

# Peripheral Neuropathy

## What is peripheral neuropathy?

Peripheral neuropathy develops when nerves in the body's extremities – such as the hands, feet and arms – are damaged. The symptoms depend on which nerves are affected. Like static on a telephone line, peripheral neuropathy distorts and sometimes interrupts messages between the brain and spinal cord and the rest of the body.

The main types of peripheral neuropathy include:

- sensory neuropathy – damage to the nerves that carry messages of touch, temperature, pain and other sensations to the brain
- motor neuropathy – damage to the nerves that control movement
- autonomic neuropathy – damage to the nerves that control involuntary bodily processes, such as digestion, bladder function and control of blood pressure.

The main symptoms of peripheral neuropathy can include:

- numbness and tingling in the feet or hands
- burning, stabbing or shooting pain in affected areas
- loss of balance and co-ordination
- muscle weakness, especially in the feet.

These symptoms are usually constant, but may come and go.

## What causes peripheral neuropathy?

In the UK, diabetes (both type 1 and type 2) is the most common cause of peripheral neuropathy. It is estimated that between 45 and 60 per cent of patients with diabetes will have peripheral neuropathy. Over time, the high blood sugar levels associated with diabetes can damage the nerves. This type of nerve damage is known as diabetic polyneuropathy.

Other causes include trauma, shingles and excessive use of alcohol. There are entrapment single nerve neuropathies such as carpal tunnel syndrome. Sometimes peripheral neuropathies are a side effect of certain medications, like hypertension medication. The cause of some neuropathies is unknown. The medical term for this is "Idiopathic".

## How common is it?

In the UK, it is estimated that almost 1 in 10 people aged 55 or over are affected by some degree of peripheral neuropathy.

## How is it diagnosed?

Conditions such as diabetes and vitamin D deficiency are looked for as a likely cause. Patients are investigated for diabetes by the sampling of glucose levels in the blood and urine.

An underactive thyroid can give symptoms of peripheral neuropathy. Thyroxine levels are measured with blood tests. Nerve conduction studies are sometimes carried out to measure the functioning of the peripheral nerves.

## How is it treated?

If the cause of peripheral neuropathy is known, such as in diabetes, the neuropathy symptoms may improve by treating the underlying condition.

When the cause is unknown there is no specific treatment. The treatment is mainly directed towards symptom management. Where patients are troubled by pain, neuropathic pain medications are offered.

If you have other symptoms associated with peripheral neuropathy, these may need to be treated individually. For example, treatment for muscle weakness may involve physiotherapy and the use of walking aids.

## Is it serious?

How serious the condition is depends upon the underlying cause.

## Will it get worse?

The prognosis depends upon the cause of the symptoms. Where the cause of the symptoms is unknown it is very difficult to make a prognosis. Some people may have periods of relief followed by relapse. Others may reach a plateau stage where symptoms stay the same for many months or years. Where the cause for the condition is unknown, there is no cure.

## Can peripheral neuropathy be prevented?

Everyone can reduce their risk of peripheral neuropathy by having a sensible alcohol intake within medical guidelines. A healthy balanced diet is also important to prevent dietary deficiencies.

Diabetes is the most common cause of persistent (chronic) peripheral neuropathy. Diabetes is more common in people who are overweight or obese. Therefore weight control may help to reduce your risk of developing diabetes. If you do develop diabetes or another medical problem that can cause peripheral neuropathy, good control of the condition may help to prevent neuropathy from developing.

## Further information

You can find further information on the following websites

<https://patient.info/health/peripheral-neuropathy-leaflet>

<https://www.nhs.uk/conditions/peripheral-neuropathy/>