

Osteochondritis Dissecans (OCD)

Osteochondritis Dissecans (os tee o kon DRY tiss DIS uh kanz) (OCD) is a condition that develops in the joints, most often in children and adolescents. OCD lesions can develop when the area of bone beneath the cartilage is injured. In children, they are most often found in the knee and elbow. They may also be found in the talus bone in the ankle.

There is damage to the blood vessels. A small piece begins to separate from the surrounding bone due to the lack of blood supply. This leads to breakdown of the bone and causes an OCD lesion. The small piece of bone and the cartilage covering it begins to crack and loosen (see Picture 1).

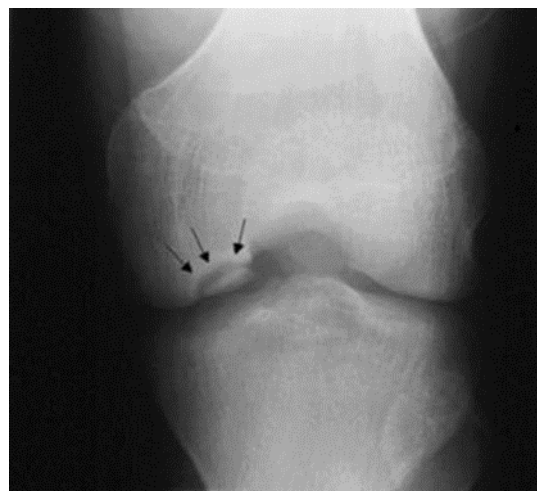
This lesion, or area of damaged bone, can be:

- stable
- unstable, or
- completely detached

An unstable or detached lesion may become loose in the joint. A loose piece of bone in the joint can cause pain, swelling, and issues with range of motion. Unstable or detached lesions may need surgery to prevent long-term issues.

Cause

The cause of Osteochondritis Dissecans is largely unknown but is thought to be caused by repetitive stress to the bone. There is a possible genetic (runs in families) link, but this has not been proven.



Picture 1 An OCD lesion of the knee

OCD occurs in children, especially in pediatric athletes such as gymnasts and pitchers, who do repetitive motions, and those who participate in contact activities.

Signs and symptoms

Early signs of OCD are:

- Pain
- Joint swelling
- Limping

Later signs are:

- Decreased range of motion
- Clicking, catching, locking sensation in the joint
- Cannot participate in sports or other activities due to constant pain

Diagnosis

Your child may see their primary care provider at first with complaints of pain and swelling. They may be referred to Orthopedics or Sports Medicine for an appointment.

Treatment

Initial treatment involves an examination in the office. The Orthopedic or Sports Medicine provider will perform full range of motion of the joint, checking for any popping or clicking sounds, or any feeling of the joint “catching.” For both the knee and elbow, the provider will palpate over areas of the joint to check for pain over specific sites.

X-rays will be taken. If the x-rays show a lesion, an MRI will be ordered to find out the size and stability of the lesion. This helps the providers to decide on the right treatment. The surgeon, nurse practitioner, physician assistant or registered nurse will call you 1 to 2 days after the MRI to review the results.

- A stable lesion can often be treated with rest, decreased activity, and close follow-up. For example:
 - For a knee OCD lesion, your child may be placed on crutches for up to 6 weeks.
 - For an elbow OCD, your child may be placed into a sling for up to 6 weeks.

- For an ankle OCD lesion, your child may be placed in a boot or cast for up to 6 weeks.

Without early treatment, the lesion can become unstable or completely detached. This will need surgery to repair.

- The condition may require surgical treatment if:
 - decreased activity has failed to make the condition better;
 - the child is older and has less growth remaining (which means less healing potential);
 - the lesion is larger than 1 cm in diameter; or
 - if the piece has separated from the bone.

Surgery often involves an arthroscopic procedure. This means the surgeon will make small incisions to insert a tiny camera and tools to evaluate the area of bone damage. If the lesion is still attached to the bone and stable, the surgeon will use a small wire to poke tiny holes into the lesion to cause blood to flow to the area of damaged bone to help with healing. This procedure is called an in situ drilling.

If the lesion has become completely detached or loose from the bone, surgery involves placing the loose piece of bone back where it belongs with screws. If the loose piece of bone cannot be fixed, it is removed from the joint to prevent long term issues. If the cartilage is already worn down, the surgeon performs a procedure using a small tool to drill into the bone to stimulate blood flow and healing, called a microfracture.

After surgery, your child will be on crutches or in a sling for up to 6 weeks. For a while, your child will not be able to bear weight on the affected limb. They will be out of sports and activities for several months to give the lesion time to heal. X-rays are often taken at 3 months after surgery to evaluate healing.

What to do and watch for at home

Signs of infection after surgery include one or more of the following:

- an increase in pain;
- redness;
- drainage from the incisions;
- an increase in swelling;
- not feeling well;

- a temperature above 101F, especially if in combination with one or more of the other symptoms.

Activity

The practitioner will discuss with you what activity restrictions your child will have. Please have your child limit lifting, pushing, pulling, pitching, tumbling, running, jumping and other high-impact activities until cleared by their practitioner. Your child cannot participate in gym class until cleared by the practitioner. Your child should participate in only low energy activities. These activities will be reviewed before surgery and again at your child's first office visit after surgery.

Follow-up appointments

Your child's follow-up appointment is on (date) _____ at (time) _____ in the (place) _____.

You can expect to have regular follow-up appointments with your child's doctor.

Write down a list of all your questions as you think of them. Bring the list with you when you see the doctor.

Be sure to call your doctor if you cannot keep the appointment.