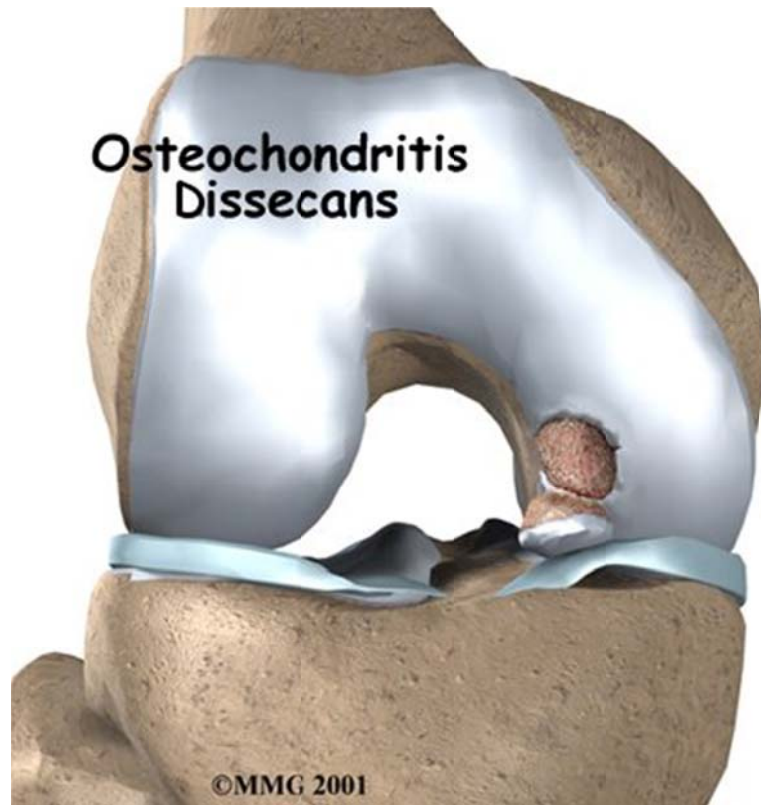


Osteochondritis Dissecans of the Knee

Introduction



Welcome to BodyZone Physiotherapy's patient resource about Osteochondritis Dissecans of the Knee.

Osteochondritis dissecans (OCD) is a problem that affects the knee, mostly at the end of the big bone of the thigh. A joint surface damaged by OCD doesn't heal naturally. Even with surgery, OCD usually leads to future joint problems, including degenerative arthritis and osteoarthritis.

This guide will help you understand:

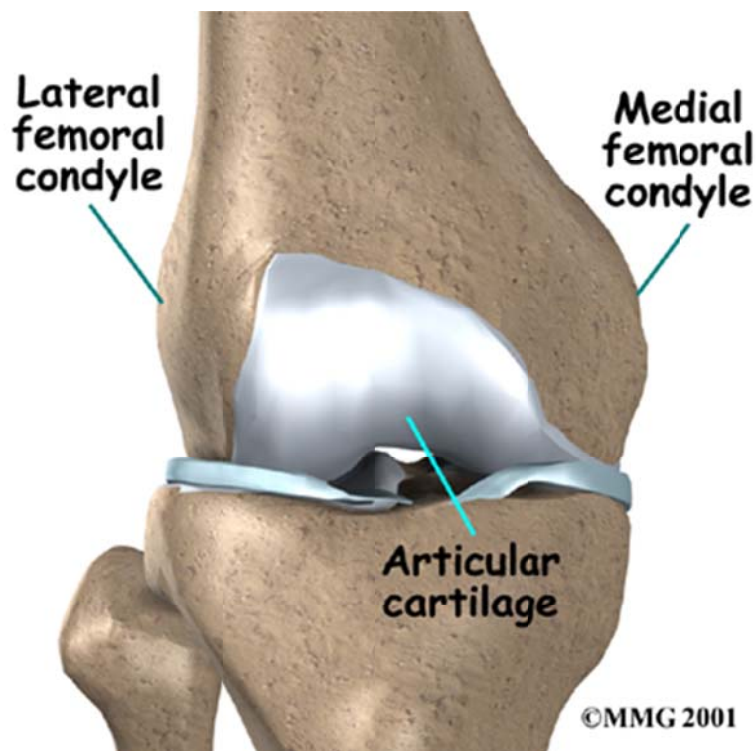
- where in the knee the condition develops
- how doctors diagnose the problem
- what treatment options are available

Anatomy

What part of the knee is affected?

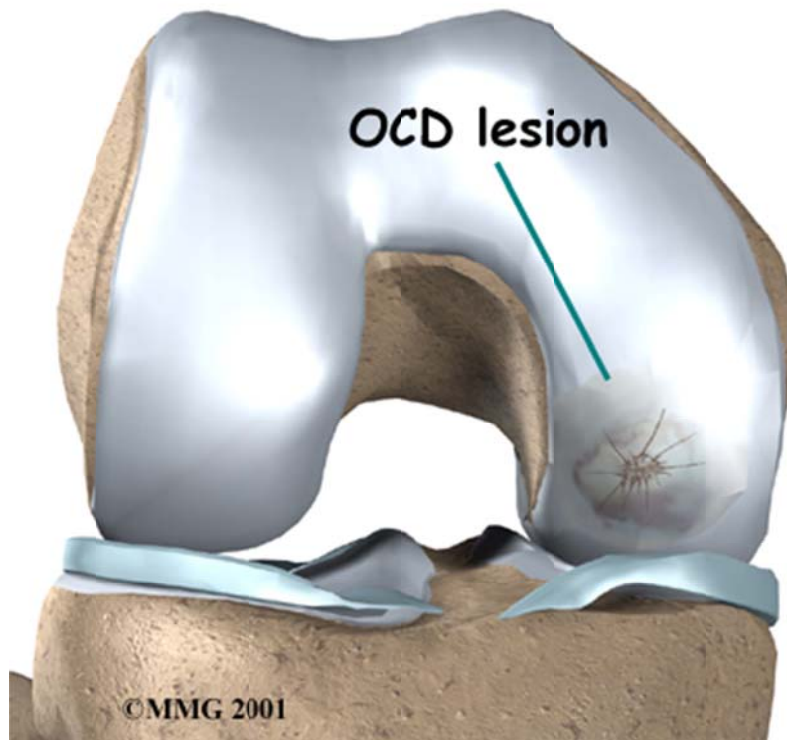
OCD mostly affects the **femoral condyles** of the knee. The femoral condyle is the rounded end of the lower thigh bone, the *femur*. Each knee has two femoral condyles, referred to as the *medial femoral condyle* (on the inside of the knee) and the *lateral femoral condyle* (on the outside). Like most joint surfaces, the femoral condyles are covered in *articular cartilage*. Articular cartilage is a smooth, rubbery covering that allows the bones of a joint to slide smoothly against one another.

Femoral Condyles



The problem occurs where the cartilage of the knee attaches to the bone underneath. The area of bone just underneath the surface is injured, leading to damage to the blood vessels of the bone. Without blood flow, the area of damaged bone dies. This area of dead bone can be seen on an X-ray and is sometimes referred to as the:

Osteochondritis Lesion



The lesions usually occur in the part of the joint that holds most of the body's weight. This means that the problem is under constant stress and doesn't get time to heal. It also means that the lesions cause pain and problems when putting weight on the knee. It is more common for the lesions to occur on the medial femoral condyle, because that part of the knee bears more weight.

Causes

How does the condition develop?

Juvenile Osteochondritis Dissecans

Children as young as nine or ten can develop this condition. But the disease behaves much differently in children. For this reason, it is given a separate name, *juvenile osteochondritis dissecans* (JOCD), meaning osteochondritis dissecans in juveniles.

OCD and JOCD cause the same kind of damage to the knee, but they are separate diseases. In the child who has JOCD, the problem is much more likely to heal itself. In the adult, the bones are not growing. For this reason, the treatment and prognosis of OCD and JOCD can be very different.

Many doctors think that JOCD is caused by repeated stress to the bone. Most young people with JOCD have been involved in competitive sports since they were very young. A heavy schedule of training and competing can stress the femoral condyle and lead to JOCD. In some cases, other muscle or bone problems can cause extra stress and contribute to JOCD.

Osteochondritis Dissecans

Sometimes JOCD is not treated or does not heal completely. When this happens, JOCD develops into OCD. OCD can occur at any time from early adulthood on, but most patients are adults under age 50. The cases of OCD that are first diagnosed in early adulthood probably began as JOCD. When a person gets OCD later in life, it is probably a brand new problem.

Doctors aren't sure what causes OCD. There is less of a link between strenuous, repetitive use and OCD. Many people who develop OCD don't have any particular risk factors.

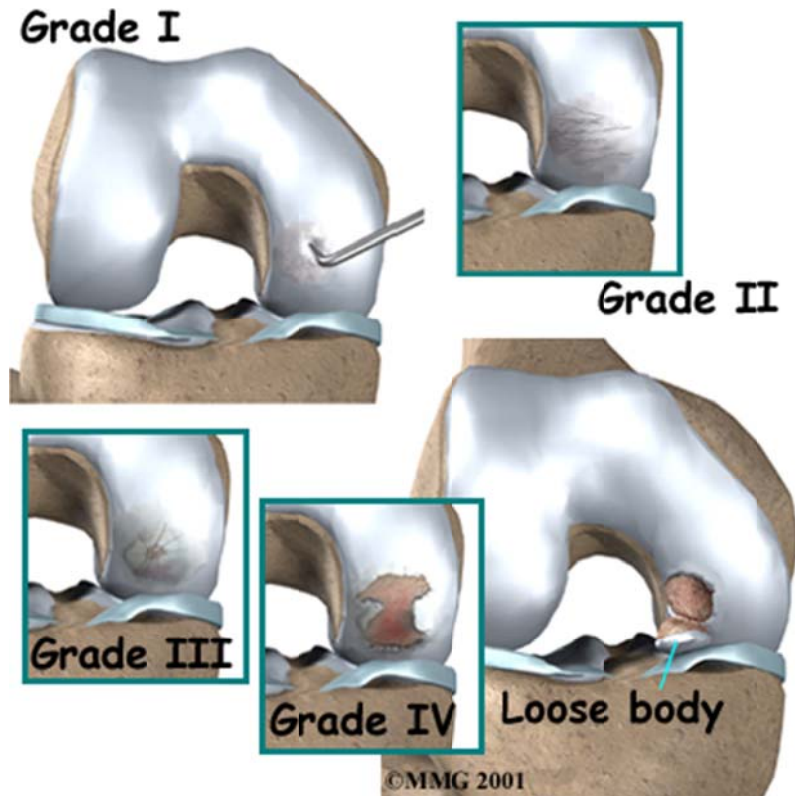
Because OCD leads to damage to the surface of the joint, the condition can lead to problems with bone degeneration and osteoarthritis. The damage to the joint surface affects the way that the joint works. Like a machine that is out of balance, over time this imbalance can lead to abnormal wear and tear on the joint. This is one cause of degenerative arthritis and osteoarthritis.

Symptoms

What do OCD and JOCD feel like?

OCD and JOCD cause the same symptoms. The symptoms start out mild and grow worse with time. Both problems start with a mild aching pain. Moving the knee becomes painful, and it may be swollen and sore to the touch. Eventually there is too much pain to put full weight on that knee. These symptoms are fairly common in athletes. They are also symptoms of sprains, strains, and other knee problems.

As the condition becomes worse, the area of bone that is affected may collapse, causing a notch to form in the bone surface. The cartilage over this dead section of bone (the lesion) may become damaged. This can cause a snapping or popping feeling as the knee joint moves across the notched area. In some cases the dead area of bone may actually become detached from the rest of the femur, forming what is called a *loose body*. This loose body may float around inside of the knee and the knee may catch or lock when it is moved if the loose body gets in the way.



Diagnosis

When you visit BodyZone Physiotherapy, our physiotherapist will ask many questions about your medical history, ask about your current symptoms and about other knee or joint problems you have had in the past. Our physiotherapist then examine the painful knee by feeling it and moving it. You may be asked to walk, move, or stretch your knee to help diagnose the problem. It may hurt, but it is important that we know exactly where and when your knee hurts.

Some patients may be referred to a doctor for further diagnosis. Once your diagnostic examination is complete, our physiotherapists at BodyZone Physiotherapy have treatment options that will help speed your recovery, so that you can quickly return to your active lifestyle.

Our Treatment

How is this condition treated?

Many cases of JOCD can be completely healed with careful treatment. OCD will probably never completely heal but can be treated. There are two methods of treating JOCD: nonsurgical treatment to help the lesions heal, and surgery, which is usually the only effective treatment for OCD.

Non-surgical Rehabilitation

Nonsurgical treatments help in about half the cases of JOCD. Our goals are to help the lesions heal before growing larger.