**Lateral ankle sprains**

An ankle sprain is the most common single type of acute sport trauma, accounting for 14% of all sport-related injuries [1]. What is of more concern is that once you have sustained one ankle sprain, you are at a higher risk of sustaining another. Approximately 30% of those who suffer a first-time ankle sprain have recurrent injuries and ongoing problems [2-4]. In sports such as basketball and netball, recurrence rates have been reported to exceed 70%, due to the frequent changes in direction, jumping and sprinting [2].

The majority of running injuries are associated with overuse but some runners sustain traumatic injuries. Running on flat ground does not often result in an ankle sprain but running on uneven ground, stepping in a pot hole, tripping over a tree root or missing the kerb can all potentially lead to an ankle sprain.

The most common cause of ankle sprain is incorrect foot positioning, resulting in a rolling in of the foot and ankle, known as an inversion injury. This mechanism can cause damage to the lateral (outside) ankle ligaments. A sprain occurs when loads applied surpass the mechanical strength of the ligament [5]. Sprains are usually graded based on the severity of the injury - over stretched (grade 1), partially torn (grade 2) or completely torn (grade 3).

 **Management:**

After an ankle injury, it appears that the majority of individuals think along the lines of “it’s just a sprain and it will be fine”, either ignoring the injury or self-treating. Of concern is that at least 30% of simple ankle sprains become chronic long-term problems due to lack of treatment [6]. It is thought that as many as 55% of individuals suffering a lateral ankle sprain may not seek treatment from a healthcare professional [7].

Management of acute ankle sprains typically involves rest, ice, compression, elevation (RICE), and functional rehabilitation.  It appears that the functional rehabilitation component is often forgotten with people returning to normal activities once their ankle pain has ceased or reduced. Maybe we should be encouraging a new acronym – RICER – the final R for rehab or referral to a health professional!

An ankle sprain injury results in damage to the ligaments on the outside or lateral side of the ankle. Rehabilitation is necessary to ensure the ligament heals correctly and pre-injury function is restored [8]. Whatever the severity of the sprain, whether grade 1, 2 or 3 (see previous blog), it is important to complete a rehabilitation programme that includes strengthening and balance re-training, to prevent ongoing problems.

There is no such thing as a simple ankle sprain - treat the injury with respect to avoid ongoing problems. Of interest, recent research has proven that people who repeatedly sprain their ankles walk and run differently from those who don’t sprain frequently [9]. These altered patterns can place unnatural loads on other joints and muscles in the body increasing the risk of other injuries.

A great way to help rehab your ankle is to try and balance on the injured leg whilst brushing teeth (approx 2 mins!), once this becomes easy progress to eyes shut. Do the same to compare the injured side to the uninjured – is there any difference in your balancing ability?

1.         Fong, D.T.P., et al., A Systematic Review on Ankle Injury and Ankle Sprain in Sports. Sports Medicine, 2007. 37(1): p. 73-73.

2.         Hertel, J., Functional anatomy, pathomechanics, and pathophysiology of lateral ankle instability. Journal of Athletic Training, 2002. 37(4): p. 364-375.

3.         Peters, J.W., S.G. Trevino, and P.A. Renstrom, Chronic lateral ankle instability. Foot Ankle, 1991. 12(3): p. 182-91.

4.         Beynnon, B., D. Murphy, and D. Alosa, Predictive factors for lateral ankle sprains: A literature review. Journal of Athletic Training, 2002. 37(4): p. 376-380.

5.         Dubin, J.C., et al., Lateral and syndesmotic ankle sprain injuries: a narrative literature review. Journal of Chiropractic Medicine, 2011. 10(3): p. 204-219.

6.         Hertel, J., Functional anatomy, pathomechanics, and pathophysiology of lateral ankle instability. Journal of Athletic Training, 2002. 37(4): p. 364-375.

7.         McKay, G.D., et al., Ankle injuries in basketball: injury rate and risk factors. British Journal of Sports Medicine, 2001. 35(2): p. 103-8.

8.         Mattacola, C.G. and M.K. Dwyer, Rehabilitation of the Ankle After Acute Sprain or Chronic Instability. Journal of Athletic Training, 2002. 37(4): p. 413-429.

9.         Chinn, L., J. Dicharry, and J. Hertel, Ankle kinematics of individuals with chronic ankle instability while walking and jogging on a treadmill in shoes. Physical Therapy in Sport, 2013.