

# Knee

1. You have been diagnosed as having sustained a soft tissue knee injury. This advice sheet is designed to help you to recover from this injury and regain full function quickly. We strongly advise you to have your knee reviewed within a week of the injury. It is not normal to be unable to weight bear on the affected leg beyond 5 days.
2. Soft tissue knee injuries involve either the ligaments and/or the knee cartilage. Ligaments are bands of strong fibrous tissue that support and strengthen joints by joining bones to each other. When a ligament is sprained, these fibres are stretched and torn. Not surprisingly, the greater the force the worse the injury. When a ligament is torn, small blood vessels along it bleed. In addition, your body increases the blood flow to the injured area – this causes more swelling and bruising, which in turn causes more pain. Cartilage is soft spongy material that acts as a ‘shock absorber’ between the knee joint and the leg bones. It can be bruised or torn as the result of a knee injury.
3. Knee x-rays are only required when there is definite pain over a knee bone or when you are unable to walk on the affected leg. Thankfully, the vast majority of knee injuries do not involve broken bones!
4. General measures that will help your knee in the first 48 hours –

**Protection** – from further injury – take it easy and don’t overstress your knee. If your knee has been splinted or bandaged, follow any guidance you have been given.

**Rest** – Initially, continued activity can increase the amount of bleeding and swelling. Recovery is assisted by resting the knee, at least initially. When you are sitting down, keep your whole leg elevated on a stool as this supports the lower leg and the knee. Make sure that you take your leg off the stool and bend your knee at least every hour. Practice bending and straightening your knee as far as you can 10 times. Avoid leaving your leg out straight for long periods of time. You may need crutches to assist you for the first day or so.

**Ice** – Helps reduce initial swelling and pain. Use crushed ice in a damp tea towel or cloth, a gel pack or a pack of frozen vegetables. Apply for a maximum of 20 mins at a time every 2 hours. Stop if this causes the injured area to be more painful or to become red or blotchy.

**DO NOT APPLY HEAT IN THE FIRST 48 HOURS AFTER INJURY – IT WILL CAUSE MORE BLEEDING, SWELLING AND PAIN.**

**Compression** – Helps to reduce swelling and supply support. Do not apply a bandage too tightly.

**Elevation** – This is v. important to minimise swelling. Always try and keep the affected leg elevated at rest.

**Drugs** – see no. 5 below

5. If you are able to take them (check with the chemist if in doubt) take an anti-inflammatory medicine such as ibuprofen 400mg regularly three times a day. Don’t think of them purely as pain killers (although they will help the pain) – they are best taken regularly for at least 5 days rather than here and there when the pain gets bad.
6. If you can, go and see a physiotherapist – either via your GP or refer yourself (look one up in the Yellow Pages)
7. After the first 48 hours the application of ice can stop. The emphasis should now be on gentle mobilisation to aid a return to full function. Concentrate on performing the following exercises –

## Exercise One

Practice lifting your leg up with the knee kept straight 10 times every couple of hours. This helps to maintain the strength in the thigh (quadriceps or ‘quads’) muscles.

## Exercise Two

Sit with your knee bent over the edge of a bed or a chair. Practice straightening the affected leg 10 times holding the leg straight for a count of between 3 and 5 (as your knee gets better, you will find this easier to do)

As soon as you feel able, try and regain your full range of movement. In general, it is movements that twist your knee that will be sore whereas ‘bend and straighten’ (flexion and extension) exercises should be less painful. Gentle cycling and swimming (not breast stroke which twists the knee) are ideal ‘low impact’ activities to try initially. In particular, take care when going up or down steps, crossing pavements or walking on uneven ground – these are all times when the knee may tend to twist again. As time goes by and the pain and swelling settle, you will be able to gradually increase back up to full mobility. **IF IT HURTS, YOU’RE DOING TOO MUCH TOO SOON!!**

## How long will recovery take?

Maximum swelling usually occurs within 48 hours. As a result, the swelling (and pain) may get slightly worse before it gets better. If you can't already, you should be able to start putting some weight on your affected leg again after about 3-4 days and it should be noticeably better after 5-7 days. **IF IT IS NOT, YOU SHOULD SEE A DOCTOR.** We normally recommend that all knee injuries are reassessed by a doctor after one week. Depending on the extent of the injury, full healing will take between 3-8 weeks. Do not take part in aggressive physical activity or sport before this time unless a doctor or physio advises you otherwise.

## Warning Signs

Please let your doctor know if any of the following have/do occur

- A feeling of a 'pop' or 'snap' at the time of injury and/or a large amount of swelling within an hour of injury (these may be signs of injury to the anterior cruciate ligament)
- Inability to straighten your injured knee completely. This is called a locked knee and indicates significant cartilage damage

**For more information on knee injuries from snow sports, visit [www.ski-injury.com/knee.htm](http://www.ski-injury.com/knee.htm)**

Whilst the information presented in this leaflet is done so in good faith, based on the latest available information - neither Dr Mike Langran nor CairnGorm Mountain can accept any liability for any accident, injury or fatality arising as a result of following this advice. Skiers and snowboarders are (for the most part) human and as such everyone varies - tailor this advice to your own needs as much as possible. If in any doubt, consult your own doctor.

## ADVICE AND EXERCISES AFTER INJURY FOR KNEES



CAIRNGORM MOUNTAIN

CAIRNGORM SKI PATROL WOULD LIKE TO THANK THE FOLLOWING ORGANISATIONS FOR THE CONTINUED SUPPORT AND ASSISTANCE

