



# PHYSIO FOCUS

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

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## **NOI Fitness Classes**

### **May/June Class Schedule**

Please sign up at front desk!

#### **Pilates Mat Level 1**

##### **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.

#### **Hatha Yoga Level 1**

##### **Tuesdays at 7:00 pm**

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

#### **Mat Pilates Level 2**

##### **Wednesdays at 5:30 pm**

We will build on the principles in Level 1; exercise at a quicker pace to create a dynamic core workout. The focus will be on exercises to increase strength and endurance.

#### **Hatha Yoga Level 2**

##### **Wednesdays at 6:45 pm**

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

“YOUR BODY HEARS EVERYTHING YOUR MIND SAYS”  
– NAOMI JUDD

## **Physical Therapy for Meniscal Tears and Knee Osteoarthritis**

Meniscal tears are a highly prevalent condition impacting around 35% of persons older than 50 years of age; two thirds of these tears are symptomatic in nature<sup>2</sup>. Meniscal tears, similar to osteoarthritis (OA) of the knee, is routinely treated surgically with arthroscopic partial meniscectomy and debridement of the joint complex.

A multicenter randomized control trial was conducted to determine whether arthroscopic partial meniscectomy for symptomatic patients with a meniscal tear and knee osteoarthritis results in better functional outcomes than non-operative physical therapy.

The researchers assigned 351 patients, aged 45 years or older with a meniscal tear and mild-moderate OA, to one of two groups: a surgery and post-operative physiotherapy group or a standardized physiotherapy regime. These patients were then evaluated at 6 and 12 month intervals and compared based upon a physical-function scale (WOMAC).

**Their results indicated that both groups reported SIMILAR and noticeable improvements in knee function and pain levels at 6 months. These findings were also observed at the 12 month follow-up! Therefore, it was concluded that physiotherapy alone provided the same functional improvements and pain control as did surgery and post-operative physiotherapy!**

These results show that clients with an MRI confirmed meniscal tear and OA would benefit from a physiotherapy program instead of immediate arthroscopic surgery. It is important to note however that 30% of patients in the physical therapy alone group did opt for surgical intervention within 6 months.

Overall, these findings indicate that physiotherapy can play an essential role for clients with meniscal tears and osteoarthritis of the knee! With research showing the increased risk of expediting arthritis progression in clients following surgical intervention, physiotherapy is a safe and effective option to surgery!

<sup>1</sup> Katz JN et al., **Surgery versus physical therapy for a meniscal tear and osteoarthritis.** *The New England Journal of Medicine* 2013; 368 (18); 1675-1684.

<sup>2</sup> Englund M et al., **Incidental meniscal findings on knee MRI in middle-aged and elderly persons.** *The New England Journal of Medicine* 2008; 359; 1108-1115.



The heart of the physiotherapy profession is understanding how and why movement and function take place. Physiotherapists are highly skilled and autonomous health professionals who provide **safe, quality client-centred physiotherapy through a commitment to service availability, accessibility and excellence**. The profession is shaped by scientific evidence and the education and competencies of the physiotherapists delivering the services. Physiotherapy is grounded in the belief that, to be effective, its services must respond to the changing needs of populations and our health system.

### Guiding Rehabilitation for Clients with Rotator Cuff Tears

Shoulder pain and stiffness is a common complaint in society with the majority of these cases relating to the rotator cuff complex. Interestingly, not all clients with a rotator cuff tear are symptomatic. Current evidence suggests that MRI confirmed rotator cuff tears in people aged 40-60 years is around 28% and peaking to 54% those over the age of 60<sup>3</sup>.

With literature showing that around 23% of these asymptomatic clients will develop pain over a 2-3 year period, it is essential in identifying modifiable risk factors that can be treated conservatively with physiotherapy<sup>4</sup>. This becomes of paramount importance to assist these clients in avoiding surgical intervention altogether or assisting in a positive outcome following surgery.

A recent cross-sectional study aimed to determine which factors correlate with pain and loss of function in patients with symptomatic, full thickness rotator cuff tears. The results of this relatively large study revealed numerous clinically valuable modifiable risk factors that can be improved with physiotherapy treatment.

**These modifiable factors that correlate with pain and functional improvements include: scapulothoracic dyskinesia, active abduction, and strength in forward elevation and abduction.**

Therefore, physiotherapy intervention in clients with symptomatic and asymptomatic rotator cuff tears should target these modifiable factors associated with pain and loss of function! The Niagara Orthopaedic Institute offers the most comprehensive, individualized assessments in clients with a rotator cuff tear to determine the most evidence-based rehabilitative strategy to assist in functional recovery and pain control!

<sup>3</sup> Sher et al., **Abnormal findings on magnetic resonance images of asymptomatic shoulders.** *J Bone Joint Surg AM* 1995; 77: 10-15.

<sup>4</sup> Yamaguchi et al., **Natural history of asymptomatic rotator cuff tears: a longitudinal analysis of asymptomatic tears detected sonographically.** *J Shoulder Elbow Surg* 2001; 10:199-203.

<sup>5</sup>Harris J, Pedroza A, & Jones GL. **Predictors of pain and function in patients with symptomatic, atraumatic full-thickness rotator cuff tears.** *Am J Sports Med* 2012; 40(2): 359-366.



## Health Corner

### Exercise of the Month!



TRX Sprinters Start

With the ever-changing dynamic of the rehabilitation industry, the focus is on functional rehabilitation that incorporates multi-joint movements while activating the core. While isolation-based exercise still remains a component of rehabilitation programs, safe and effective return to sport depends on sport-specific functional training. This progression in rehabilitation deals with sport simulation through dynamic, multi-segmental movement patterns. These patterns are sequenced, or cross-trained, to ensure cardiovascular initiation during the exercise process.

The essence of functional-based rehabilitation is the one-on-one nature of this training. A qualified personal trainer with knowledge in biomechanics, sport injury management, and exercise physiology is essential to optimize a functional program to meet the individual's sporting needs. This specialized type of personal trainer is necessary to make continual alterations in the individuals training during each session based upon ongoing assessment of exercise performance. These in-session alterations will ensure adequate physiological loading and cardiovascular activation. Essential in any sporting environment!

The Niagara Orthopaedic Institute employs the highest trained personal trainers in the Niagara Region that specialize in both individual and team-sport training. With registered Physiotherapists onsite to provide clinical injury assessment, the personal trainers utilize a team approach to maximize their sport training and return to sport programs!

Pictured is a functional-based exercise using a TRX suspension training apparatus, which simulates explosive power while engaging the core muscle group, enhancing balance and proprioception, and also strengthening the lower body. This movement pattern shows extremely high EMG values which indicates significant multi-joint muscle activation!

**Book a personalized biomechanical assessment today with one of NOI's highly trained personal trainers and see how you can incorporate this form of training into your fitness program!**

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