

## PHARMACY

### Medications to Treat Neuropathic Pain



#### What is Neuropathic Pain?

- Neuropathic pain – commonly known as nerve pain – occurs as a result of primary injury to the nerves or parts of the nervous system.
- Neuropathic pain can manifest as a tingling sensation (pins and needles), stabbing pain, sharp pain or a burning sensation.
- The main symptoms of neuropathic pain include pain due to a stimulus that does not usually cause pain (allodynia) and increased pain from a stimulus that usually cause pain (hyperalgesia).
- Neuropathic pain can be related to a number of medical conditions such as diabetes, shingles, carpal tunnel syndrome, cancer and its treatments, or spinal injury.

#### What are the Medications Used to Treat Neuropathic Pain?

Medication Class	Medication Name
Tricyclic Antidepressants (TCAs)	<ul style="list-style-type: none"> <li>• Amitriptyline</li> <li>• Nortriptyline</li> </ul>
Serotonin/Norepinephrine Reuptake Inhibitor (SNRI)	<ul style="list-style-type: none"> <li>• Duloxetine</li> <li>• Venlafaxine</li> </ul>
Anticonvulsants	<ul style="list-style-type: none"> <li>• Carbamazepine* (Tegretol®)</li> <li>• Gabapentin (Neurontin®)</li> <li>• Pregabalin (Lyrica®)</li> <li>• Sodium Valproate (Epilim®)</li> <li>• Lamotrigine (Lamictal®)</li> </ul>
Opioid analgesic	<ul style="list-style-type: none"> <li>• Tramadol</li> </ul>
Topical agents	<ul style="list-style-type: none"> <li>• Lidocaine Patch</li> <li>• Capsaicin Cream</li> </ul>

\* Prior to starting carbamazepine treatment, genetic testing for HLA-B\*1502 is mandatory. Patients who test positive for this gene are at an increased risk of developing a severe rash while on this medication. Your doctor will arrange this blood test for you.

## How Do the Medications Work?

- All these medications can be used singly or in combination to control neuropathic pain effectively.
- TCA, SNRI and anticonvulsants are thought to work by reducing pain signals from damaged nerves to your brain.
- However, they do have other uses, which may not be relevant to your condition. For example, tricyclic antidepressants (TCAs) are used to improve patient's mood and anticonvulsants are used to treat epilepsy.
- Drugs used for neuropathic pain, with the exception of tramadol, lidocaine patch and capsaicin cream, are slow-acting. Control of neuropathic pain is therefore only expected after taking these drugs continuously for a few weeks.

## How are the Medications Administered / Taken?

- Take your medications as prescribed by your doctor.
- Take your doses at regular times.
- If you miss a dose, take it as soon as you remember. If it is almost time for your next dose, take only the usual dose. Never take a double dosage to make up for the missed dose.

## Can the Medications Be Administered / Taken with Other Medications?

- It is important that you inform the doctor, pharmacist or nurse about other medications – including over-the-counter medications, supplements and traditional/herbal remedies – that you are currently taking, as they may affect the way you benefit from your neuropathic pain medications.

## What are the Important Side Effects?

- Medications prescribed by your doctor should be beneficial for your condition, although they may also result in side effects.
- It is important that you recognise the side effects of your medication(s) and know how to manage them.

Side Effect	Medication Class	Management
Blurred vision	Amitriptyline Nortriptyline Tramadol Pregabalin Gabapentin Sodium Valproate Carbamazepine	<ul style="list-style-type: none"> <li>• This is especially significant in elderly patients.</li> <li>• Consult your doctor if side effect is persistent.</li> </ul>
Urinary retention	Amitriptyline Nortriptyline Tramadol	<ul style="list-style-type: none"> <li>• Consult your doctor if side effect is persistent.</li> </ul>
Dry mouth, constipation	Amitriptyline Nortriptyline Gabapentin Tramadol Pregabalin Duloxetine	<ul style="list-style-type: none"> <li>• Sip water regularly.</li> <li>• Increase daily fibre intake.</li> <li>• Consult your doctor if side effects are persistent.</li> </ul>
Fever, sore throat, rash, mouth ulcers, bruising/bleeding or redness of eyes, skin peeling/blistering (rare)	Carbamazepine Sodium Valproate Lamotrigine Pregabalin Gabapentin	<ul style="list-style-type: none"> <li>• Please inform your doctor immediately.</li> <li>• These symptoms may indicate low white blood cell count or platelets, or a severe allergic reaction.</li> </ul>
Water retention	Pregabalin Gabapentin Amitriptyline Nortriptyline	<ul style="list-style-type: none"> <li>• Inform your doctor if side effect persists.</li> </ul>
Increased appetite	Sodium Valproate	<ul style="list-style-type: none"> <li>• You may need to control your diet if you experience weight gain.</li> </ul>

Dizziness, drowsiness or sedation	Amitriptyline Nortriptyline Tramadol Sodium Valproate Carbamazepine Lamotrigine Gabapentin Pregabalin Duloxetine	<ul style="list-style-type: none"> <li>• These side effects are frequently experienced by patients, but may decrease in severity as your body gets used to the medication.</li> <li>• With gradual increase of dose to the desired level, these side effects can be minimised as well.</li> <li>• Avoid operating machinery after taking these medications.</li> </ul>
Nausea and vomiting	Tramadol Duloxetine	<ul style="list-style-type: none"> <li>• These effects are common when you first start taking the medication, but they may decrease in severity as your body gets used to it.</li> <li>• Please inform your doctor if side effects are unbearable.</li> </ul>
Liver or pancreas irritation (Yellowing of skin and eye whites, dark brown urine, severe abdominal pain and nausea/vomiting)	Gabapentin Sodium Valproate Lamotrigine Amitriptyline Nortriptyline Carbamazepine	<ul style="list-style-type: none"> <li>• Inform your doctor immediately.</li> </ul>

If you develop rashes, facial swelling or shortness of breath after taking the medication, you could be allergic to the medication. Please seek medical attention immediately.

### Are There Any Special Precautions That I Need to Take?

- It is important to inform your doctor if you intend to conceive or breastfeed while taking these medications, as they may cause harm to your unborn child or baby.
- You should also consult your doctor or pharmacist before taking any other medication (either prescription or over-the-counter), nutritional supplements or herbal remedies. Some of these substances can interact with your medicine.

### What Else Can I Do to Help My Condition?

The following therapies may help. You can further discuss these therapies with your doctor.

- Psychological techniques
- Physiotherapy
- Transcutaneous Electrical Nerve Stimulation (TENS)
- Epidural steroid injection, peripheral nerve injections, pulsed radiofrequency techniques and radiofrequency ablation, spinal cord stimulator
- Acupuncture

### How Do I Store These Medications?

- You should keep your medicine tightly stored in its original container.
- Store your medication in a cool, dry place away from heat, moisture and direct sunlight.

If you have any problem with your treatment, please contact your doctor, pharmacist or nurse clinician.

Please keep all medications out of reach of children.

