



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.



“Towards optimal wellness... one goal at a time”

Ankle Sprain Management Protocol

An ankle sprain refers to micro-tearing of the ligaments of the ankle. The most common ankle sprain occurs on the lateral or outside part of the ankle. This is an extremely common injury which affects many people during a wide variety of activities. 50% of ankle sprains occur as a result of sporting activities and affect females at a higher rate than males. Basketball accounts for approx. 41% of all athletic ankle sprains followed by football 9.3% and soccer 7.9%¹.

A typical ankle sprain will occur over a 6-8 week period, depending on the nature and severity of ligaments involved. However, incorrect healing and rehabilitation can occur and can lead to chronic ankle instability (CAI) affecting approx. 61% of cases.

Hall and colleague (2015) conducted a randomized control trial to determine whether strength-training protocols affect strength, dynamic balance, functional performance, and perceived instability in individuals with CAI. The authors determined the evidence of chronic ankle instability utilizing the Functional Ankle Instability Questionnaire and divided participants into one of three groups: resistance training group, proprioceptive training group, and a control group. The training groups completed their exercise program 3 times per week for 6 weeks.

Their results indicated that both the resistance training and proprioceptive training groups improved with respect to strength and subjective pain scores ($p < 0.05$) when compared to the control group that did not perform any exercise interventions!

These results continue to support the need for strength AND proprioceptive exercise interventions to assist in reducing the likelihood of chronic ankle instability. The authors concluded “*Although the resistance-band protocol is common in rehabilitation, the proprioceptive neuromuscular facilitation strength protocol is also an effective treatment to improve strength in individuals with CAI. Both protocols showed clinical benefits in strength and perceived instability*”.

At NOI, our multidisciplinary approach fosters this protocol by incorporating advanced exercise training with manual joint and soft tissue mobilizations. Manual mobilizations will ensure that each client’s ankle joint is in optimal alignment to benefit from the rehabilitative exercise component of our programs.

¹Hall et al. **Strength-training protocols to improve deficits in participants with chronic ankle instability: a randomized controlled trial.** J Athletic Training, 2015; 50(1): 36-44.

NOI hosts Lumbar Spine Neural Tissue Course!



NOI was pleased to Host Dr. Bahram Jam and APTEI as they conducted an advanced course in the management of Lumbar Spine Neural Tissue Mechanosensitivity on June 5th!

The course provided current evidence in the clinical assessment and treatment of clients experiencing nerve-related pain. All NOI physiotherapists attended this innovative and dynamic course as a reflection of their continued dedication to offer the most comprehensive and evidence-based rehabilitative services!



Health Corner

Sun Safety

Sun safety is never out of season. With the summer upon us, there is an abundance of outdoor sports, family picnics, trips to the pool or days spent on the beach- which leads to sunburns and a number of other heat related illnesses.

Studies have shown that overexposure to the sun can cause skin cancer, eye problems, weakening of your immune system, and damage to your skin. These harmful effects are caused by the invisible ultraviolet rays that the sun releases. Here are a few tips to help avoid and minimize the harmful effects of the sun:

- ✓ Reduce your time spent in the sun: The sun is strongest between the hours of 10am and 2pm. Even when it is overcast, up to 80 percent of the sun's rays get through the clouds.
- ✓ Dress with care: Wear clothing that protects your body; there is now sun-protective clothing available. Consider using a wide brimmed hat or umbrella for shade.
- ✓ Generously apply sunscreen: Use a sunscreen with a sun protection factor (SPF) of 15 or more. An SPF 15 has been proven to block out 93% of all incoming UVB rays. SPF 30 keeps out 97% and SPF 60 blocks 98%. Be wise and don't forget to reapply sunscreen often!
- ✓ Protect your eyes: The sunlight reflecting off sand, water- and yes even snow will further increase your exposure to UV radiation and increase your chance of developing eye problems. When you are purchasing sunglasses, ensure that they offer 99-100% UV protection.

During the summer, the sun's UV rays are not the only element you need to be aware of. You also need to protect yourself from the heat as well! Prolonged and intense exposure to the heat without proper hydration may cause heat exhaustion or even heat stroke. Heat illness can almost always be prevented so drink plenty of fluids, keep in cool air conditioned buildings, and take rest breaks during activity!

Enjoy the summer months! Stay cool, stay hydrated, and stay safe!

Low Back Pain Classification for Nerve-related Pain

The nature of spinal pain can be both episodic and debilitating- yet despite significant clinical advancements in the past decade, this pain can remain chronic for 80% of the population. The difficulty lies within the widespread client experience for seemingly similar sources of nerve-related pain. For example, leg numbness or tingling can be either nociceptive (myofascial low back pain), neuropathic (lumbar nerve compression), or central sensitization pain (nerve processing deficit) yet the client experience remains the same².

It is therefore imperative for clinicians to differentiate between these types of pain in order to allow for the most clinically effective treatments to be employed. Nijs and colleagues (2015) conducted a comprehensive review of the literature to explain how clinicians can identify these differences in the clinical setting.

The initial step is to examine the presence of neuropathic pain. Lumbar radiculopathy is the most common syndrome which affects 20-35% of patients with low back pain. These patients show an approx. 80% success rate with physiotherapy care and do not require surgical intervention.

The next step in clinical diagnosis is to examine the presence of nociceptive or central sensitization. In basic terms, central sensitization is "*an amplification of neural signaling within the central nervous system that elicits pain hypersensitivity*" whereas nociceptive pain is related to actual myofascial or joint mechanical disruption.

The proposed classification algorithm by the authors is the first to look beyond a solely pain mechanisms diagnostic approach and look at a "top down" system to determine conservative management.

²Nijs, J. et al. **Low back pain: Guidelines for the clinical classification of predominant neuropathic, nociceptive, or central sensitization pain.** Pain Physician 2015; E333-E346.

