

Diabetic Neuropathy

Overview

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Condition Sheet



Diabetic neuropathy is a type of nerve damage caused by diabetes. According to the NIH, 60 to 70 percent of people with diabetes have some form of neuropathy. It can manifest at any time, but the risk increases with age and duration of diabetes. Metabolic factors, such as uncontrolled high blood glucose and abnormal blood lipid levels, have been shown to cause diabetic neuropathy.

Diabetic neuropathy can be classified as peripheral, autonomic, proximal or focal. Nerve problems can occur in every organ system, including the digestive tract, heart and sex organs. Peripheral diabetic neuropathy is nerve damage in the arms and legs. The lower extremities are more likely to be affected before the upper extremities. Symptoms may or may not be present. These symptoms often worsen at night.

Symptoms

- Numbness or insensitivity to pain or temperature
- A tingling, burning or prickling sensation
- Sharp pains or cramps
- Hyperesthesia
- Loss of balance and coordination
- Symmetrical

Diagnosis

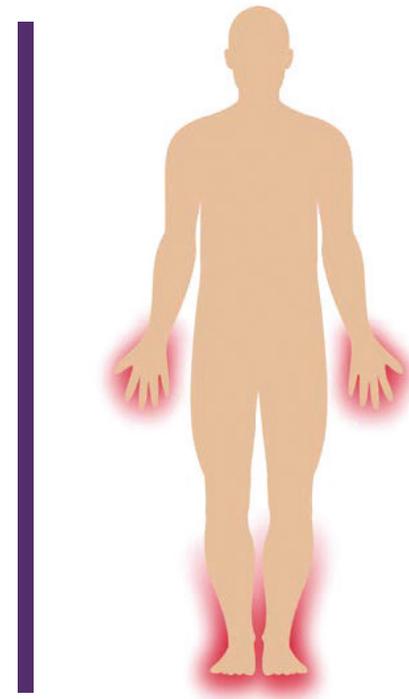
- Physical exam
- Medical history
- Electrodiagnostic studies

Treatment

Early interventions can improve outcomes. Controlling blood glucose and lipid levels will attenuate the progression of nerve damage. Oral medications, such as over-the-counter analgesic

medication, may be effective for mild cases. For patients with moderate to severe pain, neuro-active agents, anticonvulsants, antidepressants, tricyclic antidepressants and opioids have been shown to give pain relief. Topical creams or patches that deliver anesthetics, anti-neuropathics, capsaicin, or others may provide some relief. TENS units could be used to provide additional relief.

For more progressive cases when drugs are ineffective or side effects remain intolerable, neuromodulation may be a treatment option. For the appropriate patient, the implementation of a Spinal Cord Stimulation (SCS) can have an 80% to 90% success rate in reducing



pain. (1-3) With SCS, a small electrical stimulator is implanted that disrupts the pain signals by producing a mild tingling sensation in the pain area. A permanent implanted device is offered to patients if the temporary trial implant reduces pain 50% or more.

Intrathecal pumps may also be an option for some patients. This method uses a pump device and catheter to deliver small amounts of medications such as morphine, clonidine, or ziconotide into the intrathecal space, minimizing side effects.

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