ENFD Diagnostic Testing Post-Diagnosis Treatment Recommendations from Select Academic Institutions

https://my.clevelandclinic.org/health/diseases/14737-neuropathy/management-and-treatment

Treatment begins by identifying and treating any underlying medical problem, such as diabetes or infections. Some cases of neuropathy, those that are hormonal or nutrition-related, for example, can be easily treated and sometimes cured. In most cases, however, neuropathy cannot be cured. Because neuropathy can have an impact on quality of life, treatment is aimed at controlling and managing symptoms. Treatment options include the following:

- Medicines can be used to control pain.
- Physical therapy uses a combination of focused exercise, massage and other treatments to help you increase your strength, balance and range of motion.
- Occupational therapy can help you cope with the pain and loss of function and teach you skills to compensate for that loss.
- Surgery is available for patients with compression-related neuropathy, such as carpal tunnel syndrome.
- Mechanical aids, such as braces and specially designed shoes, can help reduce pain and allow for greater mobility.
- Proper nutrition involves eating a healthier diet and making sure to get the right balance of vitamins and other nutrients.
- Adopting healthy living habits, including exercising to improve muscle strength, quitting smoking, maintaining a healthy weight, and limiting alcohol intake.

https://www.hopkinsmedicine.org/health/conditions-and-diseases/peripheral-neuropathy#treatment

Usually a peripheral neuropathy cannot be cured, but you can do a lot of things to prevent it from getting worse. If an underlying condition like diabetes is at fault, your healthcare provider will treat that first and then treat the pain and other symptoms of neuropathy.

In some cases, over-the-counter pain relievers can help. Other times, prescription medicines are needed. Some of these medicines include mexiletine, a medicine developed to correct irregular heart rhythms; antiseizure drugs, such as gabapentin, phenytoin, and carbamazepine; and some classes of antidepressants, including tricyclics such as amitriptyline.

Lidocaine injections and patches may help with pain in other instances. And in extreme cases, surgery can be used to destroy nerves or repair injuries that are causing neuropathic pain and symptoms.

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https://www.mayoclinic.org/diseases-conditions/peripheral-neuropathy/diagnosis-treatment/drc-2035 2067

Treatment goals are to manage the condition causing your neuropathy and to relieve symptoms. If your lab tests indicate no underlying condition, your doctor might recommend watchful waiting to see if your neuropathy improves.

Medications

Besides medications used to treat conditions associated with peripheral neuropathy, medications used to relieve peripheral neuropathy signs and symptoms include:

- *Pain relievers*. Over-the-counter pain medications, such as nonsteroidal anti-inflammatory drugs, can relieve mild symptoms. For more-severe symptoms, your doctor might prescribe painkillers.
- Medications containing opioids, such as tramadol (Conzip, Ultram) or oxycodone (Oxycontin, Roxicodone, others), can lead to dependence and addiction, so these drugs generally are prescribed only when other treatments fail.
- Anti-seizure medications. Medications such as gabapentin (Gralise, Neurontin) and pregabalin (Lyrica), developed to treat epilepsy, may relieve nerve pain. Side effects can include drowsiness and dizziness.
- Topical treatments. Capsaicin cream, which contains a substance found in hot peppers, can cause modest improvements in peripheral neuropathy symptoms. You might have skin burning and irritation where you apply the cream, but this usually lessens over time. Some people, however, can't tolerate it.
- *Lidocaine patches* are another treatment you apply to your skin that might offer pain relief. Side effects can include drowsiness, dizziness and numbness at the site of the patch.
- Antidepressants. Certain tricyclic antidepressants, such as amitriptyline, doxepin and nortriptyline (Pamelor), have been found to help relieve pain by interfering with chemical processes in your brain and spinal cord that cause you to feel pain.
- The serotonin and norepinephrine reuptake inhibitor duloxetine (Cymbalta) and the extended-release antidepressant venlafaxine (Effexor XR) also might ease the pain of peripheral neuropathy caused by diabetes. Side effects may include dry mouth, nausea, drowsiness, dizziness, decreased appetite and constipation.

Therapies

Various therapies and procedures might help ease the signs and symptoms of peripheral neuropathy.

- Transcutaneous electrical nerve stimulation (TENS). Electrodes placed on the skin deliver a gentle electric current at varying frequencies. TENS should be applied for 30 minutes daily for about a month.
- Plasma exchange and intravenous immune globulin. These procedures, which help suppress immune
 system activity, might benefit people with certain inflammatory conditions. Plasma exchange involves
 removing your blood, then removing antibodies and other proteins from the blood and returning the
 blood to your body. In immune globulin therapy, you receive high levels of proteins that work as
 antibodies (immunoglobulins).
- Physical therapy. If you have muscle weakness, physical therapy can help improve your movements. You may also need hand or foot braces, a cane, a walker, or a wheelchair.
- Surgery. If you have neuropathies caused by pressure on nerves, such as pressure from tumors, you might need surgery to reduce the pressure.

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https://www.pennmedicine.org/for-patients-and-visitors/patient-information/conditions-treated-a-to-z/peripheralneuropathy

Penn's Neuromuscular Disorders Program has a long history of being one of the leading groups in the world providing clinical care for people with neuropathy, doing original research on neuropathy, and training neuropathy specialists. We have nationally recognized clinical centers of excellence in GBS/CIDP and CMT. We also have active, funded research projects on the causes of inherited neuropathies (led by Dr. Steven Scherer) and immune-mediated neuropathies (led by Dr. Eric Lancaster). Achieving an accurate diagnosis is the first step in formulating a management plan. Physicians review the management options and work with the patient to develop an individualized treatment plan. In some cases, this will focus on treatment of the underlying medical condition that causes neuropathy. In other cases, there may be specific medications used to treat the neuropathy and improve strength and sensation. Treatment medications may include medications for neuropathic pain and immune-modulating treatments.

https://stanfordhealthcare.org/medical-conditions/brain-and-nerves/peripheral-neuropathy.html

Treatment for peripheral neuropathy can relieve symptoms. This is done by treating the health problem that's causing it. For example, if you have diabetes, keeping your blood sugar within your target range may help. Or maybe your body lacks certain vitamins caused by drinking too much alcohol. In that case, treatment may include eating a healthy diet, taking vitamins, and stopping alcohol use. If you have neuropathy in your feet, it's a good idea to have them checked during each office visit. This can help prevent problems.

- Physical therapy can increase muscle strength and help build muscle control.
- Over-the-counter medicine can relieve mild nerve pain.
- Your doctor may also prescribe medicine to help with severe pain, numbness, tingling, and weakness.
- Some people find that physical therapy, acupuncture, or transcutaneous electrical nerve stimulation (TENS) helps relieve pain.

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https://www.virginiamason.org/polyneuropathy

Therapies for controlling pain caused by polyneuropathy may include:

- Pain medications Over-the-counter pain medications may be adequate for mild symptoms. For more severe pain, prescription painkillers may be used. Some painkillers can lead to dependence and other side effects, so they are generally prescribed when other treatments fail.
- Corticosteroids Corticosteroids are anti-inflammatory drugs that can relieve the severe pain associated with nerve irritation and inflammation. They may be taken orally or injected directly into the areas of the body where there is pain. Corticosteroids can greatly reduce and may eliminate pain for extended periods of time.
- Anti-seizure medications Drugs that were originally developed to treat epilepsy are sometimes used to relieve nerve pain. The side effects of these drugs can cause drowsiness and dizziness.
- Transcutaneous electrical nerve stimulation (TENS) TENS is a drug-free therapy that works by applying very small electrical impulses on specific nerve paths. The electrical impulses are delivered through electrodes placed on the skin. Although it doesn't work for everyone or all types of pain, TENS may be prescribed in combination with other treatments, primarily to provide relief from acute forms of nerve pain.
- Antidepressants Certain antidepressants have been found to help relieve pain caused by neuropathy by interfering with chemical processes in the brain involved in the pain response.

When more aggressive treatment is needed for progressive types of neuropathy causing serious physical dysfunction, some options include:

- Immunosuppressant medications, including those that contain antibodies that curb the autoimmune processes leading to nerve damage.
- Removing malfunctioning antibodies from the blood by way of plasmapheresis, a process that clears antibodies from the plasma portion of blood before being put back in the body.

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https://www.medicalnewstoday.com/articles/317212.php

Medications

Several different medications are available to treat neuropathy and its symptoms. These include:

- Medications for associated conditions: Conditions that may be causing polyneuropathy should be managed through various treatments, including medication if recommended by a doctor. Examples include insulin for diabetes and thyroid hormones for hypothyroidism.
- Pain medications: Over-the-counter pain relief can be beneficial for those with mild to moderate pain. These medications should not be taken on a long-term basis.
- Prescription medications: Some antidepressants, such as a group of medications called TCAs (including
 amitriptyline or nortriptyline), can be used, and another group called SNRIs, such as duloxetine, may also
 help. Corticosteroid injections could possibly be used for mononeuropathies, and some seizure
 medications such as gabapentin or pregabalin may help.

Medical therapies

A variety of medical procedures are available. They include:

- Transcutaneous electrical nerve stimulation (TENS): Electrodes send a gentle current of electricity through the skin. This can help with pain and sensitivity.
- Plasma exchange: People with inflammatory or autoimmune conditions may benefit from this therapy. The practitioner removes blood from the body, then separates antibodies and other proteins from the blood, before returning the blood to the body.
- Immune globulin therapy: Those with inflammatory and autoimmune conditions are given high levels of proteins to act as antibodies, which helps with immune function.
- Physical therapy: muscle weakness or coordination issues may improve with physical therapy.
- Orthotic and other devices: Braces, canes, casts, splints, walkers, and wheelchairs may provide support and pain relief to those with neuropathy of the hands, feet, legs, and arms.
- If neuropathy is caused by pressure on a nerve, surgery may be recommended.

Prevention and Outlook

Preventing polyneuropathy involves limiting the risk factors and managing underlying conditions. A person with polyneuropathy may not be able to avoid all risk factors, but some lifestyle choices may reduce the risk. These are:

- avoiding alcohol
- avoiding exposure to toxins, including cigarette smoke
- limiting factors that contribute to physical trauma or injury, such as repetitive actions and restrictive positions
- getting enough sleep and physical activity to support immune function
- eating a balanced diet rich in vitamins and minerals
- considering vitamin B-12 supplements if a vegan or vegetarian
- Managing underlying conditions

Managing any underlying conditions can help to prevent the onset of the condition. Those with diabetes and other conditions related to polyneuropathy should closely follow the treatment plan devised by their doctor, as well as ensure that they attend all check-ups.

The outlook for polyneuropathy varies and can depend on the underlying cause, which nerves are damaged and the extent of the damage. For some people, treating the underlying cause can lead to improvements. For others, the damage is permanent. Implementing a treatment plan as soon as possible following diagnosis is important to manage symptoms and prevent further nerve damage.