

GET YOUR RUNNING TECHNIQUE RIGHT TO AVOID INJURY

By Simon Burley Physiotherapist

The joints are most at risk of injury are the weight-bearing joints. There is twice as much force on the hip and ankle and six times as much force on the knee with running compared to walking.

Although there is most force on the lower limbs during the push-off part of running (i.e. when the foot pushes off the big toe to propel the body forward) it is the heel strike phase that causes the problems. This is because of the jarring effect.

This jarring is absorbed by a number of factors:

- the fat pad under the heel;
- normal rolling in (pronation) of the foot.
- slight bending of the long bones of the leg.
- The quadriceps muscle.

Running has two effects on joints. The cartilage can be thinned by excessive pounding but at the same time the supportive structures, the ligaments and muscles are strengthened.

Research has shown that if you have poor bio-mechanics, i.e. unusual running pattern, knock knees or excessive foot roll, you have a greater chance of developing osteoarthritis from running.

If you have had previous injury and or surgery such as meniscectomy of the knee you have a greater chance of osteoarthritis of the knee and should consider other activities or cross training.

From research it is felt that a recreational runner doing 40km a week is safe.

Running up to and over 100 km a week may be a risk factor to developing arthritis.

If you want this higher level of training then cross training is recommended i.e. cycling, gym etc. Every effort should be made to reduce the jarring by running with good shoes and on softer surface, like grass.

The quadriceps should also be strengthened through other exercise to increase its shock absorption capacity.

Good running techniques are important and potentially poor bio-mechanics poor pelvic, hip or foot control - can be assessed and corrected by your physiotherapist.