

**Neuropathic pain:
update searches and screening
for
Universitätsklinikum Schleswig-Holstein/Campus Kiel**



Kleijnen Systematic Reviews Ltd

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1. PROJECT OBJECTIVES

A key aim of the research project “Making SDM a reality” is to inform patients as part of shared decision making (SDM).

Kleijnen Systematic Reviews (KSR) Ltd has prepared an evidence report with a synthesis of the evidence of treatment options for neuropathic pain.

2. METHODS

LITERATURE SEARCHES

Literature searches were conducted to identify systematic reviews and evidence-based guidelines about neuropathic pain to update the 2018 evidence report.

The search strategies were developed specifically for each database and the keywords adapted according to the configuration of each database. Searches were limited by date range for systematic reviews and guidelines to 2018-2021. Searches were not limited by language or publication status.

Systematic reviews and guidelines

The following systematic review and health technology assessment specific databases were searched:

- Cochrane Database of Systematic Reviews (CDSR) (Wiley): issue 9 of 12, September 2021
- KSR Evidence (Internet) (<https://ksrevidence.com/>): 2018-2021
- Epistemonikos (Internet) (<https://www.epistemonikos.org/>): 2018-2021
- International HTA Database (INAHTA) (<https://database.inahta.org/>): 2018-2021

The following guidelines resources were searched:

- Guidelines International Network (GIN) (Internet) (<https://www.g-i-n.net/home>): 2018-2021
- NICE Evidence (Internet) (www.evidence.nhs.uk/): 2018-2021
- NICE Guidance (Internet) (<https://www.nice.org.uk/guidance>): 2018-2021
- ECRI Guidelines Trust (Internet) (<https://guidelines.ecri.org/>): 2019-2021
- Trip Database (<https://www.tripdatabase.com/>): 2018-2021
- Canadian Agency for Drugs and Technologies in Health (CADTH) (www.cadth.ca): 2018-2021

Full details of all search strategies are presented in Appendix 1.

Handling of citations

References identified from the searches were downloaded into EndNote bibliographic management software for further assessment and handling.

Supplementary searches

The bibliographies of included studies and review articles were also checked for additional relevant articles.

Prioritisation

During formal screening of titles and abstracts, studies were subject to a prioritisation process whereby the recency e.g., to most up-to-date clinical practice guidelines (CPG), methodological quality e.g., Cochrane systematic review (CSR), quality of the analyses per outcome (e.g., ratio of RCTs to observational studies), the number of included RCTs, the breadth of the timepoints reported etc. were considered to further prioritise which studies would be used to inform analyses. Studies were categorised into the following three categories: '1' = German, American, European or similar CPG; '2' = CSR or similar quality SR; '3' = potentially lower/other quality SR.

3. RESULTS

The original KSR searches were conducted in March 2018; and of the 1,516 references screened, 17 studies were deemed eligible. In the current update, a total of 1,629 records were retrieved from the electronic literature searches (see Appendix 1). After the removal of duplicate records 1,029 titles and abstracts were screened by two reviewers. Fifty-eight records were found to be potentially eligible and were longlisted after a consensus. Of those, five were short-listed and included in the analyses (Table 1).¹⁻⁵ See also Table 2 for an overview of primary studies included in the identified SRs/CPGs.

UPDATE – Concluding Assessment by SHARE-TO-CARE Evidence Team (23/03/22)

On the basis of the update searches conducted by KSR Ltd in September 2021, we want to highlight the following aspects: According to the German CPG by Schlereth et al. (2019), Gabapentin, Pregabalin, TCA and duloxetine should be used as first-line treatments for neuropathic pain, Tramadol can be opted as third-line medication, whereas Carbamazepine is only recommended for patients suffering from trigeminal neuralgia. These recommendations can be considered as the prevailing evidence basis and they are in line with the current version of the decision aid. Further support for the prescription of Carbamazepine in the treatment of trigeminal neuralgia is given by two recent CPGs from Bendtsen et al. (2019) and the Royal College of Surgeons (2021). Cases of neuropathic pain caused by post-herpetic neuralgia should benefit from Gabapentin and Pregabalin; TCA such as Amitriptyline can be added if needed for enhanced pain reduction (Gross, 2020).

Conclusion regarding the evidence report: No evidence update required. The present evidence report (November, 2018) remains valid until further notice.

Table 1 Evidence sources

Study/year	Evidence type	Primary studies	Number of studies	Intervention(s)	Comparator(s)	Outcome(s)	Date searched	Conclusions
Schlereth 2019 ¹	CPG	OR,SR,RCT	54*	Multiple	Multiple	Multiple	February 2018	Please refer to pages 3-5 of that report.
Gross 2020 ²	CPG	SR,RCT	N/M	Multiple	Multiple	Multiple	N/M	Please refer to section 9.2.3 as well as Figure 2 (p. 37) of that report.
Bendtsen 2019 ³	CPG	SR,RCT	N/M	Multiple	Multiple	Multiple	N/M	“Recommendations on pharmacological and surgical management have been updated. There is a great need for future research on all aspects of trigeminal neuralgia, including pathophysiology and management” “Based on a moderate quality of evidence, a strong recommendation is given that carbamazepine is used for long-term treatment of TN.” “Based on low quality of evidence, a weak recommendation is given that gabapentin is used either as monotherapy or as add-on therapy for long-term treatment of TN.”

Study/year	Evidence type	Primary studies	Number of studies	Intervention(s)	Comparator(s)	Outcome(s)	Date searched	Conclusions
Narain 2018 ⁴	SR	HTA,SR,RCT	5	Gabapentin	Tricyclic antidepressants, serotonin norepinephrine reuptake inhibitors, carbamazepine, topiramate	Effectiveness, safety (pain management, symptom relief, quality of life, adverse events)	February 9, 2018	"While some studies reported little to no difference in pain, the limited data prevent strong conclusions to be drawn for the clinical efficacy of gabapentin"
Royal College of Surgeons ⁵ 2021	CPG	SR,RCT	N/M	Multiple	Multiple	Multiple	N/M	"The first-line medication to be prescribed for trigeminal neuralgia is the anticonvulsant medication carbamazepine, while oxcarbazepine is an acceptable alternative"
CPG = clinical practice guideline; HTA = health technology assessment; N/M = not mentioned; OR = overview of reviews; RCT = randomised controlled trial; SR = systematic review. * = number pertains to SRs only								

Table 2 Overview of primary studies included in the identified SRs/CPGs

Study/year	Primary study(ies)	Reference (first author & journal)
Schlereth 2019 ¹	OR, SR, RCT*	1. Wiffen PJ, Derry S, Bell RF, Rice AS, Tölle TR, Phillips T, Moore RA. Gabapentin for chronic neuropathic pain in adults. Cochrane Database Syst Rev.2017 Jun 9;6:CD007938 2. Waldfogel JM, Nesbit SA, Dy SM, Sharma R, Zhang A, Wilson LM, Bennett WL, Yeh HC, Chelladurai Y, Feldman D, Robinson KA. 2017. Pharmacotherapy for diabetic peripheral neuropathy pain and quality of life: A systematic review. Neurology. 88(20): 1958-1967. 3. Cooper TE, Chen J, Wiffen PJ, Derry S, Carr DB, Aldington D, Cole P, Moore RA: Morphine for chronic neuropathic pain in adults. Cochrane Database Syst Rev 2017, 5:CD011669 4. Gaskell H, Derry S, Stannard C, Moore RA. Oxycodone for neuropathic pain in adults. Cochrane Database Syst Rev. 2016;7:CD010692.

Study/year	Primary study(ies)	Reference (first author & journal)
		5. Aiyer R, Mehta N, Gungor S, Gulati A. A Systematic Review of NMDA Receptor Antagonists for Treatment of Neuropathic Pain in Clinical Practice. <i>Clin J Pain</i>. 2018;34(5):450-67. 6. Attal N, de Andrade DC, Adam F, Ranoux D, Teixeira MJ, Galhardoni R, et al. Safety and efficacy of repeated injections of botulinum toxin A in peripheral neuropathic pain (BOTNEP): a randomised, double-blind, placebo-controlled trial. <i>Lancet Neurol</i>. 2016;15(6):555-65. 7. Aviram J, Samuelly-Leichtag G. Efficacy of Cannabis-Based Medicines for Pain Management: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. <i>Pain Physician</i>. 2017;20(6):E755-e96. 8. Baron R, Allegri M, Correa-Illanes G, Hans G, Serpell M, Mick G, et al. The 5% Lidocaine-Medicated Plaster: Its Inclusion in International Treatment Guidelines for Treating Localized Neuropathic Pain, and Clinical Evidence Supporting its Use. <i>Pain Ther</i>. 2016;5(2):149-69. 9. Cakici N, Fakkal TM, van Neck JW, Verhagen AP, Coert JH. Systematic review of treatments for diabetic peripheral neuropathy. <i>Diabet Med</i>. 2016;33(11):1466-76. 10. Colloca L, Ludman T, Bouhassira D, Baron R, Dickenson AH, Yarnitsky D, et al. Neuropathic pain. <i>Nat Rev Dis Primers</i>. 2017;3:17002. 11. Deckert S, Kaiser U, Kopkow C, Trautmann F, Sabatowski R, Schmitt J. A systematic review of the outcomes reported in multimodal pain therapy for chronic pain. <i>Eur J Pain</i>. 2016;20(1):51-63. 12. Derry S, Rice ASC, Cole P, Tan T, Moore RA. Topical capsaicin (high concentration) for chronic neuropathic pain in adults. <i>Cochrane Database of Systematic Reviews</i>. 2017(1). 13. Derry S, Stannard C, Cole P, Wiffen PJ, Knaggs R, Aldington D, et al. Fentanyl for neuropathic pain in adults. <i>Cochrane Database Syst Rev</i>. 2016;10:Cd011605 14. Duehmke RM, Derry S, Wiffen PJ, Bell RF, Aldington D, Moore RA. Tramadol for neuropathic pain in adults. <i>Cochrane Database Syst Rev</i>. 2017;6:Cd003726. 15. Hauser W, Finn DP, Kalso E, Krceviski-Skvarc N, Kress HG, Morlion B, et al. European Pain Federation (EFIC) position paper on appropriate use of cannabis-based medicines and medical cannabis for chronic pain management. <i>Eur J Pain</i>. 2018. 16. Hauser W, Petzke F, Fitzcharles MA. Efficacy, tolerability and safety of cannabis-based medicines for chronic pain management - An overview of systematic reviews. <i>Eur J Pain</i>. 2017. 17. Lopez-de-Uralde-Villanueva I, Beltran-Alacreu H, Fernandez-Carnero J, La Touche R. Pain management using a multimodal physiotherapy program including a biobehavioral approach for chronic nonspecific neck pain: a randomized controlled trial. <i>Physiother Theory Pract</i>. 2018:1-18.

Study/year	Primary study(ies)	Reference (first author & journal)
		18. McNicol ED, Ferguson MC, Schumann R. Methadone for neuropathic pain in adults. <i>Cochrane Database Syst Rev.</i> 2017;5:Cd012499. 19. Meng H, Johnston B, Englesakis M, Moulin DE, Bhatia A. Selective Cannabinoids for Chronic Neuropathic Pain: A Systematic Review and Meta-analysis. <i>Anesth Analg.</i> 2017;125(5):1638-52. 20. Min K, Oh Y, Lee SH, Ryu JS. Symptom-Based Treatment of Neuropathic Pain in Spinal Cord-Injured Patients: A Randomized Crossover Clinical Trial. <i>Am J Phys Med Rehabil.</i> 2016;95(5):330-8. 21. Mittal SO, Safarpour D, Jabbari B. Botulinum Toxin Treatment of Neuropathic Pain. <i>Semin Neurol.</i> 2016;36(1):73-83. 22. Mucke M, Phillips T, Radbruch L, Petzke F, Hauser W. Cannabis-based medicines for chronic neuropathic pain in adults. <i>Cochrane Database Syst Rev.</i> 2018;3:Cd012182. 23. Park J, Park HJ. Botulinum Toxin for the Treatment of Neuropathic Pain. <i>Toxins (Basel).</i> 2017;9(9). 24. Petzke F, Enax-Krumova EK, Hauser W. [Efficacy, tolerability and safety of cannabinoids for chronic neuropathic pain: A systematic review of randomized controlled studies]. <i>Schmerz.</i> 2016;30(1):62-88. 25. Safarpour Y, Jabbari B. Botulinum toxin treatment of pain syndromes - an evidence based review. <i>Toxicon.</i> 2018. 26. Sawynok J, Zinger C. Topical amitriptyline and ketamine for postherpetic neuralgia and other forms of neuropathic pain. <i>Expert Opin Pharmacother.</i> 2016;17(4):601-9. 27. Shackleton T, Ram S, Black M, Ryder J, Clark GT, Enciso R. The efficacy of botulinum toxin for the treatment of trigeminal and postherpetic neuralgia: a systematic review with meta-analyses. <i>Oral Surg Oral Med Oral Pathol Oral Radiol.</i> 2016;122(1):61-71. 28. Stannard C, Gaskell H, Derry S, Aldington D, Cole P, Cooper TE, et al. Hydromorphone for neuropathic pain in adults. <i>Cochrane Database Syst Rev.</i> 2016(5):Cd011604. 29. Thomas AM, Atkinson TJ. Old Friends With New Faces: Are Sodium Channel Blockers the Future of Adjunct Pain Medication Management? <i>J Pain.</i> 2018;19(1):1-9. 30. van Nooten F, Treur M, Pantiri K, Stoker M, Charokopou M. Capsaicin 8% Patch Versus Oral Neuropathic Pain Medications for the Treatment of Painful Diabetic Peripheral Neuropathy: A Systematic Literature Review and Network Meta-analysis. <i>Clinical Therapeutics.</i> 2017;39(4):787-803. 31. Waldfogel JM, Nesbit SA, Dy SM, Sharma R, Zhang A, Wilson LM, et al. Pharmacotherapy for diabetic peripheral neuropathy pain and quality of life: A systematic review. <i>Neurology.</i> 2017;88(20):1958-67. 32. Wiffen PJ, Knaggs R, Derry S, Cole P, Phillips T, Moore RA. Paracetamol (acetaminophen) with or without codeine or dihydrocodeine for neuropathic pain in adults. <i>Cochrane Database Syst Rev.</i> 2016;12:Cd012227.

Study/year	Primary study(ies)	Reference (first author & journal)
		33. Zhou M, Chen N, He L, Yang M, Zhu C, Wu F. Oxcarbazepine for neuropathic pain. <i>Cochrane Database Syst Rev</i>. 2017;12:CD007963. 34. Moore A, Derry S, Wiffen P. Gabapentin for Chronic Neuropathic Pain. <i>JAMA</i>.2018;319(8):818-819.
Gross 2020 ²	CPG,SR,OS*	1. Robert-Koch-Institut. RKI-Ratgeber: Windpocken (Varizellen), Gürtelrose (Herpes zoster) 2018. Available from: https://www.rki.de/DE/Content/Infekt/EpidBull/Merkblaetter/Ratgeber_Varizellen.html. 2. Ständige Impfkommission. Empfehlungen der Ständigen Impfkommission (STIKO) am Robert Koch-Institut. <i>Epid Bull</i>. 2018;(34):335–382. doi: 10.17886/EpiBull-2018-042.5. 3. Tugal-Tutkun I, Cimino L, Akova YA. Review for Disease of the Year: Varicella Zoster Virus-Induced Anterior Uveitis. <i>Ocul Immunol Inflamm</i>. 2018;26(2):171–177. 4. Seo YG, Kim SH, Choi SS, Lee MK, Lee CH, Kim JE. Effectiveness of continuous epidural analgesia on acute herpes zoster and postherpetic neuralgia: A retrospective study. <i>Medicine (Baltimore)</i> 2018 Feb;97(5):e9837. 5. Wohlrab J, Staubach P, Augustin M, Eisert L, Hünnerbein A, Nast A, Reimann H, Strömer K, Mahler V. S2k-Leitlinie zum Gebrauch von Präparationen zur lokalen Anwendung auf der Haut (Topika) <i>J Dtsch Dermatol Ges</i>. 2018 Mar;16(3):376–392. 6. Kommission Leitlinien der Deutschen Gesellschaft für Neurologie, editor. S2k-Leitlinie Therapie der idiopathischen Fazialisparese (Bell's palsy). AWMF-Registernummer: 030/013. 2017. (Leitlinien für Diagnostik und Therapie in der Neurologie). 7. Kim HJ, Ahn HS, Lee JY, Choi SS, Cheong YS, Kwon K, Yoon SH, Leem JG. Effects of applying nerve blocks to prevent postherpetic neuralgia in patients with acute herpes zoster: a systematic review and meta-analysis. <i>Korean J Pain</i>. 2017 Jan;30(1):3–17. 8. Derry S, Rice AS, Cole P, Tan T, Moore RA. Topical capsaicin (high concentration) for chronic neuropathic pain in adults. <i>Cochrane Database Syst Rev</i>. 2017 Jan;1:CD007393 9. Wiffen PJ, Derry S, Bell RF, Rice AS, Tölle TR, Phillips T, Moore RA. Gabapentin for chronic neuropathic pain in adults. <i>Cochrane Database Syst Rev</i>. 2017 Jun;6:CD007938. 10. Wang SL, Wang H, Nie HY, Bu G, Shen XD, Wang H. The efficacy of pregabalin for acute pain control in herpetic neuralgia patients: A meta-analysis. <i>Medicine (Baltimore)</i> 2017 Dec;96(51):e9167. 11. Vora RV, Anjaneyan G, Kota RKS, Pilani AP, Diwan NG, Patel NN. Study of clinical profile of herpes zoster in human immunodeficiency virus positive and negative patients at a rural-based tertiary care center, Gujarat. <i>Indian J Sex Transm Dis AIDS</i>. 2017 Jan-Jun;38(1):65–68. 12. Schutzer-Weissmann J, Farquhar-Smith P. Post-herpetic neuralgia – a review of current management and future directions. <i>Expert Opin Pharmacother</i>. 2017 Nov;18(16):1739–1750.

Study/year	Primary study(ies)	Reference (first author & journal)
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Study/year	Primary study(ies)	Reference (first author & journal)
		9. Mendelson ZS, Velagala JR, Kohli G, Heir GM, Mammis A, Liu JK. Pain-free outcomes and durability of surgical intervention for trigeminal neuralgia: a comparison of gamma knife and microvascular decompression. <i>World Neurosurg</i> 2018; 112: e732–e746. 10. Zakrzewska JM, Wu J, Brathwaite TS. A systematic review of the management of trigeminal neuralgia in patients with multiple sclerosis. <i>World Neurosurg</i> 2018; 111: 291–306.
Narain 2018 ⁴	SR,RCT*	1. Wiffen PJ, Derry S, Bell RF, Rice AS, Tolle TR, Phillips T, et al. Gabapentin for chronic neuropathic pain in adults. <i>Cochrane Database Syst Rev</i>. 2017 Jun 9;6:CD007938. 2. Summary safety review - gabapentin - assessing the potential risk of serious breathing problems [Internet]. Ottawa: Health Canada; 2016 Sep 16. [cited 2018 Feb 20]. 3. Gabapentin for HIV-associated neuropathic pain: a review of the clinical effectiveness [Internet]. Ottawa: CADTH; 2016 Jan 22. 4. Cooper TE, Derry S, Wiffen PJ, Moore RA. Gabapentin for fibromyalgia pain in adults. <i>Cochrane Database Syst Rev</i>. 2017 Jan 3;1:CD012188. 5. Shanthanna H, Gilron I, Rajarathinam M, AlAmri R, Kamath S, Thabane L, et al. Benefits and safety of gabapentinoids in chronic low back pain: A systematic review and metaanalysis of randomized controlled trials. <i>PLoS Med</i> [Internet]. 2017 Aug 6. Yuan M, Zhou HY, Xiao ZL, Wang W, Li XL, Chen SJ, et al. Efficacy and safety of gabapentin vs. carbamazepine in the treatment of trigeminal neuralgia: a meta-analysis. <i>Pain Pract</i>. 2016 Feb 19;2016:1083-91 7. Nazarbaghi S, miri-Nikpour MR, Eghbal AF, Valizadeh R. Comparison of the effect of topiramate versus gabapentin on neuropathic pain in patients with polyneuropathy: a randomized clinical trial. <i>Electron Physician</i> [Internet]. 2017 Oct. 9(10):5617-22 8. Belfer I, Pollock NI, Martin JL, Lim KG, de la CC, Van LG, et al. Effect of gastroretentive gabapentin (Gralise) on postmastectomy pain syndrome: a proof-of-principle open-label study. <i>Pain rep</i> [Internet]. 2017 May;2(3):e596
Royal College of Surgeons of England ⁵	CPG,SR,RCT,OS	1. Bendtsen L, Zakrzewska JM, Heinskou TB, et al. Advances in diagnosis, classification, pathophysiology, and management of trigeminal neuralgia. <i>Lancet Neurol</i>. 2020;19:784-796. 2. Bendtsen L, Zakrzewska JM, Abbott J, et al. European Academy of Neurology guideline on trigeminal neuralgia. <i>Eur J Neurol</i>. 2019;26:831-849. 3. Moore D, Chong MS, Shetty A, Zakrzewska JM. A systematic review of rescue analgesic strategies in acute exacerbations of primary trigeminal neuralgia. <i>Br J Anaesth</i>. 2019;123:e385-e396. 4. Atkin PA, McMillan R. Redefining Medical Competencies for an Oral Medicine Specialty Training Curriculum Using a Modified Delphi Technique. <i>J Dent Educ</i>. 2019;83:1452-1456

Study/year	Primary study(ies)	Reference (first author & journal)
		5. Besi E, Zakrzewska JM. Trigeminal neuralgia and its variants. Management and diagnosis. Oral Surg. 2020; 3:404-414 6. Foo I, Macfarlane AJR, Srivastava D, et al. The use of intravenous lidocaine for postoperative pain and recovery: international consensus statement on efficacy and safety. Anaesthesia. 2020;76:238-250. 7. Schnell S, Marrodan M, Acosta JN, et al. Trigeminal Neuralgia Crisis - Intravenous Phenytoin as Acute Rescue Treatment. Headache. 2020;60:2247-2253 8. Heinskou TB, Maarbjerg S, Wolfram F, et al. Favourable prognosis of trigeminal neuralgia when enrolled in a multidisciplinary management program - a two-year prospective reallife study. J Headache Pain. 2019;20:23. 9. Durnford AJ, Gaastra B, Akarca D, et al. Internal neurolysis: 'nerve combing' for trigeminal neuralgia without neurovascular conflict - early UK outcomes. Br J Neurosurg. 2020;10:1-4. 10. Tuleasca C, Régis J, Sahgal A, De Salles A, Hayashi M, Ma L, Martínez-Alvarez R, Paddick JI, Ryu S, Slotman BJ, Levivier M. Stereotactic radiosurgery for trigeminal neuralgia. J Neurosurg. 2018;130:733-757. 11. Boling W, Song M, Shih W, Karlsson B. Gamma Knife Radiosurgery for Trigeminal Neuralgia: A Comparison of Dose Protocols. Brain Sci. 2019;9:134. 12. Daniel HC, Poole JJ, Klein H, et al.. Cognitive Behavioral Therapy for Patients with Trigeminal Neuralgia: A Feasibility Study. J Oral Facial Pain Headache. 2021;35:30-34. 13. Ghiai A, Tay-Yibah M, Hussain MM, et al. The role of a clinical nurse specialist in managing patients with trigeminal neuralgia. Br. J. Pain. 2019;14:180-187
* = only studies published after 2015 were extracted CPG = clinical practice guideline; HTA = health technology assessment; OR = overview of reviews; OS = observational study; RCT = randomised controlled trial; SR = systematic review.		

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APPENDIX 1: SEARCH STRATEGIES

Shared Decision Making: neuropathic pain update (KSR)

Table 3. Systematic reviews and guideline search results

Database	Dates	Results
CDSR	2018 - Issue 9, September 2021	128
KSR Evidence	2018-2021	402
Epistemonikos	2018-2021	509
INAHTA	2018-2021	9
NICE Evidence	01/01/2018 - 24/09/2021	206
NICE Guidance	2018-2021	6
GIN	2018-2021	15
ECRI	2018-2021	14
Trip	2018-2021	340
CADTH	2018-2021	0
Total		1629
Total after de-duplication		1029
Total after de-duplication v original results		993

Search strategies

Cochrane Database of Systematic Reviews (CDSR) (Wiley): Issue 9 of 12, September 2021
Searched: 24.9.21

<http://onlinelibrary.wiley.com/cochranelibrary/search/advanced/shared/searches/11779909705737981219>

- #1 MeSH descriptor: [Peripheral Nervous System Diseases] this term only 1007
- #2 MeSH descriptor: [Neuralgia] explode all trees 1776
- #3 MeSH descriptor: [Diabetic Neuropathies] explode all trees 2187
- #4 MeSH descriptor: [Polyneuropathies] explode all trees 543
- #5 MeSH descriptor: [Mononeuropathies] explode all trees 1172
- #6 MeSH descriptor: [Complex Regional Pain Syndromes] explode all trees 307
- #7 MeSH descriptor: [Somatosensory Disorders] explode all trees 1123
- #8 MeSH descriptor: [Pain, Postoperative] explode all trees 16307
- #9 (neuralg* or neurodynia* or dysesthesia):ti,ab,kw 3316
- #10 ((nerve* or neuropath* or neuro-path* or mononeuropath* or polyneuropath* or diabat* or peripheral or central or multifocal or mixed) near/3 (pain* or hurt or hurting or hurts or sore or soreness or tender* or discomfort* or ache* or aching or agony or nociception or nociperception or algiatry)):ti,ab,kw 8265
- #11 (pain* near/3 (post-treatment* or "post treatment*" or posttreatment* or surg* or post-op* or postop* or "post op*")):ti,ab,kw 41348
- #12 ((peripheral or central or multifocal or mixed) near/3 ("nerve disease*" or "nerve disorder*" or "nervous system disease*")):ti,ab,kw 459
- #13 ("PNS disease*" or "PNS disorder*"):ti,ab,kw 3
- #14 (CRPS* or "complex regional pain syndrome*"):ti,ab,kw 653

#15 ("posttrauma* dystroph*" or "post trauma* dystroph*" or "reflex* neurovascular dystroph*" or "posttrauma* osteoporo*" or "post trauma* osteoporo*"):ti,ab,kw 0

#16 (sympathetic near/2 (syndrom* or dystroph*)):ti,ab,kw 319

#17 ("algo dystroph*" or "algo neurodystroph*" or sudeck* near/2 atroph* or algodystroph* or algoneurodystroph*):ti,ab,kw 53

#18 (("shoulder hand" or "shoulder arm") near/2 (syndrom* or dystroph*)):ti,ab,kw 103

#19 (cervical near/2 "sympathetic dystroph*"):ti,ab,kw 0

#20 (causalgia or (pain* near/2 deafferentation)):ti,ab,kw 62

#21 ((phantom or fantom or amputat* or missing or lost or remov* or absent) near/3 (limb* or extremity* or leg* or arm* or foot or feet or hand* or organ* or breast* or sensation*)):ti,ab,kw 2564

#22 (phantom-limb* or PLP):ti,ab,kw 415

#23 (sensation* near/3 (diminished* or pinprick or "light touch")):ti,ab,kw 282

#24 ("position sense disorder*" or "proprioceptive disorder*"):ti,ab,kw 4

#25 "sensation disorder*":ti,ab,kw 2

#26 ((somatosensory or somatic or thermal) near/3 (disorder* or disease*)):ti,ab,kw 467

#27 #1-#26 with Cochrane Library publication date Between Jan 2018 and Dec 2021, in Cochrane Reviews, Cochrane Protocols 128

KSR Evidence (Internet): Database last updated 2021 Sep 24

www.ksrevidence.com

Searched: 24.9.21

1 (nerve* or neuropath* or neuro-path* or mononeuropath* or polyneuropath* or diabet* or peripheral or central or multifocal or mixed) near/3 (pain* or hurt or hurting or hurts or sore or soreness or tender* or discomfort* or ache* or aching or agony or nociception or nociperception or algia*) in Title Date published: 2018 - 2021 126 results

2 (nerve* or neuropath* or neuro-path* or mononeuropath* or polyneuropath* or diabet* or peripheral or central or multifocal or mixed) near/3 (pain* or hurt or hurting or hurts or sore or soreness or tender* or discomfort* or ache* or aching or agony or nociception or nociperception or algia*) in Bottom line 219 results

3 (peripheral or central or multifocal or mixed) near/3 ("nerve disease*" or "nerve disorder*" or "nervous system disease*") in All text 134 results

4 CRPS* or "complex regional pain syndrome*" in All text 159 results

5 "posttrauma* dystroph*" or "post trauma* dystroph*" or "reflex* neurovascular dystroph*" or "posttrauma* osteoporo*" or "post trauma* osteoporo*" in All text 1 result

6 (sympathetic near/2 (syndrom* or dystroph*)) in All text 29 results

7 "algo dystroph*" or "algo neurodystroph*" or sudeck* near/2 atroph* or algodystroph* or algoneurodystroph* in All text 4 results

8 ("shoulder hand" or "shoulder arm") near/2 (syndrom* or dystroph*) in All text 6 results

9 cervical near/2 "sympathetic dystroph*" in All text 0 results

10 causalgia or (pain* near/2 deafferentation) in All text 12 results

11 (phantom or fantom or amputat* or missing or lost or remov* or absent) near/3 (limb* or extremity* or leg* or arm* or foot or feet or hand* or organ* or breast* or sensation*) in Title 139 results

12 (phantom or fantom or amputat* or missing or lost or remov* or absent) near/3 (limb* or extremity* or leg* or arm* or foot or feet or hand* or organ* or breast* or sensation*) in Bottom line 38 results

13 phantom-limb* or PLP in All text 92 results

14 sensation* near/3 (diminished* or pinprick or "light touch") in All text 9 results

15 "position sense disorder*" or "proprioceptive disorder*" in All text 1 result

16 "sensation disorder*" in All text 27 results

17 (somatosensory or somatic or thermal) near/3 (disorder* or disease*) in All text 136 results

18 #1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 in All text Date published: 2018 - 2021 402 results

Search run Fri Sep 24 2021

Epistemonikos (Internet): up to 2021 Sep 13

<https://www.epistemonikos.org/en/>

Searched: 13.9.21

(title:(("neuropathic pain" OR neuralg* OR neurodynia* OR dysesthesia OR "nerve pain" OR "mononeuropathic pain" OR "polyneuropathic pain" OR "peripheral pain" OR "central pain" OR "multifocal pain" OR "mixed pain" OR "post treatment* pain" OR "posttreatment* pain" OR "peripheral nerve disease" OR "peripheral nerve disorder" OR "complex regional pain syndrome" OR causalgia OR "phantom limb" OR "phantom-limb" OR "sensation disorder" OR "somatosensory disorder" OR "somatosensory disease" OR "somatic disorder" OR "somatic disease" OR "hermal disorder" OR "thermal disease")) OR abstract:(("neuropathic pain" OR neuralg* OR neurodynia* OR dysesthesia OR "nerve pain" OR "mononeuropathic pain" OR "polyneuropathic pain" OR "peripheral pain" OR "central pain" OR "multifocal pain" OR "mixed pain" OR "post treatment* pain" OR "posttreatment* pain" OR "peripheral nerve disease" OR "peripheral nerve disorder" OR "complex regional pain syndrome" OR causalgia OR "phantom limb" OR "phantom-limb" OR "sensation disorder" OR "somatosensory disorder" OR "somatosensory disease" OR "somatic disorder" OR "somatic disease" OR "hermal disorder" OR "thermal disease"))) Publication type: Systematic Review; Publication year: Custom year range: From 2018 To 2021

509 records retrieved

International HTA Database (INAHTA): up to 24 September 2021

<https://database.inahta.org/>

Searched: 24.9.21

("neuropathic pain" OR neuralg* OR neurodynia* OR dysesthesia OR "nerve pain" OR "mononeuropathic pain" OR "polyneuropathic pain" OR "peripheral pain" OR "central pain" OR "multifocal pain" OR "mixed pain" OR "post treatment* pain" OR "posttreatment* pain" OR "peripheral nerve disease" OR "peripheral nerve disorder" OR "complex regional pain syndrome" OR causalgia OR "phantom limb" OR "phantom-limb" OR "sensation disorder" OR "somatosensory disorder" OR "somatosensory disease" OR "somatic disorder" OR "somatic disease" OR "hermal disorder" OR "thermal disease") OR ("Pain, Postoperative"[mh]) OR ("Somatosensory Disorders"[mh]) OR ("Complex Regional Pain

Syndromes"[mh]) OR ("Mononeuropathies"[mh]) OR ("Polyneuropathies"[mh]) OR ("Neuralgia"[mh]) OR ("Peripheral Nervous System Diseases"[mh])
 YEAR 2018 TO 2021
9 records retrieved

NICE Evidence Search: limited to guidance and SRs only (Internet): 2021/09/24

<https://www.evidence.nhs.uk/>

Searched 24.9.21

Search terms	Results (Guidance; Systematic Reviews): 01/01/2018-24/09/2021
"neuropathic pain"	190
"neuropathy pain"	4
"peripheral nervous system"	33
neuralgia	126
Total retrieved	353
Total (without duplicates)	206

National Institute for Health and Care Excellence (NICE): Guidelines

Searched 24.9.21

<https://www.nice.org.uk/>

**NICE Guidance; Conditions and diseases; Chronic and neuropathic pain
 2018-2021**

Guidance 3
 Quality Standards 0
 NICE Pathways 2
 NICE Advice 1

Total 6

International Guideline Library (GIN) (Internet): up to 24 Sep 2021

Searched 24.9.21

<https://g-i-n.net/international-guidelines-library/>

Search terms	Results (Published guidelines only); 2018-2021
pain	24
neuralgia	23
neuropathy	4
neuropathies	4
polyneuropathy	0
polyneuropathies	0

mononeuropathy	0
mononeuropathies	0
"peripheral nervous system"	0
Total retrieved	55
Total (without duplicates)	51
Total (removal of irrelevant guidelines)	15

ECRI Institute Guidelines Trust (Internet): up to 24 September 2021

<https://guidelines.ecri.org/>

Searched: 24.9.21

"neuropathic pain" OR neuralgia neuropathy OR neuropathies OR polyneuropathy OR polyneuropathies OR mononeuropathy OR mononeuropathies OR "peripheral nerve"

neurodynia* OR dysesthesia OR "nerve pain" OR "mononeuropathic pain" OR "polyneuropathic pain" OR "peripheral pain" OR "central pain" OR "multifocal pain" OR "mixed pain" OR "post treatment* pain" OR "posttreatment* pain" OR "peripheral nerve disease" OR "peripheral nerve disorder"

"complex regional pain syndrome" OR causalgia OR "phantom limb" OR "sensation disorder" OR "somatosensory disorder" OR "somatosensory disease" OR "somatic disorder" OR "somatic disease" OR "thermal disorder" OR "thermal disease"

2018-2021

14 records retrieved

Trip Database: up to 24 September 2021

<https://www.tripdatabase.com/>

Searched: 24.9.21

"neuropathic pain" OR neuralg* OR neurodynia* OR dysesthesia OR "nerve pain" OR "mononeuropathic pain" OR "polyneuropathic pain" OR "peripheral pain" OR "central pain" OR "multifocal pain" OR "mixed pain" OR "post treatment* pain" OR "posttreatment* pain" OR "peripheral nerve disease" OR "peripheral nerve disorder" OR "complex regional pain syndrome" OR causalgia OR "phantom limb" OR "phantom-limb" OR "sensation disorder" OR "somatosensory disorder" OR "somatosensory disease" OR "somatic disorder" OR "somatic disease" OR "hermal disorder" OR "thermal disease"; in the Document; 2018, 2021

Guidelines: 165 records retrieved

"neuropathic pain" OR neuralg* OR neurodynia* OR dysesthesia OR "nerve pain" OR "mononeuropathic pain" OR "polyneuropathic pain" OR "peripheral pain" OR "central pain" OR "multifocal pain" OR "mixed pain" OR "post treatment* pain" OR "posttreatment* pain" OR "peripheral nerve disease" OR "peripheral nerve disorder" OR "complex regional pain syndrome" OR causalgia OR "phantom limb" OR "phantom-limb" OR "sensation disorder"

OR "somatosensory disorder" OR "somatosensory disease" OR "somatic disorder" OR
"somatic disease" OR "hermal disorder" OR "thermal disease"; in the Title; 2018, 2021
Systematic Reviews: 175 records retrieved

Total: 340 records retrieved

Canadian Agency for Drugs and Technologies in Health (CADTH): up to 24 September 2021
<https://www.cadth.ca/>
Searched: 24.9.21

neuralgia
neuropathy
neuropathies
polyneuropathy
polyneuropathies
mononeuropathy
mononeuropathies
"peripheral nervous"

Advanced Search; Project Line; Health Technology Assessment; 2018-2021
0 records retrieved