

Straighten up and read on ...

Andrew Holbrook



In previous articles we have discussed overuse injuries and some of the most common causes. Among the most significant that we see in clinical practice are issues of alignment. If we use the lower limb as a common example the misalignment may be in the feet, for example flat or excessively pronating feet, or the problem may arise at the hip or pelvis. The effect of these is seen most clearly at the knee and will often present as a knock-kneed (valgus) appearance, visible with normal walking and magnified with higher impact activities such as running and jumping.

The truth is, many people have some form of misalignment. For most, this does not lead to any significant problems. However, it is also common for people with valgus knees to develop symptoms over time. There are many factors which contribute to these such as; genetic predisposition, muscle control, skeletal maturity and activity levels. All of these factors interact to affect the risk and degree of injury severity.

A high proportion of injuries in the lower limb involve the tendons or the junction of the tendon with the bone. To minimise the stress on these structures it is essential the limb is well aligned. For example the position of the knee with relation to the shin is crucial – a neutral and therefore optimum alignment is achieved where weight is transferred directly through the middle of the joint.

A simple test that you can use at home and that we use in clinical practice is to have the patient stand on one leg and perform a single leg squat. Optimum alignment would see the knee aiming for the middle toes. Commonly, however, the knee rotates inwards, the thigh rotates in and the arch of the foot collapses.

This creates uneven stresses throughout the whole lower limb: in the foot /ankle the

structures on the inside are overstretched, in the Achilles tendon there will be an imbalance of forces between the inside and outside of the tendon (often leading to tendon pain), in the knee there are likely tracking issues of the patella and potential patella tendon injury. The hip and low back may also be affected. In the growing child symptoms are often magnified as the body shape is changing all the time. An example of this is the widening of the female pelvis. This will elevate the inward rotation of the thighs and therefore knee valgus. This provides one of the reasons why knee pain in adolescent girls is so common.



At Tudor Physiotherapy we will assess all injuries with a combination of detailed examination and biomechanical analysis. This will, hopefully, establish the root of the symptoms and therefore rehabilitation can include an injury prevention strategy. This may include orthotic provision to optimise the foot position and help realign the knee and will always include an exercise program designed to strengthen, stretch, balance and control the relevant muscle groups.

We understand that many of your children will show some of the above signs and whether symptomatic or not you may decide you want to seek some expert advice. This is where we can help. For school children up to the age of 18 we have set up a FREE triage clinic at Tudor Medical Group, Stratford upon Avon. Our Chartered Physiotherapists will assess your son or daughter and will give advice on all aspects of sports injury management / alignment issues. For full details of this service please refer to our ad on the opposite page.

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