

I was cold, tired and sore. The wind was so strong that I felt like I was being pelted by hail, not rain. I had goose bumps starting to appear all over my arms due to the chill factor. I had radiating pain shooting down my right leg from hip to knee. A peculiar sensation that somewhat resembled a cross between neural pain and being stabbed in the knee with a knife. Every step was excruciatingly painful and had rendered me almost completely unable to run. The best I could manage was a sort of limp – a half run, half walk type movement in a vain attempt to protect my injured knee. As the rain passed and wind subsided, the sun broke through the clouds, and temporarily lifted my spirits. That was until I passed a street sign that read “Apollo Bay 24”. I had 24 kilometres that I still needed to run in order to finish the Great Ocean Road Marathon – my first marathon. I wasn’t even half way yet...

12 months earlier I succumbed to ITB issues for the first time. In my left leg though. That was in 2015 when I first started to take running more seriously. I had signed up for the Salomon Trail Running Series and elected to run the furthest distance in all 4 races. I ran a PB in Race 1 in Studley Park (14.7km) and was feeling pretty good about myself. 1 week later I set out for an 11km long run only to end up limping by 4km, and having to turn around and walk back home. I was forced to pull out of Races 3 and 4 due to the immense pain in my left knee. At the time I was still completing my health science degree at University. Because I majored in physiology and anatomy (and being quite stubborn) I considered myself knowledgeable enough to fix the problem myself. Sadly I wasn’t quite equipped with the expertise to deal with this injury on my own. I was also moving house during this period, and the pain I felt in my knee whilst moving furniture up and down stairs (I had previously only felt it when running) was the final straw to swallow my pride and go see a physio.

Despite a growing passion for running, my primary health and fitness passion at this point in my life was lifting weights. I wanted a barrel chest, wide back and big arms, so I was always doing heavy bench presses, chin-ups and bicep curls. I very rarely set foot in the squat rack. Running was my “leg day”. When I did meet with the physio for the first time she asked me to perform a few leg exercises and couldn’t help but smirk at my appalling leg strength (remember I was studying Health Sciences at Uni and was undergoing my Personal Training qualification by this point as well). To cut a long story short, I begrudgingly got in the squat rack at the gym and started to focus more on squats and lunges. In addition I was told to foam roll my excessively tight ITB, received dry needling and MYO therapy every week and had to spend 2 months gradually building up my running from a few hundred metres to the 23km that I was finally able to run at Angelsea for Race 4 for the Salomon Trail Running Series, and a 24 minute improvement in my half marathon PB at the Melbourne Marathon Festival.

I saw the same physio last year after Great Ocean Road and was told the same thing I had been told in 2015. I had very weak glutes and over-developed quadriceps. The lack of strength exercises to build my glutes and hamstrings had resulted in my quads doing all the work while I was running, which in turn caused my ITB to tighten excessively – hence the pain in my knee. Since then, I’ve always incorporated strength training into my weekly training, and have run an additional 3 marathons (improving my time with every race, completely injury free).

As a society, many of us are spending most of our time in a seated position. At which point our hips and knees are *flexed*. What this means is that our hip flexors and quadriceps are contracting and activated, and our glutes and hamstrings are relaxed (and essentially switched off) and progressively weaken over time as a result. With every stride we take when running, we *extend* through the hip and knee joints, recruiting our glutes and hamstrings predominantly. However, due to the weakness attributed to these muscles with the inactivity in our daily lives, the constant load bearing of an activity, such as running, often leads to injuries in runners.

I'm sure this is something many of you will be familiar with, and yet strength training still gets neglected. Having worked with a number of runners during my time as a personal trainer, I've encountered a number of reasons as to why many athletes choose not to train with weights. The main one being a fear of becoming too muscular. Endurance runners worldwide are renowned for their lean, small frames and low levels of body fat which optimise their performance. It goes without saying that by building muscle and developing larger muscles we will get heavier (which would be a predisposition for injury). However, for muscle gain to occur, we must be in a state of considerable *calorie surplus*, where we are consuming more calories than we are expending. Very few runners fall into this bracket. Most of us will be expending more energy than we are consuming, making it physiologically impossible to gain excessive amounts of weight from muscle.

Another factor to consider is the optimal amount of weight to be lifting, how frequently, and for how many sets and repetitions. I'll elaborate more on this in my second article (Strength Training for Performance), but it's not uncommon for runners to enter gyms and lift weights aimlessly with the best of intentions, but not actually maximise the benefits due to how they are lifting the weights. When considering training with weights to improve strength from an injury prevention perspective, one of the major benefits is the effect that lifting weights has on our metabolisms – our body's ability to burn energy. The faster our metabolism, the more efficient we are at burning fat as fuel. I referred earlier to the lean, light framed runner without an ounce of body fat on them. 70% of our metabolism is actually attributed to our lean muscle. Therefore, the more lean muscle we're able to build through strength training, the faster our metabolism will be, and so we'll be able to burn body fat at a much faster rate. And the less body fat we have, the lighter we'll be. This in turn, is a great injury prevention method.

To summarise, strength training has a number of benefits for runners to help prevent injury. The main one is building strength through our hamstrings and glutes. Groups of muscles that are often weaker in most of use due to the nature of our modern lifestyles. By building strength through these muscles we are able to rectify any imbalances we may have in our legs with over-dominant quads and hip flexors and under-active hamstrings and glutes. Essentially, the stronger these muscles at the back of our leg are, the more of the load they will take with each stride, sparing our more fragile joints. In addition, by building strength, and increasing our lean muscle mass, we substantially increase our metabolisms which has a really positive effect on our ability to burn body fat as fuel.

Stay tuned for my next article and more information to come on practical workshops to help you with your strength training and in turn help your running!