

3 tips to reduce knee pain

Knee pain is highly prevalent amongst the athletic and general population. Whether due to a traumatic injury or of insidious onset there are things we can do to prevent knee pain onset and reduce its severity if it occurs. Below are three quick tips that you might find useful.



Tip 1: Mobilise the ankles and hips

Ensuring good mobility at the joint above and below the knee will reduce the amount of work the knee has to do with certain activities. The knee joint is built for stability, whilst the hip and ankle joints, the joints above and below the knee, favour mobility. If mobility is lacking at either of these joints the body may compensate and try and recruit mobility via the knee joint. We know that excess mobility at the knee particularly with reference to rotation, predisposes knee injuries, so we want to limit loading through the knee where possible.

Ensuring good hip and ankle mobility will aid force distribution during sporting movements such as running, squatting, lunging, cutting, landing and changing direction. In short, the more we can get the hips and ankles to mobilise the less likely the knee will need to.

Half kneeling stick mobilisation



Tip 2: Improve tissue quality

The better tissue quality at the muscles around the knee joint the less force will be transmitted through the knee. Excessive quad tightness due to poor tissue quality increases force generation at both insertional sites at both the femur/pelvis and at the patella/tibio-femoral (knee) joints. In addition, excessive tightness in the quads will feed an anteriorly rotated pelvis position leading to further force transfer through the knee secondary to poor pelvis and hip positioning.

There are a variety of ways to improve tissue quality; soft tissue massage, instrument assisted soft tissue release, stretching and self myofascial release techniques. Whilst there is no substitute for hands on tissue work, we may all not have the luxury of access or money to pay for such services. However, self myofascial techniques are cheap and on the plus side can be administered frequently. The use of a foam roller is a great tool to improve tissue quality.

Quad foam rolling



Tip 3: Use the knee less

Many knee injuries are the result of overuse. Thus, if we can make the knee do less work the chance of gaining a knee injury is reduced. I have already mentioned the importance of having good mobility at the hip and ankle joints in sparing knee workload. In addition, ensuring good movement patterns is also key. Even with the greatest tissue quality and hip/ankle mobility if you put the knee in a vulnerable position as a result of a poor movement pattern the knee will injure.

The squat and lunge are common and fundamental movement patterns. Used extensively in sport and in a gym setting to improve lower limb strength and stability if performed incorrectly they can cause knee issues. Commonly with the lunge or squat patterns many athletes will allow the knee (s) to ride over the toes. This increases force through the knees and in addition increases knee valgus forces. We know that putting the knee in a valgus position is a vulnerable position for the joint and increases the risk of serious knee injury i.e.

ACL, meniscal. The inability to keep the knee and hip in a good strong position is imperative for any athlete involved in sports that require cutting, turning and changes in direction/speed.

The picture below shows a rear foot elevated split squat. Note the position of the front leg. The aim is to keep a relatively vertical shin angle so that the load is evenly distributed between the hip, knee and ankle joint. Keep the chest tall as excessive forward lean will lead to quad overuse and also feed the anteriorly rotated pelvic position we are largely trying to prevent.

Rear foot elevated split squat



In summary, the aim is to use the joints above and below, the hip and ankle, as much as possible during activity. In addition, ensuring good tissue quality around the knee will reduce force transmission through the joint and reduce injury incidence.

Thanks for reading

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