

# HEALTH RESTORATION

## Neuropathy

Neuropathy is a broad term that indicates abnormal function in many nerves. The symptoms of neuropathy are many and vary among types and individuals. Some of the common symptoms are burning, stabbing, piercing pains, numbness, tingling, electrical feelings, and weakness in the feet and lower legs. There are numerous causes and many patients have a combination of factors that are causing this dysfunction. Many of these factors are cumulative and increase with general aging. The incidence of neuropathy increases with each decade. The younger population, in their 20s through 50s, are more likely to suffer temporarily from acute neuropathies such as sciatica or carpal tunnel syndrome, which are usually unilateral (one-sided) and have a high rate of improvement with appropriate care. Older populations of 60 and beyond often have more chronic neuropathies which are more often bilateral (both sides) beginning in the toes and feet.

There are several different types of neuropathies in the following categories:

1. Spinal-related neuropathies called radiculopathy. These can be from acute or chronic disc bulges, protrusions, herniations, degenerative disc or spinal stenosis, which can be congenital (developmental) or degenerative in nature. These degenerative changes in the disc, ligament and joints cause a narrowing of the opening around the nerves that go to the legs and feet.
2. Nerve entrapment syndrome, such as carpal tunnel syndrome (the most common upper extremity neuropathy), involves the median nerve and occurs in the palmar side of the wrist affecting the thumb, index and middle finger. This occurs three to five times more frequently in women than men. Guyan's canal syndrome involves the ulnar nerve at the wrist and affects the ring and little finger. Cubital syndrome involves the ulnar nerve at the elbow (funny bone), affecting the ring and middle finger. Thoracic outlet syndrome (Scalenus Anticus Syndrome) involves compression from an extra rib or muscular contraction over nerves as they exit the spine and go under the clavicle (collar bone). Piriformis Syndrome is a compression of the sciatic nerve by the piriformis muscle which is in the buttocks region transversing from the sacrum to the femur. This muscle attaches your sacrum or spine to your femur or thigh bone. This syndrome occurs six times more frequently in women than men. Tarsal tunnel involves the tibial nerve in the heel on the outside ankle/heel area of the foot. Compartment syndrome involves the peroneal nerve that is felt on the outside part of the calf and foot below the knee. This can occur from crossing your legs at the knee for extended periods.
3. Distal peripheral neuropathies begin in the longest nerves in the body, usually the big toe or second toe for some people, and work upwards towards the ankle and knee. These neuropathies are caused by a multitude of different diseases, such as diabetes (30%),

hypothyroidism, drugs such as metformin (causes B6 and B12 deficiencies) and statin drugs for cholesterol causes B6, B12, and coenzyme Q10 deficiency, and chemotherapy.

4. Inflammatory neuropathies are systemic (all over the body and usually involve autoimmune disease such as scleroderma, lupus, multiple sclerosis, rheumatoid arthritis, HIV, etc.)

Standard medical treatment of neuropathy is pharmacological agents such as Neurontin or gabapentin (generic), Cymbalta, Lyrica, and an older drug, amitriptyline. In some cases, these medications reduce the severity of the pain associated with the symptoms, but really do nothing for numbness and do not restore or reverse the progression of the neuropathy. If these drugs fail to give some pain relief, other pain medications may be prescribed such as hydrocodone, oxycodone, Oxycotin, morphine, or methadone. More radical treatment is the use of a dorsal column stimulator (a surgically implanted electrical device in the spine).

Our approach to neuropathy is primarily non-drug and non-surgical in nature. We use multiple modalities to create an environment for optimal nerve regrowth and repair. There are numerous articles published in scientific journals and literature about the benefits of specific nutrients as it relates to different types of neuropathies. The down side of this single approach is that it usually takes several months to see results even if you are using the proper product from natural sources and at optimal dosages. Most people will not adhere to a program for six months without seeing results. Specific vibrational frequencies of under 20 Hz (cycles per second) are helpful. Infrared therapy has proven beneficial. Again, there are numerous studies published in accepted scientific journals showing positive changes from the use of infrared light therapy. The proper frequency of the infrared is important and the average layperson is not going to be able to obtain a device that works at these frequencies for under several hundred dollars. TENS units, interferential electrotherapy, microcurrent and most other electrical therapy devices do not have a healing effect on the nerves but may give temporary relief while being applied. However, there are two electrical devices that are manufactured that produce frequencies that can repair injured nerves. These are the synaptic unit and the synopsis unit (formally the matrix). These devices produce currents up to 40,000 Hz and can do things physiologically in the body that other devices cannot. Unfortunately, these units cost \$15,000 to \$25,000 and therefore not readily available for treatment. A combination of all these modalities (infra-red therapy, synaptic electrotherapy, and specific nutritional support) works the best. If patients have spinal-related problems contributing to their neuropathy, those must be addressed as well with decompression type traction devices.

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816-210-6913/813-985-5190