



# 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/Fall 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.



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“Age is no barrier. It’s a limitation you put on your mind.”

**Adding Intent to Physical Training**

Remember your last training session? Doing some random exercise while thinking of all the other places where you would rather be? Or while watching television in the mirror? Or even worse, trying to exercise while your training partner is screaming “it’s all you bro!” at you?

How often do you exercise in a distracted state of mind? Do you go to the gym for training or for entertraining?

When we consider the results we expect to get from physical training, I think it’s fair to consider what physical training expects of us.

Intent is a critical component in physical training and beyond. It means applying great energy – not just physical but also mental, and emotional - and determination to your workouts; an intense mental focus and desire to get it just right. Employing strong intent in your training tremendously magnifies its results and impact. Appropriate input from your mind stimulates your nervous system, which is what tells the muscle fibres to contract. This means that the stronger your mental drive, the more muscle fibres you activate and the more vigorously they contract. Without intent we are more likely to take the dysfunctional path of least resistance and that just won’t get us very far.

Part of intent is not getting distracted. Not engaging in conversations during your sets. Not letting your mind wander. Keeping your head in neutral position. Being fully present in your body. Pretend you’re being chased by a lion – it would be life-threatening to start thinking about anything else other than the task of outrunning and outsmarting the animal. Same applies to physical training - it’s dangerous to tilt your head in the middle of the set, to let your knee wander off-track, to let your core not support your moving body. Many people will have full blown conversations in the middle of a set which is the ultimate in risk. Or they vacuously stare into space thinking about things unrelated to what they are doing at present moment.

Why should you care about all of the above? I think we should expect positive outcomes from physical training, and we can’t do that without considering what physical training expects of us. This is exciting because training with intent puts us in a position of not being victims of “not seeing any results” and affords us full control over creating the kind of results we like to see.

## Exercise of the Month: Ankle Mobilization!



Ankle mobility, more specifically dorsiflexion, is an integral part and movement in optimizing our whole lower quadrant functional chain. A lack of dorsiflexion, or upward movement of the ankle joint, has been linked to plantar fasciitis, Achilles tendinopathy, knee pain, sciatica, and many hip-related impairments. As such, regaining this vital physiological movement is not only essential but required!

This simple yet effective exercise shown above increases ankle dorsiflexion but providing a joint glide (with a band) while stretching into physiological range. The stretch can be held from 10-45 seconds and repeated 3-8 times depending upon condition. This movement should never cause pain! Ask one of our NOI practitioners today for a personalized demonstration!

### Top 10 Causes of Cartilage Loss

Cartilage loss in any joint in our body can lead to significant pain, physical restrictions, and an overall reduced functional capacity. These deficits can often lead to arthroscopic surgeries and total joint replacements. Regenexx, worldwide leader in stem cell procedures, has compiled a list of the top ten causes of cartilage loss. Here is what their data collection and evidence-based compilation suggest are the top ten causes:

1. Obesity (mechanical): increased wear and tear on the joints.
2. Obesity (metabolic syndrome): changes in insulin response breaks down cartilage.
3. Trauma: sudden trauma or injury can cause a weak spot in the cartilage that can break down even with normal forces being transmitted within the joint.
4. Joint Instability: injured ligaments around the joint cause the joint to become unstable and to “move around too much” which leads to wear and tear.
5. Nutrition: vitamin E and C deficiencies can contribute to premature cell death and cartilage matrix breakdown.
6. Medications: certain medications can be toxic to joints. Surprisingly these include local anaesthetics, non-steroidal anti-inflammatory drugs (Naproxen, ibuprofen) and steroids.
7. Hormonal Changes: the body can lose its responsiveness to leptin which research has shown to lead to more arthritis.
8. Repetitive Trauma: higher levels of loading can damage your cartilage (ie running) which is more pronounced following surgery.
9. Biomechanics: poor alignment of your joints can cause increase wearing in certain parts of that joint.
10. Age and Genes: as we age cartilage loss is a common occurrence.

The important part to take away from the list above is that individuals can modify or change 9 of the 10 contributing factors through diet and exercise. Ask your NOI practitioners how you can get on a joint cartilage preservation program!

## Health Corner

### Iron Deficiency and Anemia in Female Athletes

Iron is an essential nutrient required from our diet. Without enough iron, your body can't produce enough haemoglobin in red blood cells that are responsible for carrying oxygen from the lungs to the rest of your body. A deficiency in iron can leave you feeling tired, weak and short of breath, not a great recipe for athletes trying to achieve maximum results.

The causes of iron deficiency include: blood loss, a lack of iron in the diet, inability to absorb iron, and pregnancy. Female athletes are at a greater risk because of blood loss from monthly menstruation; plasma expansion that occurs during training; increased perspiration leading to iron loss; foot strike hemolysis where repeated pounding on the feet can destroy red blood cells and leach iron; and inadequate iron uptake either through the diet or poor absorption secondary to gastrointestinal disease. Another cause for low haemoglobin is pseudoanemia which occurs from exercise-induced fluid retention causing dilution of the blood. Simple blood tests can determine the type of anemia that one might have and if iron supplementation is required. A Naturopathic Doctor can monitor blood tests, recommend an appropriate iron formula that is specific to the individual and work on addressing the root cause of anemia to get you in your best shape possible.

Harefuah. 2003 Oct;142(10):698-703, 717, [Iron deficiency and anemia in female athletes--causes and risks]. Portal S, Epstein M, Dubnov G.