

PHYSIO FOCUS

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

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NOI Fitness Classes

March/April Schedule

8 week session beginning March 10th
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.

Meditation for Healing...

Mondays at 6:35 pm

Learn to use your breath and awareness to connect to the healing power that lies within you.



Hatha Yoga Level 1...

Tuesdays at 6:45pm

Sequence of standing, seated and kneeling postures linked with your breath which will open the entire body and allow energy to flow more freely.

Hatha Yoga Level 2...

Wednesdays at 6:45pm

A natural progression from Hatha Level 1; you will be guided into intermediate postures helping to increase your strength, flexibility and stamina.

“LIFE IS NOT MERELY TO BE ALIVE, BUT TO BE WELL”
– MARCUS VALERIUS MARTIAL

Neuromuscular Stimulation Following ACL Reconstruction

One of the most important and functionally relevant client-centered goals following ACL reconstructive surgery is the successful return to sport. The recent advancements in the safe and expeditious return to sporting activities is the result of enhanced double bundle ACL grafts coupled with the implementation of an *accelerated* post-operative rehabilitation program.

One of the most important functional markers in determining when a safe return to sport re-integration process can be commenced is related to the strength of the quadriceps femoris muscle group (more specifically the vastus medialis obliquus or VMO).

In a recent clinical study, Taradaj and colleagues 2013 aimed to assess the clinical efficacy and safety of a neuromuscular stimulation (NMES) program applied to the quadriceps muscle in developing quadriceps strength in male soccer players. The participants were sub-grouped into two groups: an exercise only group and an exercise with NMES group.

Following 1 and 3 months of intervention, the sub-group that had the NMES applied with supervised exercise from a physiotherapist had statistically greater improvements in muscle mass and quadriceps strength when compared to the exercise only group!

Similarly, the researchers found that NMES was safe to the knee joint biomechanics. They also found that these results were even more pronounced at the 3 month follow-up. Therefore, it was concluded that NMES is a safe and effective component to any post-operative ACL rehabilitation program, and can expedite quadriceps muscle strengthening.

The Niagara Orthopaedic Institute utilizes the most advanced Neuromuscular stimulating devices available on the market! The Mi-sensor technology used at the clinic will customize any muscle stimulation program specific to each individual clients muscle tissue.

1. Taradaj J et al: **The effect of neuromuscular stimulation on quadriceps strength and knee function in professional soccer players: return to sport after ACL reconstruction.** *Biomed Research International* 2013; 802534.



Kinesiology is the science of human movement, applying the latest evidenced-based research to improve function, health and wellness of people in all settings and populations.

As university trained professionals and regulated by the College of Kinesiologists of Ontario, Kinesiologists work with individuals, groups and healthcare professionals to apply the principles of biomechanics, anatomy, physiology and psychomotor behavior to improve health, function and performance.

Registered Kinesiologists are committed to enhancing quality of life through the promotion of physical activity and workplace health and safety, as well as the prevention and management of injury and chronic disease.

Registered Kinesiologists have been recognized as healthcare practitioners by the Ontario Workplace Safety and Insurance Board (WSIB) for the completion of Functional Abilities Forms (FAF) and the delivery of the Programs of Care services (POC). As of December 12, 2013 once registered with WSIB, registered Kinesiologists are able to fill out FAF upon request by workplace parties. Expected to be implemented in 2014, registered Kinesiologists will then be able to deliver four WSIB Programs of Care – Acute Low Back Injuries POC, Upper Extremities Injuries POC, Shoulder POC, and Lower Extremities Injuries POC.

Concussion in Sport: Current Practice Guidelines

It is estimated that over 4 million concussions occur in North American sports per year, and as many as 50 percent go unreported. Most troubling is the impact that sport concussion has upon youth both in the short term and long term. It is reported by the CDC that 30,000 Canadian youth between the ages of 12 and 19 suffer a sports concussion yearly!

The American Society for Sports Medicine defines a concussion as **“a traumatically induced transient disturbance of brain function that involves a complex pathophysiological process. Concussion is a subset of mild traumatic brain injury (MTBI).”**

The American Society for Sports Medicine 2013 outlined a position statement outlining current practice guidelines in the management of the concussed athlete based upon current literature findings.

Sideline evaluation of a suspected concussion should include: removal of athlete from competition immediately, assessment completed by a licenced healthcare provider trained in concussion evaluation (i.e. physician, physiotherapist), a guided checklist should be utilized in conjunction with cognitive evaluation, balance tests, and a detailed neurological examination, arrange imaging if intracerebral bleeding is suspected, continued monitoring of physical and cognitive status, and a no same day return to sport protocol to be followed.

Return to sport should only be attempted upon approval by the licenced concussion evaluator. The athlete must be asymptomatic to begin return to sport trial and the trial should be halted with the emergence of any concussion related symptom.

2. Harmon KG, Drezner JA, Gammons M et al. **American Medical Society for Sports Medicine position statement:concussion in sport.** *Br J Sports Med* 2013;47, 15-26.

Health Corner

Why Exercise...? Let us tell you!



With winter winding down, we can all find ourselves in an exercise rut or having a case of cabin fever. Here are a few of the benefits of exercise and some tips to get moving. (Research shows that all of these benefits can start with even light activity).

Exercise Benefits

- Reduces pain and stiffness
- Increases energy
- Increases blood flow
- Improves overall sense of wellbeing
- Boosts immunity
- Helps eliminate toxins
- Decreases stress, anxiety and depression
- Improves brain function

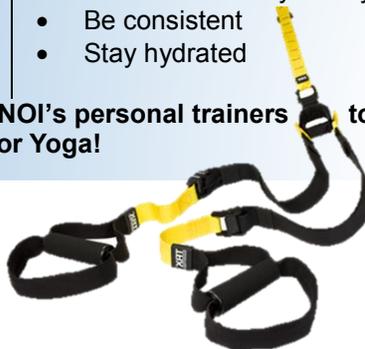
Exercise Tips

- Stay positive – don't say you can't
- Take the stairs instead of the elevator when possible
- Don't sit for longer than 20 minutes at one time
- Park further away from your destination
- Be consistent
- Stay hydrated



Need some motivation? Book in with one of NOI's personal trainers to keep you on track! Sign up with a friend for an NOI group exercise class, like Pilates or Yoga!

If you would like full text documents of the articles summarized in this issue or have any questions please contact us!



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