

OSTEOCHONDROSIS AND ITS TREATMENT METHODS IN MODERN MEDICINE

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Abstract: This article discusses osteochondrosis and its treatment methods. Patients with osteochondrosis can be successfully treated at any stage of the disease, but as the disease progresses, it becomes more difficult to get rid of its consequences. In the final stages, it is likely that treatment will not be possible. Failure to treat osteochondrosis leads to various other complications. It causes negative consequences, including radiculitis, herniated discs, and impaired oxygen supply to the brain.

Keywords: Osteochondrosis, spine, intervertebral disc, cartilage, back, inflammation, disc herniation.

Introduction: The spine is the main supporting structure of the human body. It consists of 24 vertebrae and the coccyx, between which there are 23 intervertebral discs. It is these discs that provide the vertebrae with flexibility, elasticity, mobility, and resistance to physical stress. The cartilage elements that cover the disc connect the vertebrae together, forming the spinal column.

When viewed from the side in a healthy person, the spine has an S-shaped curve. This shape provides additional shock absorption. The spine has an arc-shaped shape with the cervical and lumbar regions slightly convex outwards, while the thoracic region is inwards.

The spine is mainly affected by congenital anomalies of the spine, injuries, acquired and other diseases. In most cases, congenital defects of the spine include fusion of 2 or 3 vertebrae, the presence of extra vertebrae, and various other conditions. Acquired diseases include osteochondrosis, spinal deformities, inflammation of the vertebrae, rupture or stretching of ligaments, and others.

Osteochondrosis is a degenerative-dystrophic lesion of the cartilage that connects the vertebrae in the spine. This disease is more common in the lumbar region than in other regions of the spine. This is, of course, a natural phenomenon, since it is the lumbar region that supports the entire upper body. In osteochondrosis, the vertebrae shift, which can result in a herniated disc or compression of the nerves and blood vessels. Osteochondrosis is a painful disease, the treatment of which is quite complicated.

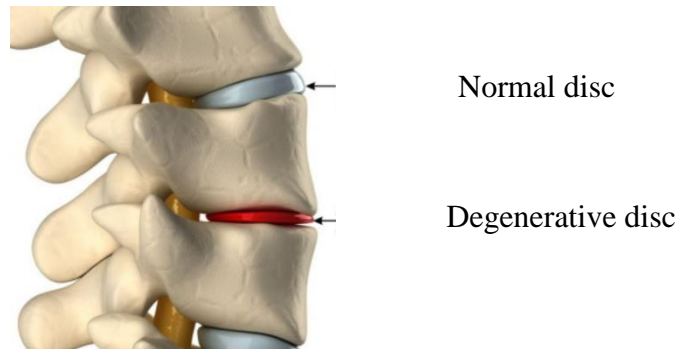


Figure 1. Healthy and diseased intervertebral disc.

Occurs mainly in people aged 30-35. It affects about 40% of the population under the age of 35-40, and 90% of people over the age of 35. Osteochondrosis also occurs in children and adolescents. Children who play sports are slightly more likely to suffer from this disease than other children. This is because they are at higher risk of injury .

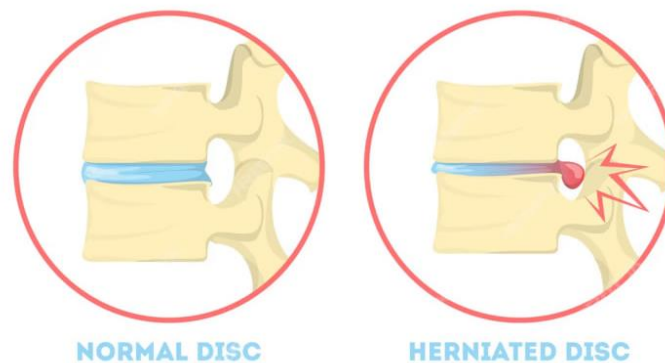


Figure 2. Appearance of damaged discs in osteochondrosis.

Stages of development of osteochondrosis:

No.	Signs:
1	The disease does not show obvious symptoms at this stage. However, the patient may occasionally feel discomfort in a part of the spine. At this stage, the disease can be detected accidentally during a preventive screening X-ray examination.
2	In the second stage, the patient suffers from moderate pain. Also, degenerative processes begin, the intervertebral discs change and the space between them narrows. Medications prescribed by the doctor help reduce pain.
3	This in stages spine stepmother deformation hernias are observed and fibrous places harvest will be . Qualified doctor right chosen therapy using this in the period also conservative treatment methods with help show takes or surgery necessity about decision acceptance does.
4	The patient loses the ability to move independently. The intervertebral space is filled with pathological bone tissue. The patient may also become disabled at this stage.

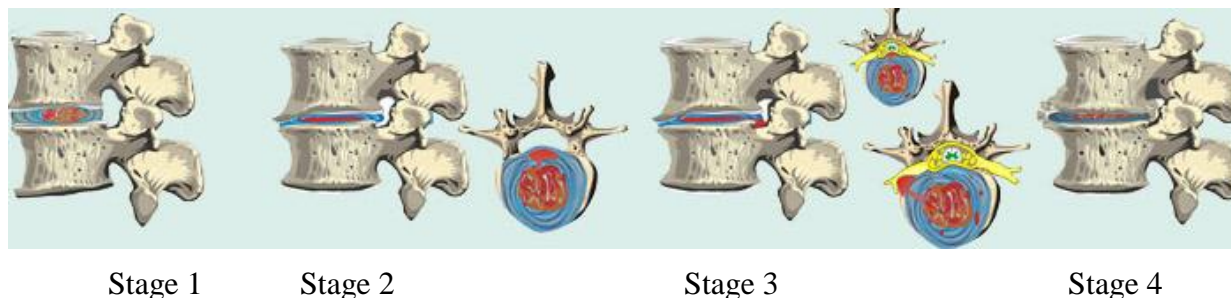


Figure 3. Stages of development of osteochondrosis.

Osteochondrosis is divided into three main types depending on the location of its occurrence, but there is also a fourth type:

- Cervical osteochondrosis is a common form, accounting for 25% of patients with osteochondrosis.
- Thoracic osteochondrosis is the rarest form.
- Lumbar osteochondrosis is the most common type, observed in more than 50% of patients.
- Mixed osteochondrosis – this form is a combination of two or more of the above types. The probability of occurrence is approximately 12%.

The symptoms of this disease also vary depending on the area affected:

cervical osteochondrosis:

- dizziness;
- chest pain
- pain in the neck, head, arms;
- finger cramps;
- deterioration of vision;
- in the ears.

thoracic osteochondrosis:

- back pain;
- chest pain;
- pain in the leg;
- difficulty breathing
- pain in the heart, liver, stomach;
- sexual dysfunction.

Symptoms of lumbar osteochondrosis:

- back pain;
- symptoms of a herniated disc;
- leg pain;
- limited mobility.

mixed osteochondrosis:

- Symptoms characteristic of osteochondrosis of the chest , waist, and neck are observed. of osteochondrosis :
- malnutrition;
- age-related changes;
- hereditary (genetic) predisposition;
- overweight;
- spinal hypothermia;
- low mobility;
- uneven distribution of the load on the back of the body;
- deficiency of phosphorus, calcium, vitamin D, as well as a number of microelements;
- childhood trauma and injuries;
- birth defects and hereditary factors;
- neuro-emotional fatigue;
- multiple pregnancy.

Methods of treating osteochondrosis:

- physiotherapy;
- interstitial electrical stimulation;
- medicines;
- getting a massage;
- traction;
- reflexology;
- physical therapy;
- electrotherapy;
- laser therapy;
- microdiscectomy .

Physiotherapy - helps to reduce symptoms of osteochondrosis and enhance the effect of medications taken. It eliminates pain, inflammatory processes, and rehabilitation after injuries and operations. The use of physiotherapy methods reduces the treatment time of many diseases.

Interstitial electrical stimulation – is performed according to the original method of AAGerasimov and is a very effective method. The effectiveness of treating patients with this method is 92-95 %. There are no side effects. The duration of the procedure is 20-40 minutes, the course of treatment is 3-10 procedures, carried out every 1-2 days.

Drug therapy. Various groups of drugs are used to treat this disease. Of course, the drugs were taken according to the doctor's recommendation:

- nonsteroidal anti-inflammatory drugs. These drugs relieve inflammation and symptoms of osteochondrosis.
- improve nerve conduction along the spine.
- Chondroprotectors. Strengthens discs.

Therapeutic massage. Patients with osteochondrosis are recommended to undergo therapeutic massage 2 times a year. This helps to relieve muscle tension and improve blood supply to tissues. Massage is allowed only during remission. As a result of the exercises, blood circulation improves, the metabolism of the intervertebral discs normalizes, and the intervertebral spaces expand.

Traction is a procedure for artificially stretching the spine using special equipment and stimulators. Traction achieves a uniform distribution of the vertebrae along the entire length of the spine, that is, it helps restore the anatomically correct shape of the spine. It also eliminates pain at the site of inflammation, as compressed vessels and nerves are released.

Reflexology is a therapeutic method of influencing pain points and reflex zones in the human body. The use of reflexology with other therapeutic methods significantly increases its effectiveness. Typically, reflexology methods are used for pain, nervous system diseases, sleep disorders, as well as osteochondrosis, which is accompanied by excess weight.

Electrotherapy is a treatment method using specialized medical equipment, including electrophoresis, diadynamic therapy, and others.

Laser therapy is the effect of a laser on the inflamed area. This therapy helps activate natural biological processes in the body.

Microdiscectomy is a minor surgical procedure aimed at removing a herniated disc.

Surgical practice. Osteochondrosis rarely requires surgical procedures. The spine is a complex structure that contains nerves that control body functions. Therefore, surgery is only performed in the most severe cases. The type of surgery depends on the size of the injury, the stage, and the maturity of the bones.

In most cases, the active phase of treatment for osteochondrosis lasts 1-3 months with conservative treatment methods, and the recovery period after surgery lasts 1 year.

If osteochondrosis is not treated properly, it can lead to other complications, below are the most common complications:

- Intervertebral hernia;
- Kyphosis;
- Radiculitis;
- Spinal cord stroke;
- Paralysis of the legs.

Disease prevention:

- ✓ Wear comfortable shoes;
- ✓ Getting enough vitamins;
- ✓ Proper nutrition;
- ✓ Sleeping on an orthopedic mattress and pillow;

- ✓ Perform back and abdominal exercises;
- ✓ Avoid high heels.

Conclusion: As mentioned above, osteochondrosis can be successfully treated. For this, of course, patients need to regularly and correctly take the treatment, therapy, and medications prescribed by doctors, as well as have patience, determination, strong willpower, and sincere faith and desire to get rid of the disease. The manifestation of osteochondrosis begins after the age of 35, but in recent years, people aged 18 to 30 have also been experiencing back pain. Of course, the main reasons for this are improper physical training, excess weight, disordered eating, and many other reasons that depend on the person themselves. This shows that following a healthy lifestyle can prevent many other diseases, in addition to osteochondrosis.

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