Non-Pharmacologic Management of Peripheral Neuropathy Pain

Peripheral neuropathy is a disease or disorder that has damaged the nerves in the body. This may impair sensation or movement of the body, but also can affect the glands and organs in the body. There are a multitude of causes of peripheral neuropathy, but the most common are:

- Diabetes mellitus
- Medications such as chemotherapy
- Excess alcohol usage
- Trauma
- Autoimmune disorders such as rheumatoid arthritis
- Exposure to toxins/poisons and infections
- Genetics

Frequent problems noted by persons with peripheral neuropathy are:

- Muscle cramps
- Weakness
- Changes in skin and hair
- Impaired balance and coordination
- Burning, numbness, tingling, pins and needles
- Stabbing pain
- Abnormal heart rate and blood pressure control
- Impaired bladder control
- Increased sensitivity to touch and temperature

The majority of cases of peripheral neuropathy are not reversible, but can be managed. The pain related to peripheral neuropathy is frequently controlled with prescription medications such as Gabapentin, Lyrica and
Cymbalta. Other non-pharmacologic prescription options are available to help people manage the pain and physical changes associated with the disease. These treatments have not been extensively tested, but there are some studies demonstrating benefit over placebo, as well as anecdotal evidence. Non-pharmacologic management of peripheral neuropathy can be divided into 2 categories. The first is life style changes and alterations in the home environment and the second is alternative medicine.

**Life Style changes and Alterations in Home Environment** include:

- **Exercise**—studies have demonstrated the need to maintain ROM (range of motion), strength and balance. Activities such as aquatics, yoga and Tai Chi have been shown to be beneficial.
- **Eat a balanced diet and avoid excess alcohol.**
- **Quit smoking**—smoking decreases circulation to the nerves.
- **Massage**—improves circulation and stimulates the nerves.
- **Warm water**—relaxes the muscles.
- **Comfortable shoes with large toe box**
- **Cotton socks with padding at the ball of the foot and heel**
- **Semicircular hoop to keep bed covers off feet when in bed**
- **Clean and inspect feet daily for sores or cracks in the skin to prevent infections and further pain**
- **Avoid prolonged pressure on nerves**—do not cross legs or lean on elbows.
- **Splints for hands and feet to maintain ROM and function**
- **Mobility devices**—canes, walkers, wheelchairs, scooters.
- **De-clutter the home to allow for adequate room for maneuvering around the home**
- **Remove throw rugs to prevent falls**
- **Adaptive equipment**—large handle kitchen devices and utensils, button/zipper aids, large button remote, key
turner, reacher, elevated toilet seats, tub benches or seats

- Alternative medicine:
  - Biofeedback/relaxation techniques
  - TENS units—application of electrical current to the skin over the painful or adjacent body region. Studies have shown a 44-52% reduction in pain after 3 weeks of daily use.
  - Acupuncture—involves insertion of thin needles into various parts of the body. Studies have shown that 50% of patients have a 50% reduction in pain after 6 sessions.
  - Magnet therapy insoles for shoes—more effective than placebo but only show a 25% reduction in pain.
  - Low intensity laser therapy—demonstrated a 50% reduction in pain for a month
  - FREMS—modulated electromagnetic stimuli. Has been shown to decrease pain after 3 weeks.
  - Capsaicin—cream made from hot chili peppers—must be used regularly. You get used to the heat before experiencing any pain relief. Must be careful not to touch eyes, nose or mouth after applying to feet and hands until you have thoroughly washed hands.
  - Vitamins—vitamins B1, B6 and B12 are essential for nerve health
  - Herbs and oils—all may interact with medications and patients should discuss these with their physician prior to starting them.
  - Alpha lipoic acid is an anti-oxidant that has been used in Europe for many years for peripheral neuropathy. It may affect blood sugar levels.
  - Primrose oil and botanical oils
  - Fish oil—acts as an anti-inflammatory and may increase blood flow

Non-pharmacologic strategies work best when combined with prescription medications in managing pain related to
peripheral neuropathy. Neuropathic pain can be difficult to manage and generally requires multiple approaches to control.