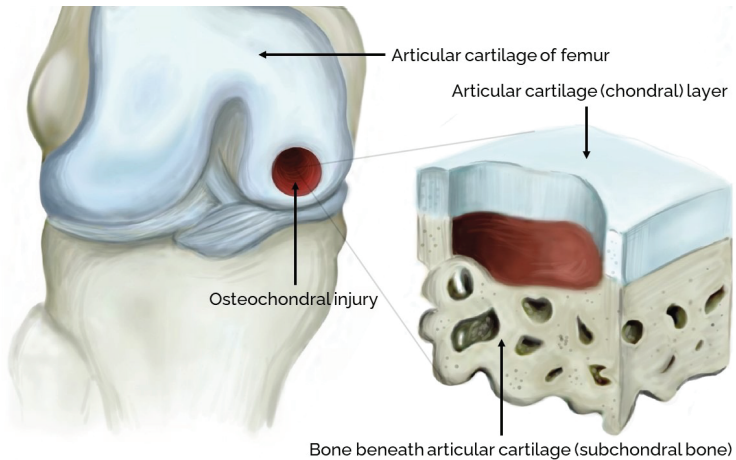


# Cartilage Injury



# Cartilage Injury

The end of your thigh bone (femur) and the top of your shin bone (tibia), along with the under surface of your kneecap (patella) form your knee joint. The surfaces of these bones are covered in a smooth, tough, rubbery cartilage (articular cartilage) that act as shock-absorbers and lubricators during movements of your knee. The wearing of this articular cartilage is what constitutes osteoarthritis. Articular cartilage is different to the other cartilage within your knee known as your meniscus. You may injure your articular cartilage (Figure 1), leading to a focal area of damage (chondral injury) that can sometimes be deep enough to affect the underlying bone (osteochondral injury). As this cartilage has no blood supply, there is very little capacity for healing when it is injured.



**Figure 1**

An illustration depicting an injury of the articular cartilage (white layer) on the inner side of the end of a right thigh bone (femur). The injury is deep to the level of the underlying bone.

## Causes

This is a relatively common problem that affects those of all ages. Possible reasons include:

- **Injury**

This can occur following forceful twisting of the knee especially when weight has been put through a slightly bent knee. A direct blow to the knee can also lead to this cartilage injury. There may not be a clear history of an injury but rather, repetitive smaller injuries may have occurred over time.

### ▫ Degenerative

Your articular cartilage will wear as you age and this process is known as osteoarthritis. This may be more pronounced if you have poor alignment of your joints.

## Symptoms

Cartilage injuries may not lead to any symptoms and not uncommonly, they are detected after you have a scan of your knee for other reasons. However, you may experience the following:

- **Popping** – If it is due to an injury, you may feel a pop in your knee at the time. This may or may not prevent you from carrying on your activities at the time but over the following 24 hours, you may develop pain and swelling. As the acute pain and swelling settles, you may be left with a vague pain/aching within your knee that worsens with you putting weight through your leg.
- **Mechanical symptoms** – caused by injured cartilage getting caught when you move your knee. You may have a feeling of something catching within your knee, or experience cracking, popping and/or grating within the knee. This, in turn, may lead to your knee feeling unstable or giving way.
- **Swelling** – this may be more pronounced at the time of injury but may continue to affect your knee depending on what activities you carry out.

## Diagnosis

The diagnosis of this condition is made with a magnetic resonance imaging (MRI) scan, following a clinical assessment. An x-ray of your knee may be used to look for any injuries that are deeper and affect your bone, and also to look for any osteoarthritis.

## Treatment

Specific treatment will depend on a number of factors including your age, your overall health, time since your injury, severity and location of your cartilage injury and your views on the treatment options. The pain from smaller injuries may settle in time such that you may find that you have mild, intermittent or even no symptoms at all.

- **Rest and activity modification**

Stop aggravating activity and consider alternative forms of exercises that are lower impact for your knee e.g. swimming, cycling. Consider increasing intensity of activity on a more graduated basis and carrying out warm-up stretches.

- **Ice Packs**

Apply several times daily for a period of 15 minutes each time if swelling is an issue.

- **Compression**

Consider an elastic bandage to provide some compression for the swelling.

- **Anti-inflammatory medication**

If oral preparations do not help, consider topical formulations to rub onto the painful area. Anti-inflammatories may have adverse side-effects if you have certain medical conditions or take certain medications so please consult with your GP prior to commencing.

- **Weight loss**

(If appropriate) to minimise stress on your articular cartilage.

- **Key-hole surgery (Arthroscopy)**

If your symptoms do not settle despite the above measures, you may wish to consider the option of key-hole surgery. The nature of surgery will depend on a number of factors. For further information, please refer to [Mr Kosuge's Patient Information Booklet – Knee Arthroscopy](#).

## Outcome

Recovery time differs depending on the extent of your injury but with small injuries, it may recover over 2 to 3 months. If you have surgery, your recovery will depend on the extent of your injury and what type of operation is performed.



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