osteoarthritis</i> . Life. PMID 36295010.	7*	Hip/knee OA	Sham/control, other PT	Short-term pain/function effects; medium/long-term evidence insufficient.	Low/very-low certainty for several outcomes.
2022	Fernández-de-Las-Peñas et al. <i>Dry needling versus trigger-point injection for neck pain</i> . Pain Med. PMID 34114639.	6*	Cervical MTrPs	Wet needling/injection	Injection gave greater short-term pain reduction; most other outcomes similar.	Low evidence for pain; very low for other outcomes.
2022	Vázquez-Justes et al. <i>Dry needling for headache</i> . PMID 35659858.	NR	Headache	Other treatments	DN may be considered alone or adjunctively.	Small heterogeneous studies.
2022	Valera-Calero et al. <i>Dry needling and acupuncture in fibromyalgia</i> . PMID 36011540.	NR	Fibromyalgia	Acupuncture, control	Associated with pain-related and psychological improvements.	Substantial heterogeneity; DN/acupuncture should not be conflated.
2022	Blanco-Díaz et al. <i>Dry needling in subacromial syndrome</i> . Biology.	8*	Subacromial pain syndrome	Exercise/manual therapy, control	Especially as an adjunct, DN appeared to improve pain/disability.	Small heterogeneous evidence base.
2023	Lara-Palomo et al. <i>Dry needling for chronic low back pain</i> . Altern Ther Health Med. PMID 36399082.	8 / 414	Chronic low-back pain	Other care	DN plus other therapy improved short-term pain; no convincing disability advantage.	Primary-study quality limitations.

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2023	Nuhmani et al. <i>Dry needling in tendinopathy</i> . J Bodyw Mov Ther. PMID 36775507.	7 RCTs*	Multiple tendinopathies	Exercise, PRP/autologous blood, other care	Comparable or beneficial for pain/function up to about 6 months.	Tendon, technique and comparator heterogeneity.
2023	Baumann et al. <i>Dry needling with electrical stimulation for shoulder pain</i> . PMID 37546088.	5 RCTs*	MSK shoulder pain	Conventional PT, DN without ES	Improvement occurred; superiority over conventional PT uncertain.	Small samples; considerable heterogeneity.
2023	Menéndez-Torre et al. <i>Deep dry needling versus manual therapy in myofascial TMD</i> . PMID 37924127.	NR	Myogenous TMD	Manual therapy	Both effective; relative ranking varied by outcome/time point.	Few/limited-quality trials.
2023	Dach et al. <i>Treating low-back myofascial pain with dry needling</i> . PMID 38157883.	NR	Acute/chronic low-back pain	Control, other care	Appeared effective; stronger long-term studies needed.	Higher-quality evidence needed.
2024	Ma et al. <i>Dry needling for lateral epicondylitis: updated review</i> . Arch Phys Med Rehabil. PMID 38484834.	17 / 979	Lateral epicondylitis	Control, other therapy	Improved short-term pain, function and grip strength.	Larger evidence base; heterogeneity remains.
2025	Khayamzadeh et al. <i>Dry needling in temporomandibular joint disorders</i> . Clin Exp Dent Res. DOI 10.1002/cre2.70214.	NR	TMD	Various	Overall symptomatic benefit reported; interpretation constrained by heterogeneous methods.	Provisional 2025 record; quality details NR in source table.
2025	Kuzdzal et al. <i>Dry needling in sports and sport recovery</i> . Sports Med. DOI 10.1007/s40279-025-02175-9.	24 / 580 athletes	Athletes, 13 sports	Sham/control, other recovery or treatment	Short-term symptom effects; broad evidence gaps for performance and recovery outcomes.	Evidence-gap map; heterogeneous applications.
2025	<i>Dry needling plus exercise versus exercise alone in tendinopathies</i> .	4 / 255	Lateral elbow, patellar, rotator-cuff tendinopathy	Exercise alone	Combination may improve selected pain/function outcomes; evidence base small.	Provisional record; only four RCTs.
2026	<i>Dry needling for recovery, neuromuscular function and injury outcomes in athletes</i> .	NR	Athletes / neck-related regions	Control, usual care	May modulate symptoms short term; performance, readiness and prevention remain uncertain.	Provisional 2026 record from source table.