



Diseases and Conditions

Osteochondritis dissecans

By Mayo Clinic Staff

Osteochondritis dissecans (os-tee-o-kon-DRY-tis DIS-uh-kanz) is a joint condition in which bone underneath the cartilage of a joint dies due to lack of blood flow. This bone and cartilage can then break loose, causing pain and possibly hinder joint motion.

Osteochondritis dissecans occurs most often in children and adolescents. It can cause symptoms either after an injury to a joint or after several months of activity, especially high-impact activity such as jumping and running, that affects the joint. The condition occurs most commonly in the knee, but also occurs in elbows, ankles and other joints.

Doctors stage osteochondritis dissecans according to the size of the injury, whether the fragment is partially or completely detached, and whether the fragment stays in place. If the loosened piece of cartilage and bone stays in place, you may have few or no symptoms. For young children whose bones are still developing, the injury might heal by itself.

Surgery might be necessary if the fragment comes loose and gets caught between the moving parts of your joint or if you have persistent pain.

Depending on the joint that's affected, signs and symptoms of osteochondritis dissecans might include:

- **Pain.** This most common symptom of osteochondritis dissecans might be triggered by physical activity — walking up stairs, climbing a hill or playing sports.
- **Swelling and tenderness.** The skin around your joint might be swollen and tender.
- **Joint popping or locking.** Your joint might pop or stick in one position if a loose fragment gets caught between bones during movement.
- **Joint weakness.** You might feel as though your joint is "giving way" or weakening.

- **Decreased range of motion.** You might be unable to straighten the affected limb completely.

When to see a doctor

If you have persistent pain or soreness in your knee, elbow or another joint, see your doctor. Other signs and symptoms that should prompt a call or visit to your doctor include joint swelling or an inability to move a joint through its full range of motion.

The cause of osteochondritis dissecans is unknown. The reduced blood flow to the end of the affected bone might result from repetitive trauma — small, multiple episodes of minor, unrecognized injury that damage the bone. There might be a genetic component, making some people more inclined to develop the disorder.

Osteochondritis dissecans occurs most commonly in children and adolescents between the ages of 10 and 20 who are highly active in sports.

Osteochondritis dissecans can increase your risk of eventually developing osteoarthritis in that joint.

You might first consult with your family doctor, who might refer you to a doctor who specializes in sports medicine or orthopedic surgery.

What you can do

- **Write down your symptoms** and when they began.
- **List key medical information**, including other conditions you have and the names of medications, vitamins or supplements you take.
- **Note recent accidents or injuries** that might have damaged your back.
- **Take a family member or friend along**, if possible. Someone who accompanies you can help you remember what your doctor tells you.
- **Write down questions to ask** your doctor to make the most of your appointment time.

For osteochondritis dissecans, some basic questions to ask your doctor include:

- What's the most likely cause of my joint pain?
- Are there other possible causes?
- Do I need diagnostic tests?
- What treatment do you recommend?
- If you're recommending medications, what are the possible side effects?
- For how long will I need to take medication?

- Am I a candidate for surgery? Why or why not?
- Are there restrictions I need to follow?
- What self-care measures should I take?
- What can I do to prevent my symptoms from recurring?

Don't hesitate to ask other questions.

What to expect from your doctor

Your doctor is likely to ask you a number of questions, such as:

- When did your symptoms begin?
- Are your joints swollen? Do they lock or give out on you?
- Does anything make your symptoms better or worse?
- How limiting is your pain?
- Have you injured that joint? If so, when?
- Do you play sports? If so, which ones?
- What treatments or self-care measures have you tried? Has anything helped?

During the physical exam, your doctor will press on the affected joint, checking for areas of swelling or tenderness. In some cases, you or your doctor will be able to feel a loose fragment inside your joint. Your doctor will also check other structures around the joint, such as the ligaments.

Your doctor will also ask you to move your joint in different directions to see if the joint can move smoothly through its normal range of motion.

Imaging tests

Your doctor might order one or more of these tests:

- **X-rays.** X-rays can show abnormalities in the joint's bones.
- **MRI.** Using radio waves and a strong magnetic field, an MRI can provide detailed images of both hard and soft tissues, including the bone and cartilage. If X-rays appear normal but you still have symptoms, your doctor might order an MRI.
- **CT.** This technique combines X-ray images taken from different angles to produce cross-sectional images of internal structures. CT scans allow your doctor to see bone in high detail, which can help pinpoint the location of loose fragments within the joint.

Treatment of osteochondritis dissecans is intended to restore the normal functioning of the affected joint and to relieve pain, as well as reduce the risk of osteoarthritis. No single

treatment works for everybody. In children whose bones are still growing, the bone defect may heal with a period of rest and protection.

Therapy

Initially, your doctor will likely recommend conservative measures, which might include:

- **Resting your joint.** Avoid activities that stress your joint, such as jumping and running if your knee is affected. You might need to use crutches for a time, especially if pain causes you to limp. Your doctor might also suggest wearing a splint, cast or brace to immobilize the joint for a few weeks.
- **Physical therapy.** Most often, this therapy includes stretching and range-of-motion exercises and strengthening exercises for the muscles that support the involved joint. Physical therapy is commonly recommended after surgery, as well.

Surgery

If you have a loose fragment in your joint or if conservative treatments don't help after four to six months, you might need surgery. The type of surgery will depend on the size and stage of the injury and how mature your bones are.

Adolescents participating in organized sports might benefit from education on the risks to their joints associated with overuse. Learning the proper mechanics and techniques of their sport, using the proper protective gear, and participating in strength training and stability training exercises can help reduce the chance of injury.

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