

healthier YOU

your healthy living newsletter

PREVENTION OF RUNNING INJURIES

There are 3 factors that lead to running injuries:

- ❖ Training errors such as overtraining (too much too soon) but also training type (e.g. hill training, speed work)
- ❖ Individual predisposition such as muscle imbalances, flexibility and biomechanical factors
- ❖ Running shoes and surfaces

A good guideline to follow to prevent training errors is to increase the duration of your run by no more than **10% per week** and **3% (of total volume) per week** for intensity. It is also important to be progressive with hills with gradual increases in hill training volume.

In regards to individual predisposition, there are a realm of possibilities that can influence your risk of injury. The most common reason for injury is weakness in the core, buttocks and foot muscles. Weakness in these muscles can lead to injuries such as patellofemoral syndrome (knee pain), iliotibial band syndrome (pain on the outer or lateral side of the knee), medial tibial stress syndrome (shin splints) and plantar fasciitis (foot pain).

The last factor that can lead to running injuries is running shoes and surfaces. Motion control or cushioning in running shoes can influence your situation. It is also important to vary surfaces that one runs on so that it decreases repetition. Trails are a good surface to run on, as they provide a slightly softer surface as well as variability in the run.

Tierney Bowen is a Physiotherapist with a particular interest in the prevention and treatment of running related injuries. For more information please email her at info@bowenphysio.ca



Regenerative Medicine

On the Forefront

How long will it be before scientists are able to swab the inside of your mouth, take a single cell and turn it into another one of you? This routine is well-established science now. For obvious ethical reasons no one has actually used "cloning" to produce humans. Scientists however have taken adult skin cells from mice and transformed them into a new kind of stem cell called an induced pluripotent stem (iPS) cells. Those iPS cells have been allowed to develop into healthy adult mice.

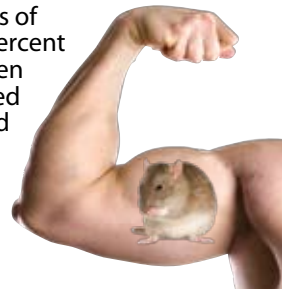
What is currently being investigated is to take iPS cells, which are fundamentally similar to embryonic stem cells, and program it to repair aged or damaged tissues. Potential iPS cells could be grown; this could lead to rejuvenating organs such as your heart. These cells could be programmed to become fresh cartilage, another cell type that does not regenerate.

It is interesting to note that every cell in your body; cartilage, kidney, heart, skin and bones, started out as a stem cell.

MUSCLES

Where Did They Get Their Name?

Did you ever wonder where some medical terms come from? What about the simple term "muscle"? In the average adult male body, there are forty –five pounds of bone compared to sixty –five pounds of muscle. The average female is fifteen percent less. We call them muscles because when a Roman physician saw how they rippled under the skin when flexed, it reminded him of the skittering of a small mouse, or musculus. En route to English, the small mouse musculus became muscle.



Prevention of Running Injuries Assessment includes

- Biomechanical Analysis
- Running Video Analysis
- Education on Running shoes
- Individualized Exercise Program



Location: LifeMark Physiotherapy – Southland
2000 Southland Drive

Contact: Tierney Bowen, BScPT
info@bowenphysio.ca for an assessment



Big Bang from Little Berries

That bright red juice sitting on the shelf has been shown to **pack a large punch** when it comes to health effects. Cranberry juice contains a large dose of **antioxidants**, one of the highest of any fruit on record. In laboratory studies, these antioxidants have been shown to perform miracles, doing everything from limiting the growth of several types of tumours to inhibiting atherosclerosis, the hardening of arteries that puts people at risk for heart attacks and strokes.

There's an issue however that is common to all dietary supplements. What scientists see in the lab doesn't always happen in your body as the digestive tract breaks down some of the beneficial chemicals before they can be exported into the bloodstream. Researchers have examined how much of this happens with cranberry juice but the jury is still out, as conclusive effects have yet to be consistently demonstrated.

The one health benefit that does seem to have been well documented though is the potential to reduce the risk of Urinary Tract Infections (UTIs). 90-480ml of sweetened cranberry cocktail or 15-20 ml of 100% unsweetened juice has been recommended as sufficient to reduce the risk of UTIs by 50%.

While there's still much to be discovered about the health effects of cranberry juice, there seems to be a lot of potential in these little berries and little risk with the exception of all the sugar that is added to the cocktails to make the taste more palatable.



These Small Berries Pack a Punch

VITAMIN D

LET THE SUNSHINE IN

A recent study in the New England Journal of Medicine notes that optimal **vitamin D** serum blood levels, **attained through sunlight** and supplementation, **dramatically reduce** the risk of **most serious diseases** by an unprecedented **50 – 80%**. These diseases include osteoporosis, osteomalacia, hypertension, and a range of cancers from breast and colon to melanoma skin cancers.

There is no simple prescription in terms of sunlight exposure or vitamin D supplementation because age, skin color, body weight and even geographical location play huge factors in your circulating blood levels, which should be at least 40ng(nanogram)/ml of 25-hydroxy vitamin D. Ideally, you should consult a physician who can prescribe blood tests to see where your vitamin D levels are.

YOUR SHORT TOES ARE BUILT FOR *RUNNING*

Humans have the shortest toes of any of the primates. Researchers have often speculated this is because humans spend their time walking on their feet and not using them to hold onto tree limbs like our furry cousins. However, a group of American and Canadian researchers have found that what our short toes really allow us to do is run. While long toes help improve stability they also increase the energy cost of walking and running. For walking this is a minimal increase but for running, a 20% increase in toe length doubles the work that has to be done by the muscles that control toe movement.

So you may not be able to swing from the trees well but humans are amongst the most efficient runners on Earth, and it's partly because of our short toes.



ABOUT OUR EDITORS

DR. MICHAEL WESTAWAY PT, DSC, FCAMT

Dr. Westaway is a Physiotherapist and researcher at LifeMark Village Square & Westside in Calgary. He has a special interest in neck pain and rehabilitation.

KRIS HEAD B.ScPT, M.Sc.

Kris is the Clinic Director of LifeMark Physiotherapy - Village Square in Calgary. In addition to treating patients, he is an active researcher and instructor with a special interest in shoulder rehabilitation.

Coming up in our next issue:

Heart Health - Cholesterol
The Science of Napping

lifemark.ca

If you have a pre-existing medical condition/injury or are in pain, please consult your health care professional prior to changing your diet or commencing any exercise.

If you wish to receive future mailings please contact us at:
info@lifemark.ca or 1.800.265.9197

LifeMARK
HEALTH

