

Research is essential for the advancement of knowledge to help people with pain and disease

By Liz Hammond

Specifically, research in Physical Therapy seeks to answer clinical questions that are used to build evidence-based practice. Physical Therapists integrate the latest research providing the most effective care available to patients in the management of issues surrounding mobility, function and pain. In Manitoba, one of the most recent randomized controlled trials was a collaborative research project with the College of Rehabilitation Sciences at the University of Manitoba and CancerCare Manitoba. It aimed to improve neuropathy symptoms in patients undergoing chemotherapy treatment.

Chemotherapy induced peripheral neuropathy is a side effect of cancer treatment affecting sensation. There are few effective treatment options. It results in tingling, burning and numbness that begins in the fingers and toes, and moves up the hands and feet with increasing dosage and cycle of chemotherapy. When severe, these symptoms may result in delays or changes to chemotherapy. Depending on your specific risk factors and type of chemotherapy, these symptoms may persist past the expected 6-month time frame

causing a significant impact in quality of life for cancer survivors for years post-treatment. In long standing peripheral neuropathy, fine motor tasks (like handwriting, texting and doing up buttons) and balance are impaired. Sleep is often interrupted because of burning and tingling from the nerve. While the nerves responsible for feeling warm/cool/hot/cold/light touch and vibration are primarily impaired, muscles can also be affected in patients with long-standing symptoms. This can greatly impact activities of daily living.

The research trial evaluated the effectiveness of a Physical Therapy home program for the management of Chemotherapy Induced Peripheral Neuropathy symptoms during and after taxane chemotherapy in patients with breast cancer. Our research found that physiotherapy exercises resulted in a decrease in reported pain and improved strength compared to a control group. Other researchers have also found improved balance and mobility with physical therapy for neuropathy symptoms. Staying active with moderate exercise has been found to be correlated to a preservation of sensory function. A Physical Therapist can

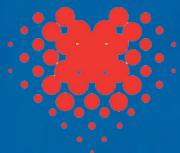
clinically evaluate sensory impairments for thermal perception, light touch and vibration and provide individualized treatment. If numbness is the primary concern, then education is provided for visual checks for skin protection, advice for safely testing hot water and working in the kitchen, balance exercises and proper footwear for indoors and out. When increased sensitivity to cold and hot, or if symptoms are burning or electrical shock in nature, then a combination of exercises, compression sleeves, and heated gloves are provided to manage nerve pain.

Seeing a physiotherapist prior to, during, and after chemotherapy can positively impact many of the treatment side effects of chemotherapy by reducing fatigue, improving sleep, increasing function in daily activities and improving the symptoms of neuropathy that may include balance issues, sensory impairments and pain.

Our research team included Drs., E. Hammond, B. Shay, M. Pitz and physical therapist K. Steinfeld. Funding was provided by CancerCare Manitoba Foundation.

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