



PHYSIO FOCUS

PHYSIO FOCUS is a bi-monthly publication geared towards providing practical physiotherapy and health information.

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NOI Fitness Classes

Summer Class Schedule
 Please sign up at front desk!

Pilates Mat
Mondays at 5:30 pm

A floor based exercise program that uses your own body or small props to build core strength and retrain proper muscle patterns while increasing your mind-body awareness.



“You are as important to your health as it is to you”
 ~Terri Guillemets

Postural Re-education and Low Back Pain

Pain can be defined as an “*unpleasant sensory and emotional experience associated with actual or potential tissue damage*”. Pain becomes chronic when it persists longer than the expected period of healing, 3 months. In chronic pain situations, the sensorial process becomes abnormal, leading to detectable changes in central nervous system data processing, motor control, and the experience of pain itself. Low back pain (LBP) is defined as pain and/or discomfort located below the costal margin and above the inferior gluteus folds, with or without related leg pain, and affects approximately 85 percent of the population at some point in their lifetime¹.

Castagnoli and colleagues conducted a recent prospective cohort study and patients admitted to an outpatient rehabilitation facility with chronic low back pain (>6 months). Subjects completed twice weekly treatments of either global postural re-education (GPR) or standard physiotherapy (ST). Pain ratings and functional questionnaires were given at inception, 3 weeks, and 12 months to evaluate the effectiveness of both protocols.

Their results indicated that both groups had significant improvements and pain and function at the 3-week interval and the GPR group showed statistically significant improvements in pain at the 12-month interval!

These findings support the fact that a comprehensive and individualized Physiotherapy plan should include postural re-education as this will foster better long term outcomes. The authors extrapolate that postural re-education should not only be included in clients with chronic low back pain programs’, but it also should be incorporated in any clients’ treatment presenting with a musculoskeletal impairment.

Long term sustainability of functional improvements and pain control is at the core of the profession of Physiotherapy. Research is conclusive in finding that only individual exercise prescription will reduce long term recurrence rates of low back pain from 80 percent to 10 percent at one year!

¹ Castagnoli et al. **Effects in Short and Long Term of Global Postural Reeducation (GPR) on Chronic Low Back Pain: A Controlled Study with One-Year Follow-Up.** Scientific World Journal 2015; 271436.

May was National Physiotherapy Month!



NOI was proud to educate Niagara residents about different health care conditions, tips to avoid injury and how your physiotherapist and PTA can get your back to full function!

Visit the Physio Can Help Public website at physiocanhelp.ca to learn more:

- Articles from around the internet and CPA-developed resources
- Videos and blogs by CPA members
- Content sorted by condition and part of the body via CPA website



Health Corner

Knee Arthritis and Benefits of Electrical Treatments

Osteoarthritis results from the “*deterioration of cartilage and the thickening of bones underneath, in one or more joints*”. This process commonly leads to chronic pain, joint damage, and stiffness. It mostly affects the hips, hands, knees, spine and feet. The Public Health Agency of Canada predicts that this affects over 10 percent of the entire adult population.

A recent study was conducted by Eftekarsadat and colleagues examined the therapeutic benefits of action potential simulation (APS) and interferential stimulation (IFC) on subjects with radiographic evidence of knee osteoarthritis (OA). The authors randomized their subjects into one of two treatment groups, an APS and IFC group, for 10 sessions over a 4 week period. Baseline and post-treatment outcomes studied were; pain (VAS), WOMAC disability questionnaire, and the timed-up-and-go test (TUG).

Their results indicated pain scores and WOMAC subscales were significantly improved after treatment in both the APS and IFC subgroups and the TUG scores were significantly improved in the APS group.

These findings provide further evidence to support the use of APS and IFC modalities in improving pain and physical function in clients diagnosed with knee osteoarthritis! NOI is pleased to offer both modalities studied to clients with all forms of osteoarthritis. The evidence continues to support our implementation of these treatments as part of our advanced multidisciplinary programs.

² Eftekarsadat B, Babaei-Ghazani A, Kolahi B. **Efficacy of action potential simulation and interferential therapy in the rehabilitation of patients with knee osteoarthritis.** *Ther Adv Musculoskeletal Dis.* 2015; 7 (3): 67-75.

At the Core of Cycling!

Cyclists frequently present to NOI with a complaint of pain, typically in their knees or back during longer rides. For some riders solution is as simple as an appropriate bike fit. For others, resolution of the problem will take a little more work. It's also important to note that proper bike fit will give you a consistent lower extremity alignment throughout the pedal stroke but poor core function may artificially induce a mal-alignment in an effort to maintain your power output. When you add this mal-alignment with excessive cadence and volume or intensity, your chance of injury is amplified.

It has become an accepted fact that decreased strength in pelvic stabilizers, specifically the rotators of the hip, can lead to altered alignment of the lower limb during activities like cycling or running and subsequently result in overuse injury. And repetitive motion in both - running and cycling - requires efficient movement patterns to avoid (1) excessive stress and (2) development of compensatory mechanisms.

The core not only provides stability to the back, but it also affords the cyclist more leverage to the lower extremity for force production which is rather good if you want to be faster, more efficient, and pain-free. Restoring core function must begin with an understanding of how to activate appropriate muscles involved with stability. By learning to consciously control "core muscles", you can create a muscular corset around your spine which will support the spine and give it stability it needs.

A properly designed individualized training program aimed at (1) correcting mechanical faults and (2) strengthening good body positions through progressive resistance training, combined with a little bit of good fortune will increase your chance of a successful pain-free season. NOI is pleased to be providing volunteer services at the Ride to Conquer Cancer in support of the Princess Margaret Cancer Centre. Come visit us on June 13/14 and support this worthwhile initiative!

