Chemotherapy Induced Peripheral Neuropathy

Chemotherapy induced peripheral neuropathy (CIPN) is a significant, debilitating symptom directly related to the administration of neurotoxic chemotherapy. CIPN compromises quality of life and results in pain and discomfort. Physical activity as an intervention for neuropathy is associated with increased muscle strength and return to work. Exercise improved functional ability in patients with peripheral neuropathy. Patients should also be provided with advice for detecting and managing chemotherapy induced peripheral neuropathy, and advised on how to avoid harmful situations if they lose sensation in their extremities and how to compensate for such losses to maintain their personal safety.

Spotlight on Physical Therapy and Chemotherapy Induced Peripheral Neuropathy

Three studies have examined progressive resistive exercise, aerobic exercise, and stretching exercises in the treatment of peripheral neuropathy. All three found significant improvements in outcomes such as stance, functional reach, and peroneal motor conduction velocity (Balducci et al., 2006; Lindeman et al., 1995; Richardson et al., 2001). A Cochrane review examined the role of exercise for individuals with peripheral neuropathy from etiologies other than chemotherapy. The study found that exercise increased function, muscle strength, endurance, quality of life and return to work. Strengthening exercises were found to reverse the losses in muscle strength related to peripheral neuropathy.

Electrical Stimulation: Transcutaneous Nerve Stimulation (TENS) has been shown to have positive benefits in patients with diabetic peripheral neuropathy. In a randomized clinical trial, Forst et al (2004) found significant improvement in patient-reported numbness, tingling, and alldynia. Another study, demonstrated that high frequency electrical muscle stimulation (FES) relieved lower extremity pain. (Reichstein et al., 2005).

TurningPoint Services to decrease peripheral neuropathy

- Exercise prescription and monitoring during treatment phase
- Exercise prescription and monitoring following active treatment
- Individual and group exercise programs
- Practical tips to enhance exercise program and stay motivated
- Desensitization techniques
- Relaxation Techniques and Massage Therapy
- Transcutaneous Electrical Nerve Stimulation (TENS)
- Functional Electrical muscle stimulation
- Patient education and support to prevent and preserve patient safety

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