



PHYSIO FOCUS

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

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NOI Fitness Classes

Fall/Winter 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.

Meditation for Healing

Mondays at 6:35 pm

This experience is truly unique in that you will learn to use your breath and awareness to connect to the healing power that lies within you. The focus will be on unlocking this inherent healing potential inside all of us.

Hatha Yoga

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.



“HEALTH IS A STATE OF COMPLETE PHYSICAL, MENTAL AND SOCIAL WELL-BEING, AND NOT MERELY THE ABSENCE OF DISEASE OR INFIRMITY.
-WORLD HEALTH ORGANIZATION

Are you getting enough Vitamin D?

Jennifer Cox, BSc., ND

Vitamin D deficiency has now become a North American epidemic. For optimal vitamin D levels, adults and children require a minimum of 20-30 minutes per day of sunlight exposure. As we approach daylight savings time, concerns around lack of sunshine begin to arise.

Vitamin D deficiency is most commonly known to be associated with poor mineralization of collagen production in children with rickets, along with osteoporosis, fractures, muscle weakness and hyperparathyroidism. Newer research demonstrates a connection between vitamin D deficiency and the risk of type I diabetes, multiple sclerosis, rheumatoid arthritis, hypertension, cardiovascular heart disease, and many forms of cancer.

So how much vitamin D do you need? The answer is different for everyone. Risk factors for vitamin D deficiency are found in North Americans; shift workers or people who spent most of their day inside; people with naturally dark skin as darker skin provides an added SPF of 15; people with gastrointestinal ailments who have compromised nutrient absorption; and people taking certain prescription medications such as topical corticosteroids, rifampicin (antibiotic) and anticonvulsants that deplete vitamin D. The best way to find out what dosage is right for is to first determine if your vitamin D levels are optimal. Serum concentration of 25(OH)D is the best indicator of vitamin D status. It reflects vitamin D produced cutaneously and has a fairly long circulating half-life of 15 days. However, just as a vitamin D deficiency can exist, so can over-supplementing with vitamin D. Too much vitamin D can lead to increased serum calcium, a concern for kidney stones and atherosclerosis (hardening of the arteries). Once you have established your vitamin D status, you can discuss dosing recommendations with your Naturopathic Doctor of healthcare practitioner. Keep in mind that for optimal vitamin D absorption, one should seek a vitamin D3 (cholecalciferol) supplement that is suspended in a fat soluble liquid like medium chain triglycerides (MCTs). This is because vitamin D is a fat soluble vitamin and thus requires fat to be absorbed. In my clinical experience, tablets rarely do the job unless taken at a higher dose, along with another fat source.

References:

<http://ods.od.nih.gov/factsheets/VitaminD-HealthProfessional/>

<http://jn.nutrition.org/content/135/11/2739S.full>

<http://umm.edu/health/medical/altmed/supplement-depletion-links/drugs-that-deplete-vitamin-d>

NOI Feature Athletes for November Daniel Brown and Mike Varalli



Daniel Brown is a 23 year old athlete who was born and raised in Niagara Falls. While in his final year at Niagara College, he suffered a knee injury playing soccer. Daniel tore his ACL, MCL and meniscus. This injury ultimately resulted in knee reconstruction surgery. Jeff and his team at NOI helped him prepare for surgery. While recovering Daniel discovered Crossfit. He began to use Crossfit as a strength and conditioning program by building off of the techniques and exercises that he learned from NOI.

Michael Varalli is a twenty-seven year old Crossfit affiliate owner of Crossfit Reva. After being introduced to Crossfit four years ago by his sister, he soon began to dedicate all of his training to becoming the best Crossfit athlete he could be. *“When pushing your body to the limits you’re more susceptible to injury, and that’s where NOI has been a huge factor in keeping me healthy.”*

Protein Consumption and your Health!

There is a lot of information today about protein and the importance of ensuring we get enough daily, but what exactly it is and how and when should consume protein is important. In basic terms proteins are large complex molecules made up of amino acids attached together in long chains. These molecules play multiple crucial functions in the body. Proteins build, maintain and replace tissues in the body. Proteins are described according to their function in the body and have three main classes, globular, fibrous, and membrane. Globular proteins are soluble and many are enzymes. Fibrous proteins are structural and a major component of connective tissue or keratin a major component of hair and nails. Membrane proteins are receptors that pass molecules across cell membranes.

The best sources of protein are beef, poultry, fish, eggs, dairy, nuts, seeds and some legumes. Eating proteins between meals helps to keep a steady supply to the muscles to keep them strong and sustain you until your next meal. Consuming protein 30 minutes post workout will also help your muscles heal and become strong maximizing the effect of your workout.

Dort and colleague (2013) found that cod protein was the most effective form of protein for muscle repair and inflammation. Furthermore, cod protein up-regulated ($p=0.037$) myogenin expression at day 5 post-injury compared with casein. In the cod protein-fed group, these changes resulted in greater muscle mass at days 14 ($p=0.002$), and 28 ($p=0.001$) post-injury and larger myofiber cross-sectional area at day 28 post-injury compared with casein ($p=0.012$). This data indicates that the anti-inflammatory actions of cod protein, are driven by its high levels of arginine, glycine, taurine and lysine.

Adding appropriate protein sources to your diet is an essential part of your physical health whether you are rehabilitating an injury or pursuing optimal health and wellness. A visit with a Naturopathic Doctor at NOI can help determine deficiencies from a cellular level. A simple and delicious protein snack is outlined below in the Health Corner that is time efficient and easy to pack for a snack!



Health Corner

Peanut Butter Protein Bars

Here is a simple recipe for protein bars to keep handy as a healthy snack to keep you feeling full until your next meal.

Ingredients

- 1 ½ cups gluten free rolled oats (blended into a flour) or oat flour
- ½ vanilla protein powder (about 2 scoops)
- ½ cup rise crisp cereal broken up or puffed quinoa
- ½ tsp fine sea salt
- ½ cup natural peanut butter (can use almond butter)
- 1/3 – ½ pure maple syrup (or liquid sweetener of choice ie. Honey)
- 1 tsp pure vanilla extract
- 3 tbsps dark chocolate chip – optional
- ½ tbsps. Coconut

Total time: 15 min **Servings:** 12-16 depending on size you cut bars

Mix the oat flour, protein powder and the salt together with a whisk. Add the other ingredients together and stir. Press in an 8x8 inch pan. Refrigerate for about 15 mins and then cut into bars. Wrap in clear wrap (2 bars per pkg.) and either place in fridge or place pkg. in a freezer bag and freeze.

Note: if using chocolate for the topping, melt and with a fork sprinkle over top the bars.

