# Pharmacological management of neuropathic pain

**Neuropathic pain is very challenging to manage due to heterogeneity of its aetiologies, symptoms, and underlying mechanisms.**
**Conditions which are associated with neuropathic pain include painful diabetic neuropathy, stroke, spinal cord injury and multiple sclerosis.**

Taking an accurate history is important, including clear descriptors of the pain or change in sensation reported. Typical descriptors include shooting, stabbing, electric shock, burning, tingling, tightness, numbness, prickling, itching and pins and needles.

People may also report allodynia (pain caused by non-painful stimulus), hyperalgesia (increased response to painful stimulus), anaesthesia dolorosa (pain in numb area) and sensory gain or loss.

All **new medicines** should be assessed for suitability in the person, considering all other diagnoses and any medicines prescribed for any condition.

**Neuropathic pain can have significant impact on a person's ability to function and take an active part in daily activities, relationships, employment etc.**

**The medicines suggested to trial for neuropathic pain can also impact functioning due to e.g. sedation, cognitive impairment, weight gain. This should be considered before initiating a medication trial.**

**Self-care, maintaining activity and improving function are key outcomes for living with neuropathic pain. Support to self-manage should be offered at every opportunity, regardless of how long the symptoms have been present.**

**Regular clinical review should monitor effectiveness of the medicines in terms of pain control, impact on daily activity, sleep, wellbeing, adverse effects, and if treatment should continue.**

**Medicines that may be trialled for neuropathic pain (not trigeminal neuralgia)**

| | |
|---|---|
| **Antidepressants** | **Amitriptyline 10 mg increasing to 50 mg between 6–8 pm** initially but effectiveness for pain is dose related so may need **50–125 mg** (dosed between 6–8pm)<br>• Amitriptyline is particularly useful if sleep is affected.<br>• Dose should be increased by 10 mg weekly, fortnightly or longer as tolerated by the patient and dependent on effect.<br>• Taking the dose in the evening (6–8pm) helps to reduce the 'hangover' effect the following morning.<br><br>**Duloxetine 30 mg increasing to a maximum of 120 mg per day**<br>• Initiate at 30 mg once daily for 1–2 weeks then increase to 60 mg daily (maximum 120 mg in divided doses) |

If the patient is already prescribed an antidepressant, consider optimising the dose, within recommended limits, before changing to an alternative.

**Do not co-prescribe antidepressants of any class unless recommended by a mental health professional.**

**Prescribers are reminded of MHRA advice relating to the use of antidepressants in patients at risk of harming themselves, including those aged less than 25 years.**

| | |
|---|---|
| **Gabapentinoids** | **Gabapentin 900–1200 mg daily in three divided doses**<br>• Start with 300 mg daily in up to 3 divided doses for one week, then 600 mg daily in divided doses for one week then 900 mg daily in divided doses thereafter. Further increase to a maximum of 600 mg three times a day may be indicated depending on response to lower doses.<br>• Doses greater than 600 mg three times a day should be prescribed only when some benefit has been demonstrated at lower doses.<br>**Or,** where anxiety is a significant presenting symptom despite optimised Step 1 treatment with an antidepressant, pregabalin may be considered as an option.<br>**Pregabalin 100–400 mg daily in two divided doses**<br>• Doses greater than 200 mg twice a day should be prescribed only where some benefit has been demonstrated at lower doses.<br>Gabapentin and pregabalin need to be prescribed with appropriate dose reductions for patients with impaired renal function and in the elderly. Check the BNF for further advice on gabapentin and pregabalin. |

## Appendix 2. Pharmacological management of neuropathic pain

**Gabapentinoids are associated with misuse, especially pregabalin. Caution is needed when prescribing for people with a history of substance misuse.**
**If indicated, consider a trial using limited quantities of medication.**

Gabapentinoids have limited evidence to support their use for sciatica.

| | |
|---|---|
| **Carbamazepine for trigeminal neuralgia** | **Carbamazepine 100 mg–800 mg daily in divided doses.**<br>• Start with 50–100 mg twice daily for one week and increase weekly according to response and adverse effects.<br>• Doses greater than 200 mg four times a day should be prescribed only on recommendation from specialist prescribers and where benefit outweighs adverse effects.<br>• Check BNF for further advice including dose adjustment. |

**Topical treatments:**

| | |
|---|---|
| **Capsaicin cream 0.025% or 0.075%** | **To be applied four times daily regularly**<br>Much less effective if used intermittently.<br>If no response after first tube, then **stop.**<br>If substantial pain relief, arrange regular review to establish continued efficacy.<br><br>Consider when no response to oral therapy or when side effects of oral therapy limit use for:<br>• post-herpetic neuralgia<br>• discrete surface neuropathic pain of clear origin. |
| **Capsaicin 8% patch** | Capsaicin 8% patch is restricted to specialist use in pain management for the treatment of post-herpetic neuralgia (PHN) and peripheral neuropathic pain (PNP) in non-diabetic adults who have not achieved adequate pain relief from, or who have not tolerated, conventional first- and second-line treatments. |
| **Post-herpetic neuralgia only Lidocaine plaster 5%** | **1–2 patches to be applied for 12 out of 24 hours**<br>Consider when no response to oral therapy or when there are side effects of oral therapy.<br>**Stop if no clear benefit within 28 days.**<br>Patches can be cut to size for smaller areas of pain to allow multiple use per patch. |

| | |
|---|---|
| **Flare-up management** | **Tramadol starting dose of 50 mg up to four times a day increased to a maximum of 100 mg four times a day for maximum 2 weeks**<br>• Caution in elderly patients (poor tolerance of side effects).<br>• Caution with alcohol use.<br>• Avoid in epilepsy and head injury (lowers seizure threshold).<br>• Avoid in pregnancy.<br>• Can cause psychiatric side-effects.<br><br>Where tramadol is contraindicated consider the following options (despite lack of supporting evidence):<br>**Codeine starting dose 30 mg up to four times a day increased to maximum 60 mg four times a day for a maximum of 2 weeks**<br><br>**Or**<br>**Dihydrocodeine 30 mg up to four times a day, increased to 60 mg three times a day for a maximum of 2 weeks**<br><br>Use caution with both codeine and dihydrocodeine in:<br>• obstructive airways disease<br>• respiratory depression<br>• acute alcohol intake. |

**Tramadol should be very cautiously co-prescribed with antidepressants and/or gabapentinoids due to increased risks of serotonin syndrome, lowered seizure threshold and misuse.**

**If an opioid is genuinely indicated, consider codeine or dihydrocodeine for a maximum of 2 weeks as safer alternatives.**