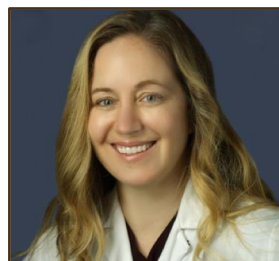


Neuropathy: What It Is and How to Treat it

Celebrating a Second Chance at Life Survivorship Symposium

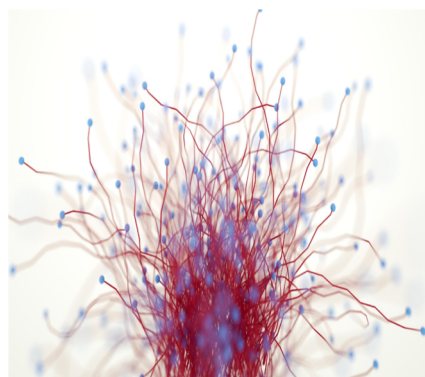
April 29 – May 5, 2023



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Objectives

- Defining peripheral neuropathy
- Causes of peripheral neuropathy
- Risk Factors
- Symptoms of peripheral neuropathy
- Testing for peripheral neuropathy
- Treating peripheral neuropathy
 - Underlying cause
 - Symptom management



Defining peripheral neuropathy

- Central nervous system and peripheral nervous system
- Nerves control our sensation and movement
- Neuropathy is damage to the peripheral nerves
- More than 100 different types of peripheral neuropathy
- Affects the long nerves initially, felt primarily in the hands and/or feet

Causes of Peripheral Neuropathy

- Diabetic
- Alcohol
- HIV induced neuropathies
- Nutritional imbalance: B12 deficiency
- Carpal tunnel syndrome
- Chemotherapy induced neuropathies
- GVHD associated peripheral neuropathy

Chemotherapy-Induced Peripheral Neuropathy

- Neurotoxic chemotherapies – high risk:
 - bortezomib
 - thalidomide
 - taxanes (taxol),
 - vinka alkaloids (vincristine)
- 30-40% of people can develop peripheral neuropathy after using neurotoxic chemotherapy



Graft-versus-Host Disease (GVHD) and Peripheral Neuropathy

- Neuropathy can be associated with chronic GVHD
- 0.6 to 6.1% of patients after transplant
- Average onset was 5.5 months after transplant
- Associated with long term immunosuppressant use

Risk Factors

- Diabetes
- Alcohol use
- Long term use of immunosuppression medications
- Age
- Smoking history
- Baseline neuropathy
- Kidney impairment

Symptoms of Peripheral Neuropathy

- Sensory
 - Numbness
 - Tingling
 - Pain
 - Decreased or increased sensations
 - Temperature changes



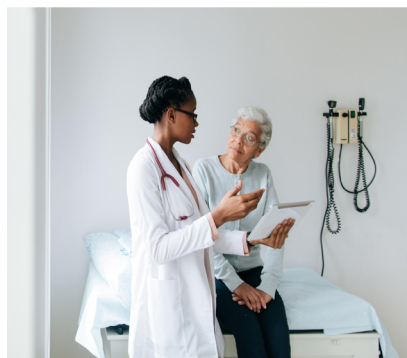
Symptoms of Peripheral Neuropathy

- Motor
 - Weakness
 - Imbalance
 - Muscle cramping and muscle loss
- Autonomic
 - Lightheaded (change in blood pressure)
 - Impaired food digestion
 - Erectile dysfunction



Testing for Peripheral Neuropathy

- Physical exam
 - Light touch
 - Vibration testing with a tuning fork
 - Strength testing
 - Reflexes
 - Walking test
- Blood tests (vitamin deficiencies)



Testing for Peripheral Neuropathy

- Nerve conduction test: measures strength and speed of motor and sensory nerves
- Electromyography (EMG): measures electrical nerve activity and can distinguish between muscle issues and nerve disorders



Testing for Peripheral Neuropathy

- Nerve biopsy (sensory nerve from lower leg): very beneficial but can damage the nerve further
- Skin biopsy: examine the nerve fiber endings



Radiology Testing for Peripheral Neuropathy

MRI or CT imaging to look at nerve compression



Managing Peripheral Neuropathy

- Treat the underlying cause
- Symptom management
- Treatment varies depending on
 - cause
 - location
 - symptoms

Treating the Underlying Cause of Peripheral Neuropathy

- Fix the underlying cause if possible
 - If drug induced, consider stopping the drug or changing the dose after discussing with your health team
 - If vitamin deficiency, treat with vitamin supplement
- If disease induced – is the disease under control? (multiple myeloma)



Treating Underlying Cause: Carpal Tunnel

- Carpal tunnel: compression of the median nerve in the wrist
- Numbness and tingling in the fingers, hand, wrist
- Wrist brace to keep your wrist straight at night and thus prevent compression of the nerve
- OTC pain medication or anti-inflammatory medication
- Surgical intervention



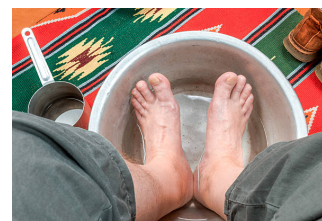
Treatment: Symptom Management

- Self care
 - Smoking cessation
 - Exercise
 - Adequate control of diabetes
 - Weight control and good eating habits
- Supplements: alpha-lipoic, B complex, acetyl-L-carnitine



Treatment: Symptom Management

- Medications
 - Anti-depressants: duloxetine, nortryptiline
 - Anti-convulsants: gabapentin, lyrica
 - Over the counter pain medication
 - Narcotics
- Topical treatment
 - Lidocaine patch or gel
 - Capsaicin cream
 - Soaking feet in cool water (epson salts)



Nonpharmacologic Symptom Management

- Physical therapy
 - Gait training/balance training
 - Strengthening
 - Endurance
- Occupational therapy
 - Finding aides to assist
 - Useful for fine motor or sensory deficits



Nonpharmacologic Symptom Management

- Cognitive behavioral therapy
- Acupuncture
- Massage
- Aides
 - Orthopedic shoes
 - Walker for gait imbalance
 - Hand or foot braces



Foot Care

- Sturdy shoes
- Observe for injuries or skin breakdown
- Keep dry
- Wear shoes at all times

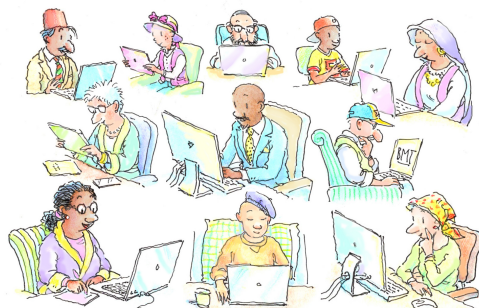


QUESTIONS?



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LET US KNOW HOW WE CAN HELP YOU



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