

Neuropathic Pain: Oral Therapy Quick Facts

Neuropathic pain is caused by nerve pressure, damage, or injury. It is commonly described as sharp, shooting, tingling, stabbing, numbness, electrical like sensations, or burning and may be disproportionate to physical findings. Pain may be unresponsive or only partially responsive to opioids.

Antidepressants¹

Ranking Based on Supportive Data	1 st	2 nd	Last	Notes
Target Pain	TCAs	SNRIs	SSRIs	Tricyclic antidepressants (TCAs) ¹ <ul style="list-style-type: none"> Drugs: amitriptyline (Elavil®), nortriptyline (Pamelor®), desipramine (Norpramin®) Most studies used amitriptyline Can be combined with gabapentin or pregabalin Possible option for insomnia-related to pain Side effects: sedation, cardiac conduction abnormalities, anticholinergic
Diabetic neuropathy	✓	✓	✓	Serotonin norepinephrine reuptake inhibitors (SNRIs) ¹ <ul style="list-style-type: none"> Drugs: venlafaxine (Effexor®), duloxetine (Cymbalta®) Most data with Duloxetine Possibly less effective than TCAs Can be used in both depressed and non-depressed patients Side effects: GI, dry mouth, sweating, anxiety, increased BP, insomnia, dizziness Selective serotonin reuptake inhibitors (SSRIs) ¹ <ul style="list-style-type: none"> Drugs: citalopram (Celexa®), escitalopram (Lexapro®), paroxetine (Paxil®) Poor analgesic effect; not preferred
Post-herpetic neuralgia	✓			
Peripheral nerve injury	✓			
Radiculopathy	✓			
Post-stroke pain	✓			
Spinal cord injury	✓			
Multiple sclerosis-related neuropathic pain	✓	✓		

Anticonvulsants¹

Ranking Based on Supportive Data	1 st		2 nd	Last	Notes
Target Pain	Gabapentin	Pregabalin	Valproic acid/ Divalproex	Carbamazepine	Gabapentin (Neurontin®) & Pregabalin (Lyrica®) ¹ <ul style="list-style-type: none"> Side effects: sedation, dizziness, weight gain, edema, blurred vision Some risk of euphoria, abuse, and dependence with risk being greater with pregabalin than gabapentin Valproic acid (Depakene®), Divalproex (Depakote®), Carbamazepine (Tegretol®) <ul style="list-style-type: none"> Anecdotally, some patients achieve good results with anti-convulsants other than gabapentin & pregabalin. Studies have mixed or negative results and/or poor quality.¹
Diabetic neuropathy	✓	✓	✓	✓	
Postherpetic neuralgia	✓	✓		✓	
Peripheral nerve injury	✓	✓			
Post-stroke pain		✓			
Spinal cord injury		✓			

Miscellaneous Therapies

- Tramadol (Ultram®)
 - Off-label indications: diabetic neuropathy and postherpetic neuralgia²
 - Strength of evidence is low plus safety and tolerability concerns so considered 2nd or 3rd line¹
 - Possible side effects (not all inclusive)
 - Dizziness, vertigo, drowsiness, nausea, constipation²
 - May cause confusion in the elderly¹
- Methadone
 - Showed efficacy in managing neuropathic pain in cancer and non-cancer pain in two small randomized studies⁵
 - Possible side effects (not all inclusive)
 - Sedation, respiratory depression, confusion, dizziness, nausea, constipation²
- Tapentadol ER (Nucynta® ER)
 - Extended release tapentadol is FDA approved for diabetic neuropathy¹
 - Study data is conflicting
 - Possible side effects (not all inclusive)
 - Drowsiness, dizziness, constipation, nausea, vomiting, headache²

Miscellaneous Neuropathies

- Chemo-related peripheral neuropathy³
 - The only medication with appropriate evidence to support use for this type of neuropathy is Duloxetine (Cymbalta®)
- Trigeminal neuralgia⁴
 - First line therapies: carbamazepine (Tegretol®) and oxcarbazepine (Trileptal®)

References

1. Clinical Resource, Pharmacotherapy of Neuropathic Pain. *Pharmacist's Letter/Prescriber's Letter*. September 2017
2. Clinical Pharmacology [database online]. Tampa, FL: Elsevier/Gold Standard, Inc.; 2021. Access 2021 March.
3. Loprinzi, C.L. et al. Prevention and Management of Chemotherapy Induced Peripheral Neuropathy in Survivors of Adult Cancers: ASCO Guideline Update. *J Clin Oncol* 38:3325-3348. July 2020.
4. Clinical Resource, AAN Summary of Evidence-based Guideline for Clinicians: Trigeminal Neuralgia. Oct 2008. Reaffirmed May 2021. [Article link](#)
5. Weissman D. PCNOW Fast Facts and Concepts #171: Methadone for Neuropathic Pain. Revised July 2015. [Article link](#)