

Osteochondral Injuries



Figure 1. X-ray illustration of joint space narrowing indicative of Osteoarthritis (OA) in the knee

An osteochondral injury is an injury to the smooth surface on the end of bones, called articular cartilage (chondro), and the bone (osteo) underneath it. The degree of injury ranges from a small crack to a piece of the bone breaking off inside the joint. These fragments can be of many sizes and depths and can stay attached (stable) to the area that was injured or become loose (unstable) inside the joint. This injury is more common in adolescents and young adults and typically occurs at the knee, ankle or elbow.

The causes of osteochondral injuries are not yet completely understood, but

some theories are lack of blood supply to the affected area, heredity, direct compressive trauma or repetitive strain.

Symptoms

- Pain with weight bearing activities
- Swelling
- Instability of the joint
- Occasional catching and locking of the joint
- Tenderness to touch over injured area
- Decreased motion

Treatment

Treatment is variable depending upon the size of the bone fragment, age of the patient and activity level of the patient. It also depends on whether the bone fragment is attached to the area or bone that was injured or loose in the joint. Skeletally immature patients—patients with open growth plates—typically respond well to conservative treatment.

Conservative treatment

- Decreasing the pain and inflammation through physician prescribed anti-inflammatory medication
- Ice and modified activity
- Rehabilitation to improve strength, flexibility and alignment

Operative treatment

If the fragment is unstable or loose in the joint, surgery may be necessary to remove and repair the injured area.

Operative treatment might also be necessary if patients do not respond well to conservative treatment. A period of immobilization might be necessary after surgery. Gradual strengthening of the injured joint, along with sport or activity specific rehabilitation are the final phases to restore function.



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References

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