DEGENERATIVE-DYSTROPHIC DISEASES OF THE SPINE AND JOINTS

Speaker PhD Iurii Piven

Lecture plan

I. Preparatory stage

II. The main stage.

1.Definition of the concept of degenerative-dystrophic diseases of the joints and spine.

2. Etiopathogenesis of diseases.

3. Classification.

4. Risk factors.

5. Clinical manifestations.

6. Principles of treatment.

III. The final stage.

Scientific – methodical study topics

One of the key in orthopedics, internal medicine and clinical pharmacology is the issue of treatment of osteoarthritis (OA) lesions of synovial joints, referring to serious human ailments.

In adulthood osteoarthritis observed in 40% of people in old age and disease was observed in 90% of the population. All this causes a decrease in efficiency up to 60% and 11.5% lead to disability (M.O.Korzh, N.V.Dyeduh, I.A.Zupanets, 1999). Osteoarthritis based on the amount of current knowledge is treated as a genetic or multifactorial polygenic disease with foundation equipment, risk factors which may be metabolic, endocrine, mechanical damage, malfunction, etc. chondrocytes. Degenerative joint damage are disorders that are sometimes different specialists, radiologists, biochemists, histology interpreted from different perspectives.

Educational goals lectures

1.Convince students in the practical sense of the topic.

2. During the presentation of lectures emphasize the contribution of domestic scientists in the treatment of osteoarthritis.

3. Cultivate a sense of professional responsibility and general ethical as future doctors.

4. Promote a healthy lifestyle, explain to students harmful use of alcohol, smoking, etc.

5. Generate ideas about the need for preventive measures for the development of the pathology of musculoskeletal system.

Plan and organizational structure lectures

The main stage

The presentation of lectures plan:

Means clarity:

1.Multymedia presentation

2. X-ray.

3. Subject sick.

3.Questions, problem situations, tasks.

1. Definition of osteoarthritis. I
2. Etiopathogenesis disease. II
3. Classification of osteoarthritis. II
4. Risk factors for the disease. II
5. Clinical manifestations. II
6. Methods of diagnosis of osteoarthritis. II
7. Principles of treatment of osteoarthritis. II

Many people who suffer from these or other lesions of the musculoskeletal system, believe that the main reason for their development lies in the joint or in any intervertebral joint. But these judgments are very far from the truth. The trigger mechanism (pathogenesis) for the development of inflammation of the joint or intervertebral disc (arthrosis, or intervertebral osteochondrosis) lies far beyond them.

The musculoskeletal system is the most important system for ensuring the vital activity of the body. The well-known catch phrase: "Life is movement." Without motor activity, there really is no full life.

Therefore, diseases of the joints and spine are so painful and socially significant..

PREVALENCE AND MORBIDITY

10-12% of the world's population suffer from osteoarthritis (OA). This is the most common pathology of synovial joints.

PREVALENCE AND MORBIDITY

The incidence of OA in Ukraine in 2014 is 460 per 100 thousand, the prevalence is 3140.6 per 10 000 population, which is significantly lower than world indicators (in the USA - 700 and 6500, respectively). In the USA, OA takes 2nd place after diseases of the cardiovascular system as a reason for premature retirement (more than 5% per year).

PREVALENCE AND MORBIDITY

Degenerative diseases of the spine occupy one of the leading places among the causes of disability in industrialized countries. From 65 to 90% of their population at least once in their life sought medical help on this subject. In Ukraine, about 1 million patients apply for medical help for degenerative spinal diseases (DZP) every year, most of them become disabled (only with lumbar osteochondrosis the number of patients is 5 cases per 100 employees, and the period of disability reaches 57 days same amount).

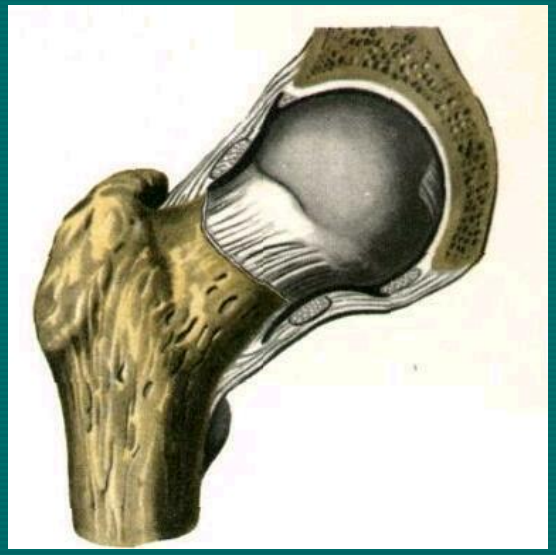
ECONOMIC ASPECTS

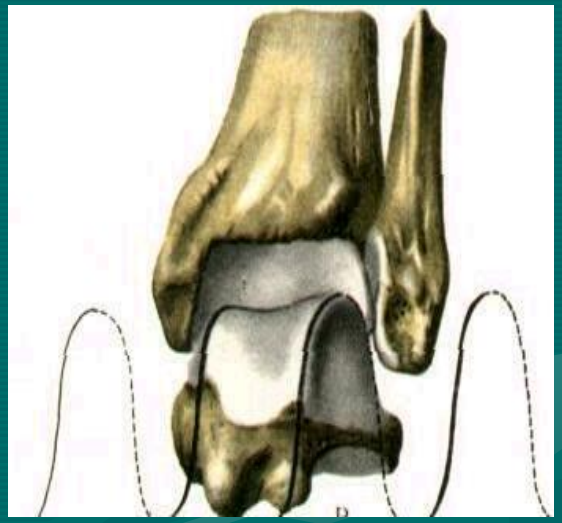
The pathology of the musculoskeletal system, in which OA takes a leading place, leads to significant losses in the economic, social and psychological spheres. Losses associated with diseases of this group have increased in recent years and comprise 1-2.5% of the gross national income of such developed countries as the USA, Canada, Great Britain, France, Australia.

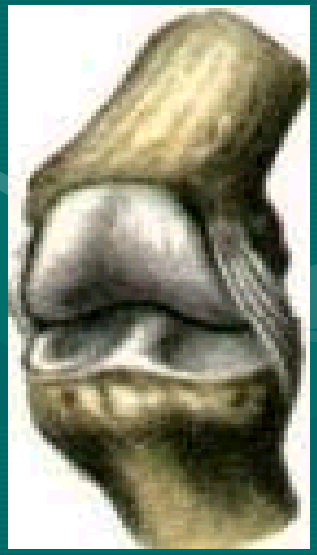
ECONOMIC ASPECTS

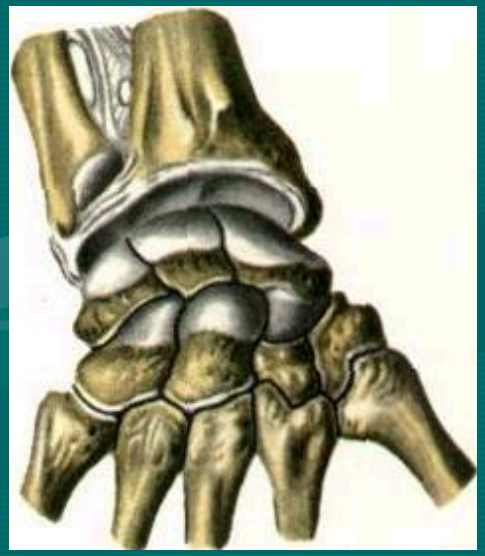
Approximately $ 18 billion is spent on treating patients with degenerative spinal diseases in the United States each year, and the total costs associated with this pathology are $ 171 billion, which exceeds the annual budget of some European countries.

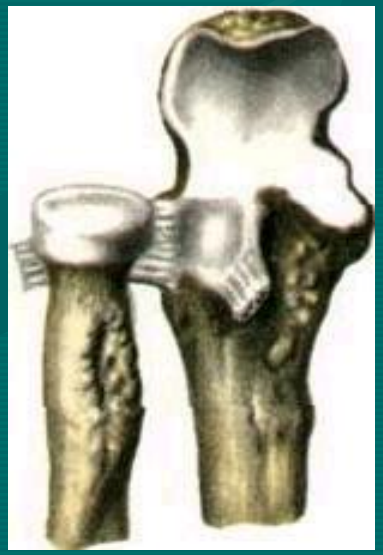
Synovial joints











STRUCTURE OF SYNOVIAL JOINTS (DIARTHROSIS)

BASIC FUNCTIONS OF DIARTHROSIS:

motor - moving the components of the joint elements along certain axes;

supporting - load when standing, walking, jumping.

The synovial joint consists of:

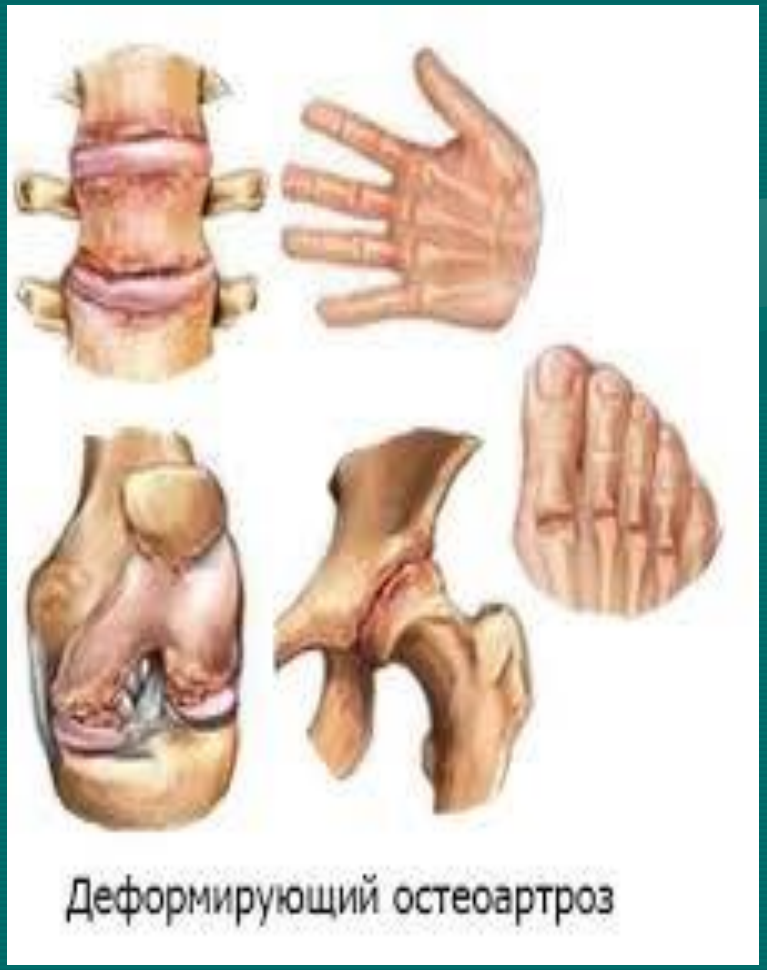
articulating bone surfaces covered with cartilage;

joint cavity containing synovial fluid;

joint capsule;

ligaments located outside or, less commonly, inside the joint;

cartilaginous menisci.

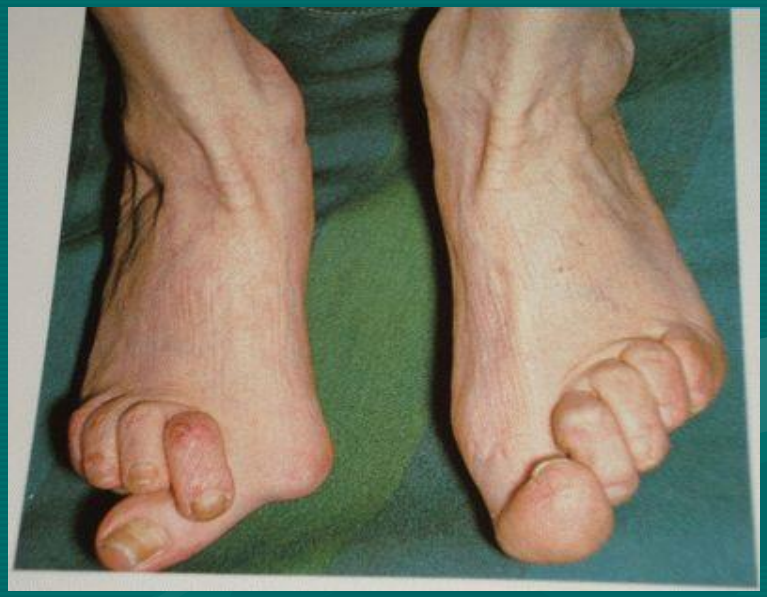


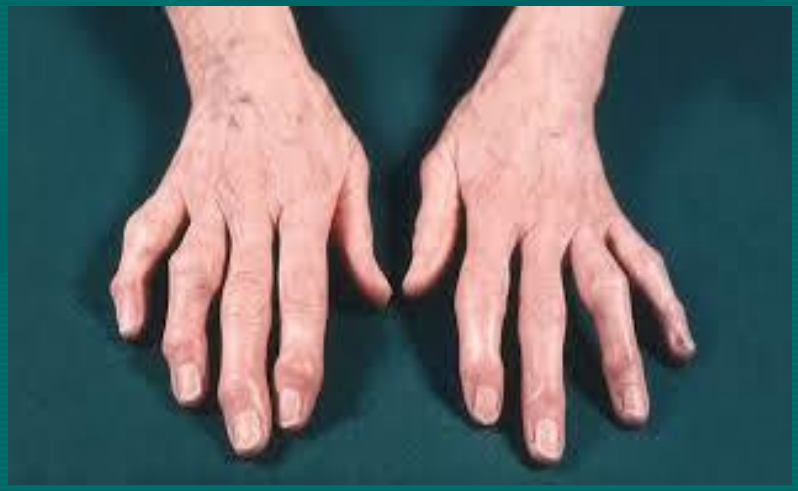
Degenerative-dystrophic diseases of the joints - OSTEOARTHROSIS

Osteoarthrosis is a heterogeneous group of diseases that lead to the appearance of symptoms from the joints caused by a violation of the integrity of the articular cartilage, as well as changes in the underlying bone.

The most complete definition: Osteoarthritis is a chronic, progressive joint disease caused by biological and mechanical factors that destabilize the normal relationship between the processes of degradation and synthesis of chondrocytes, the extracellular matrix of articular cartilage and subchondral bone.

Osteoarthrosis of the joints





Osteoarthrosis of the joints

Modern doctrine of arthrosis

The essence of degenerative joint diseases is cartilage degeneration, structural changes of the subchondral bone, a latent moderately pronounced synovitis and a change in the muscles, tendons and ligaments located in the neighborhood.

Articular cartilage

MATRIX TAKES 95% OF THE TOTAL CARTILAGE VOLUME.

COLLAGEN - IN THE MATRIX Makes – 50-70%

Glycosaminoglycans (GAG) of the CARTILAGE MATRIX - SULFATED FORMS (TWO ISONERS OF CHONDROITIN-SULPHATE).

UNSULPHATED - HYALURONIC ACID.

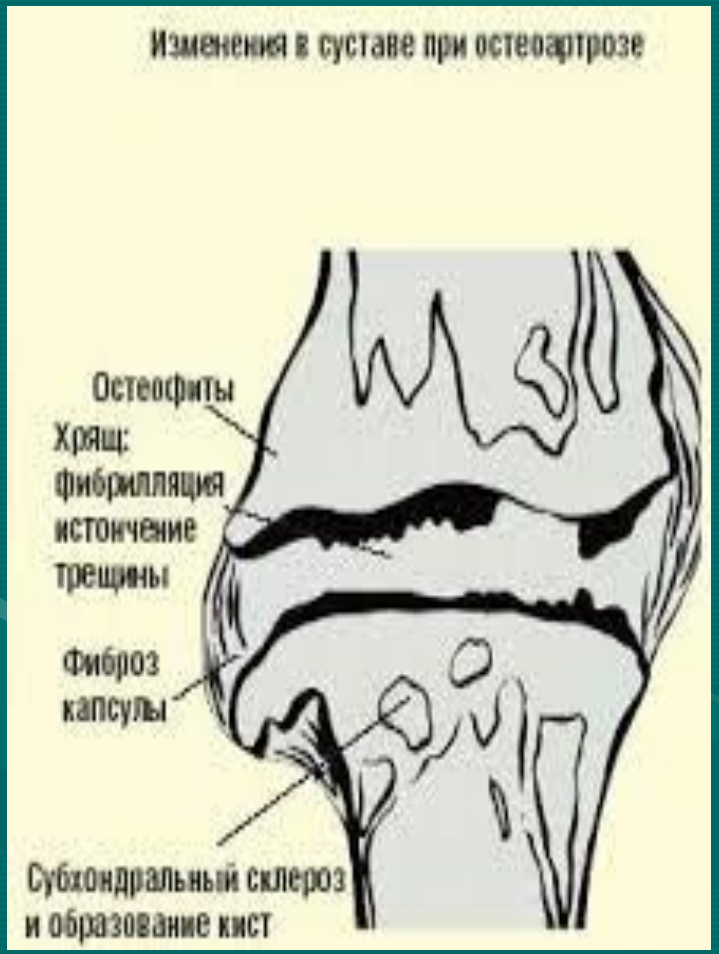
Due to the absence of blood and lymph vessels in the articular cartilage, its trophism and nutrition are carried out from the synovial fluid and capillary loops of the subchondral bone. However, this mechanism operates only until the closure of growth zones, with age - is broken.

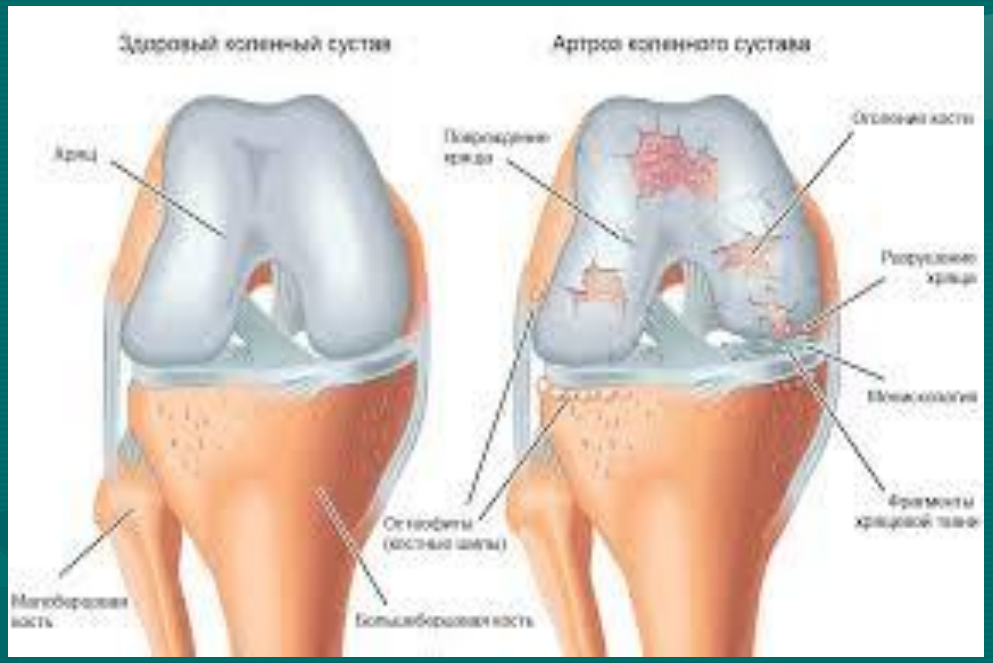
Articular cartilage metabolism is maintained through the transport of substances via a diffuse loading mechanism through synovial fluid

Cartilage in the joint ensures congruence of the articulating surfaces, reducing friction between them upon contact and cushioning under loads. The main function of articular cartilage is to take over the pressure that appears under the influence of gravity (body weight) and as a result of applying muscle force to the articular surfaces, and transmit this pressure in the form of a reduced push to the cartilage of the bones (buffer function).

With the development of degenerative changes in the cartilage, their elasticity decreases and even disappears, and the pressure exerted on the cartilage is transmitted unchanged to the pineal gland sections. Such pressure is an abnormal mechanical irritation of the bone and leads to a number of joint tissue disorders and the gradual formation of a complete picture of deforming arthrosis.

OSTEOARTHROSIS





RISK FACTORS FOR OSTEOARTHROSIS

- GENETIC:
  Gender Female)
  inherited type II collagen gene pathology
  type II collagen gene mutation
  other hereditary diseases of bones and joints
  racial / ethnic background

  EXOGENOUS:
  professional activity
  joint injury
  playing sports

  NON-GENETIC:
  elderly age
  overweight
  decrease in female sex hormones (for example, during postmenopausal women)
  malformations of bones and joints
  a history of joint surgery (e.g., meniscectomy)

WORKING CLASSIFICATION OF OSTEOARTHROSIS PROPOSED BY THE AGC (2000)

1. Pathogenetic options:
   1.1. Idiopathic (primary)
   1.2. Secondary
   2. Clinical forms:
   2.1. Monosteoarthrosis (damage to one joint)
   2.2. Oligoosteoarthrosis (damage to two or more joints, but not more than two groups of joints)
   2.3. Polyosteoarthrosis (damage to three groups of joints and more)

3. Localization:

3.1. Knee joint:

3.1.1. OA of the medial part of the tibiofemoral department

3.1.2. OA of the lateral part of the tibiofemoral department

3.1.3. OA of the patellofemoral division

3.2. Hip Joint:

3.2.1. Eccentric (upper)

3.2.2. Concentric (axial, medial)

3.2.3. Diffuse (coxae senilis)

3. Localization (continued):

3.3. Brushes:

3.3.1. Gaberden and Bouchard nodules (nodular form)

3.3.2. Erosive OA of interphalangeal joints (nodular form)

3.3.4. OA of the carpal-metacarpal joint of the first finger of the hand

3.3.5. OA of other joints of the hands

3.4. Spine:

3.4.1. Apophysial Joints

3.5. Feet:

3.5.1. Hallus valgus

3.5.2. Hallus rigidus

3.5.3. OA of other joints of the foot

3.6. Other locations

4. Synovitis:

4.1. With synovitis

4.2. Without synovitis

5. X-ray stage (MS):

0, I, II, III, IV

6. The functional ability of the patient:

6.1. Disability is temporarily limited (FN-1)

6.2. Disability lost (FN-2)

6.3. Needs outside care (FN-3)

Symptoms of osteoarthrosis

- PAIN
  Constraint.
  Usually characterized by difficulty in the first movements, the phenomenon of a “frozen” joint after a period of rest. Stiffness usually lasts several minutes and occurs only in the affected joint. The reason for the stiffness remains unknown.
  RESTRICTION OF VOLUME OF MOVEMENT.
  DENSE THICKENES of the articular margins are often palpable and can be painful. They are an important differential diagnostic sign of OA.
  CREPITUS. In OA, it is necessary to differentiate with a crunch in the joint in a healthy person, the cause of which may be gas bubbles in the synovial fluid, which burst during movements.
  BLUE.
  SIGNS OF JOINT DESTRUCTION.

CLINIC OF OSTEOARTHROSIS SIGNS OF JOINT DESTRUCTION.

Three stages are distinguished in the development of osteoarthrosis, differing in clinical, radiological and morphological criteria

CLINIC: I STAGE OF OSTEOARTHROSIS

CLINICALCRITERIA:

pain arising in the joint during exercise and passing at rest;
palpation of the joint, as a rule, is painless, unpleasant sensations cause studies only in cases of reactive inflammation;
mobility in the joint is limited slightly, the volume of only those movements that have the smallest amplitude in a healthy person (internal rotation in the hip joint, over extension in the knee joint, etc.) is reduced. even at this stage the patient spares the affected joint, so mild atrophy of the periarticular muscles may develop; the function of the joint hardly suffers, which interferes with vigorous activity only by individuals with physical labor.

X-RAY STUDY :

slight narrowing and unevenness of the joint space;
the appearance of marginal bone growths mainly around the articular cavity; these areas of calcification and ossification are often located at some distance from the bone, gradually merging with it;
the underlined contours of the end plates are often determined;
the shapes of the mating surfaces are practically unchanged at this stage;
in some cases (reactive inflammation), the joint gap can be expanded.

BIOCHEMICAL METHODS:

they do not make it possible to differentiate the stages of osteoarthritis, but are used to diagnose various pathological conditions in the joint, as well as to evaluate the effectiveness of therapeutic measures.

markers of articular cartilage degradation are determined in synovial fluid, blood serum, and urine. The most reliable information can be obtained by analyzing the composition of the synovial fluid.

IMMUNOLOGICAL MARKERS:

determined in blood serum.

CLINIC: II STAGE OF OSTEOARTHROSIS

CLINICAL CRITERIA:

pain in the joint becomes permanent, at rest decreases, but generally, as a rule, does not go away;
palpation causes pain not only in the projection of the joint space, but also in the paraarticular zones;
mobility in the joint is noticeably limited for the patient (up to half the range of motion in a healthy joint), although it remains in a volume sufficient for self-care;
contractures develop in the joint, which are mainly extrasolar in nature and amenable to correction with conservative treatment;
there is a pronounced atrophy of the muscles performing movements in the diseased joint;
the function of the joint suffers significantly, the ability to work of people with physical labor is limited, which forces them to change their profession or become disabled, and difficulties arise in the work of people with mental labor.

X-RAY STUDY:

A significant narrowing of the joint gap (more than half compared with a healthy joint) and its unevenness are determined. The latter is associated with the destruction of the cartilage in the most loaded areas.

- there is sclerosis of the locking plates under the areas of cartilage destruction and the appearance of foci of osteosclerosis and osteoporosis in the adjacent bone tissue;
- significant marginal bone growths are also found both in the articular cavity and in the articular head;
- there is a change in the shape of the mating surfaces, although at this stage of the disease it is moderate.

CLINIC: III STAGE OF OSTEOARTHROSIS

CLINICAL CRITERIA:

complaints of constant severe pain, the intensity of which increases with movements;

palpation of the joint and periarticular region is sharply painful;

mobility in the joint is sharply limited, remaining in an insignificant volume in only one plane (less than half the range of motion in a healthy joint);

sometimes only minor rocking movements are preserved;

persistent contractures develop, which are mainly the result of intra-articular changes. Extraarticular and vertebrogenic layers are pronounced, which often creates difficulties in clinical diagnosis;

atrophy of the periarticular muscles is pronounced;

joint function is often completely lost, which forces patients to use unloading means (cane, crutches, etc.)

X-RAY CRITERIA:

a sharp narrowing of the joint gap due to the expressed, and often complete destruction of the articular cartilage, menisci and degeneration of the intraarticular ligaments;

articular surfaces and surrounding bone marginal growths usually come into contact in the most loaded places, but they can also occur throughout;

the shape of the articular head and cavity sharply changes, bone marginal growths surround the articular surfaces and, floating on adjacent sections of the bones, impede movement; these changes are called "deforming arthrosis";

X-RAY CRITERIA (continued):

- **in addition to osteophytes that completely merge with the corresponding bone, independent bone formations are often found, arising through the ossification of certain sections of the joint capsule and paraarticular soft tissues; this process is best observed in the area of the hip, knee joints, as well as in the interphalangeal joints of the hand;**
- **individual bone formations at the III stage of osteoarthrosis may be the result of fractures of sites of marginal bone growths. Most often, such a pattern is found in the region of the anterior edge of the distal epiphysis of the tibia;**
- **pronounced sclerosis of the articulating bones is found in the most loaded places, cystic cavities are often detected.**

JOINT SCREENING

SCREENING-RESEARCH - this is the minimum set of techniques to objectively determine the presence of impaired joint function (arthropathy)

FRAGMENTARY CLINIC - DIAGNOSTIC RESEARCH INCLUDES:

palpation of the joint: both at rest and during movement

determination of the volume of passive movements

determination of the volume and quality of active movements

definition of joint play ("joint play" - joint play)

stress tests (overcoming traffic)

spine structure of the spinal motion segment

The system of the vertebral-motor segment (VMS) is an element of the spine, which, in turn, is part of the body's ODS

spine structure of the spinal motion segment

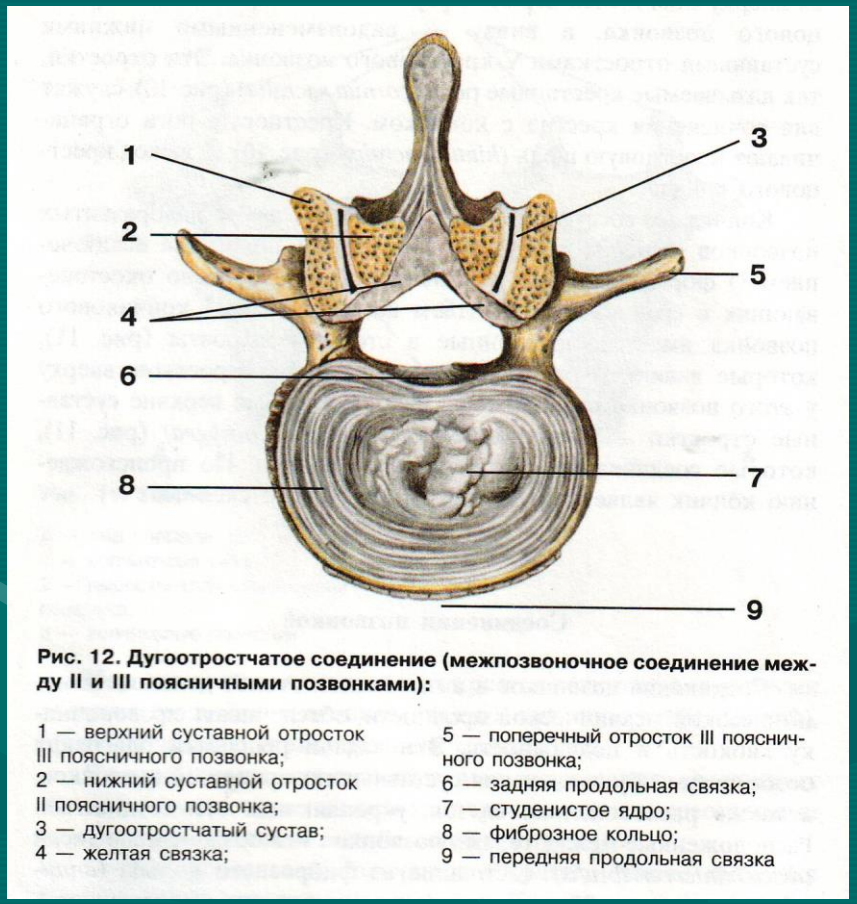


Рис. 12. Дугоотростчатое соединение (межпозвоночное соединение между II и III поясничными позвонками):

1 — верхний суставной отросток III поясничного позвонка;
2 — нижний суставной отросток II поясничного позвонка;
3 — дугоотростчатый сустав;
4 — желтая связка;
5 — поперечный отросток III поясничного позвонка;
6 — задняя продольная связка;
7 — студенистое ядро;
8 — фиброзное кольцо;
9 — передняя продольная связка

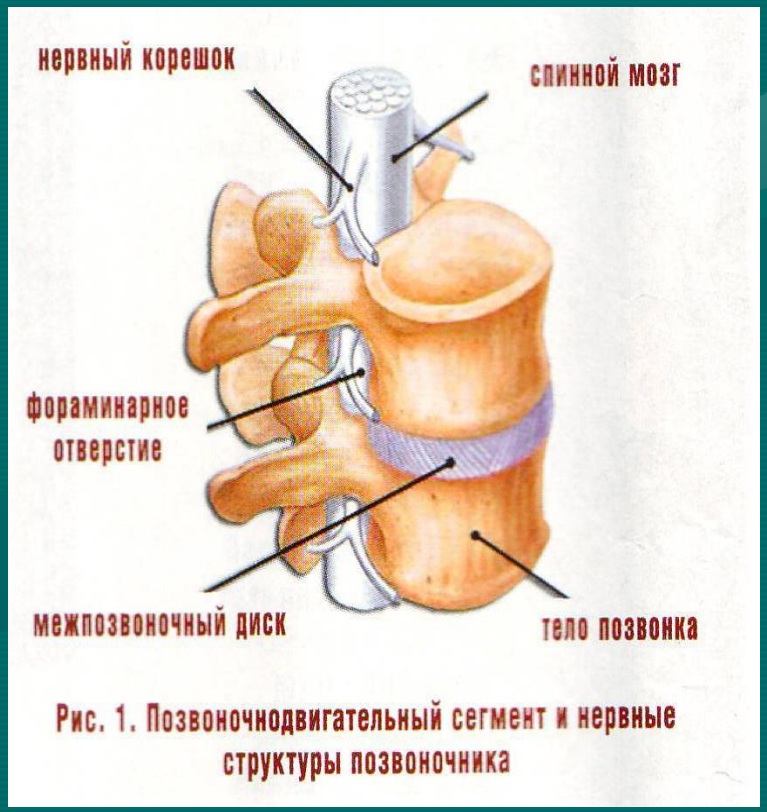
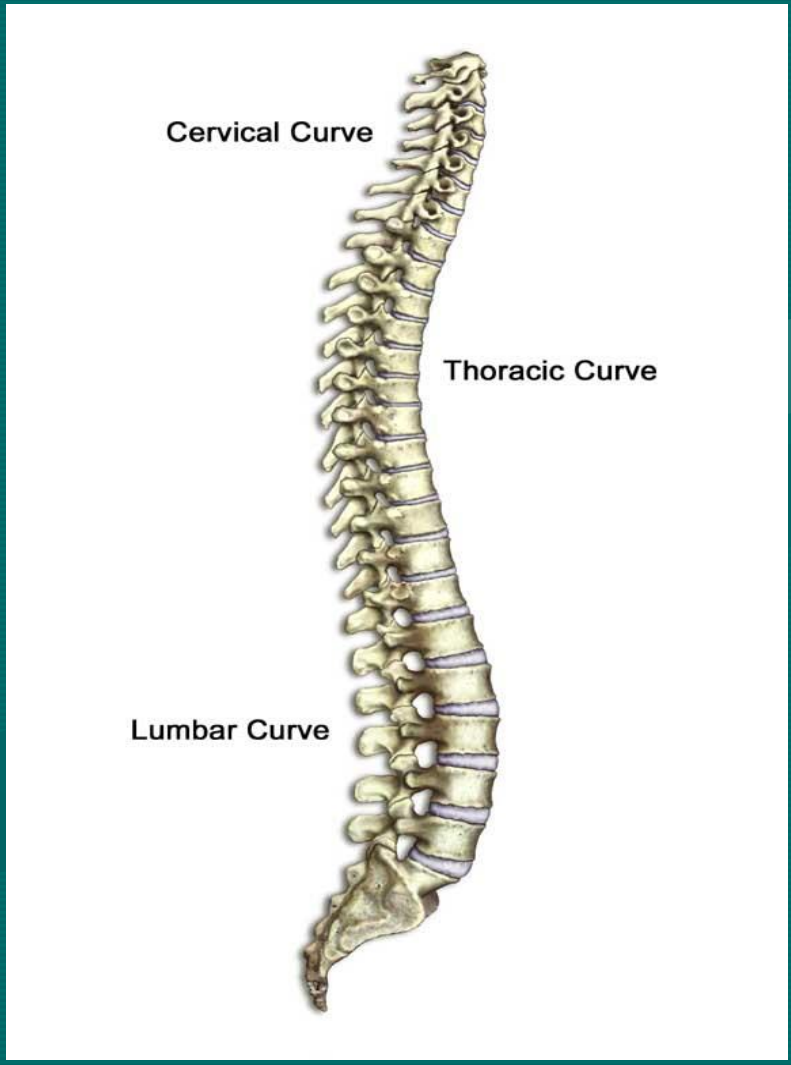


Рис. 1. Позвоночнодвигательный сегмент и нервные структуры позвоночника

The VMS system consists of subsystems of the front and rear support complex



Degenerative dystrophic diseases of the spine

The nosological affiliation of degenerative diseases of the spine is determined on the basis of which elements of the VMS degenerative changes appear primary and in which secondary.

But they arise sequentially at a different pace and in all exclusively elements of the VMS.

Risk factors for degenerative diseases of the spine

Degenerative disc disease (a modern medical diagnosis is dorsopathy) occurs as a result of the action:

- pathogenic factors affecting the functional state of the VMS system (dysplasia of the elements of the VMS, constitutional features of the configuration of the spine and pelvis, vertebral-pelvic imbalance);
- pathogenic factors associated with the state of the body's systems (dishormonal, discirculatory and neurovegetative trophic disorders, impaired immune system reactivity, inadequate muscle coordination, dynamic stereotypes, hypervitaminosis, bad habits);
- pathogenic environmental factors (prolonged static and excessive dynamic loads, physical inactivity, hypothermia, and other little-studied environmental factors (magnetic field, solar activity, penetrating radiation, radionuclides, etc.)).

Classification of degenerative diseases of the spine

Degenerative diseases of mainly the anterior support complex include:

- osteochondrosis;

- osteochondropathy;

- spondylosis; (not to be confused with spondylolysis (lack of bone fusion of the arches with the body of the V lumbar vertebra or with spondylolisthesis - sliding of the body of V, less often the IV lumbar vertebra along with the superior articular process in the anterior direction).

uncrovertebral and rib vertebral arthrosis

Spondyloarthrosis refers to degenerative diseases of the posterior supporting complex.

Classification of degenerative diseases of the spine

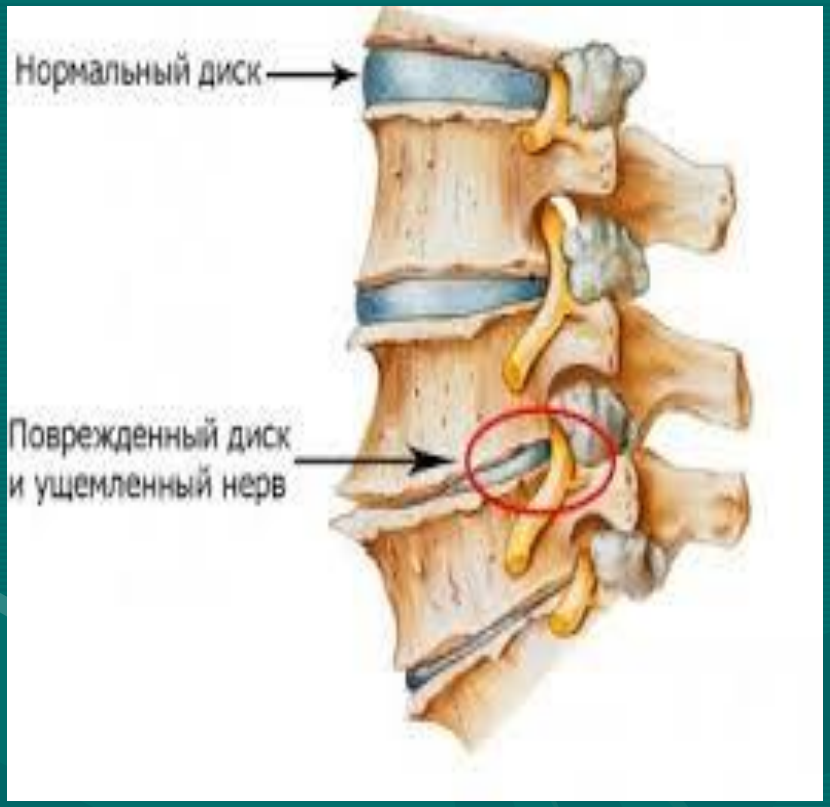
In most classifications, osteochondrosis is assigned to the OA group of the spine. However, by definition, the pathogenesis and clinical picture of spinal osteoarthritis and spinal osteochondrosis are completely different diseases.

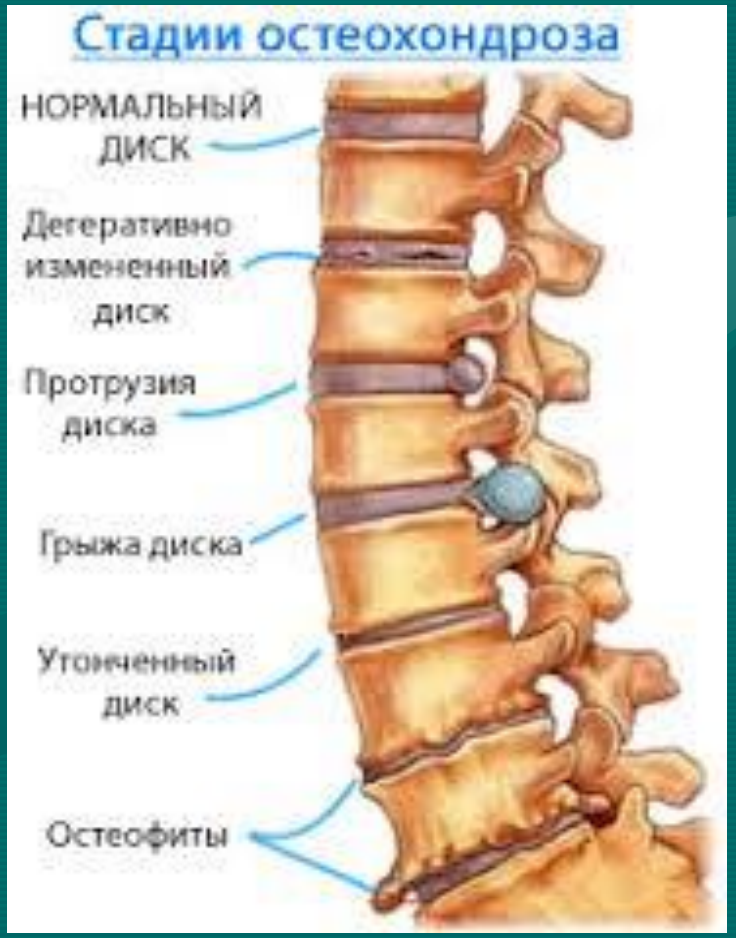
OA of the joints - a disease of the synovial joints (diarthrosis), in relation to the spine - OA of the so-called apophysial joints (the joint between the upper articular processes of the underlying and lower articular processes of the overlying vertebrae).

Osteochondrosis - a degenerative lesion of cartilage joints (amphiarthrosis), in the modern classification of diseases refers to DORSOPATHIA.

Osteochondrosis is characterized by primary processes of dystrophy, degeneration and destruction of MD, secondary damage to the posterior support complex, and then vertebral bodies with total damage to all elements of the vertebral-motor segments (VMS).

Osteochondrosis of the spine





MORPHOLOGY OF DEGENERATIVE SPINE DISEASES

Structural changes in MD can be divided into: fractures of the fibrous ring, protrusion and hernia.

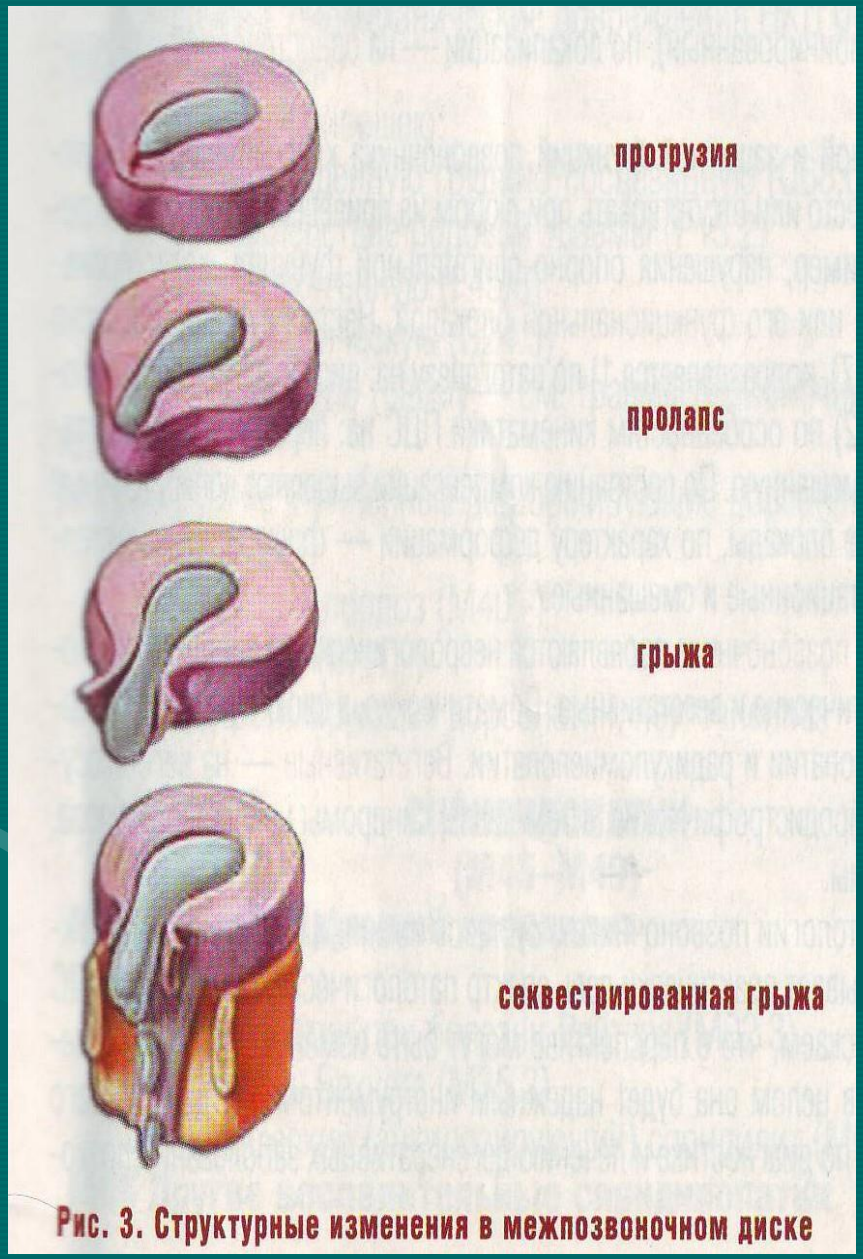


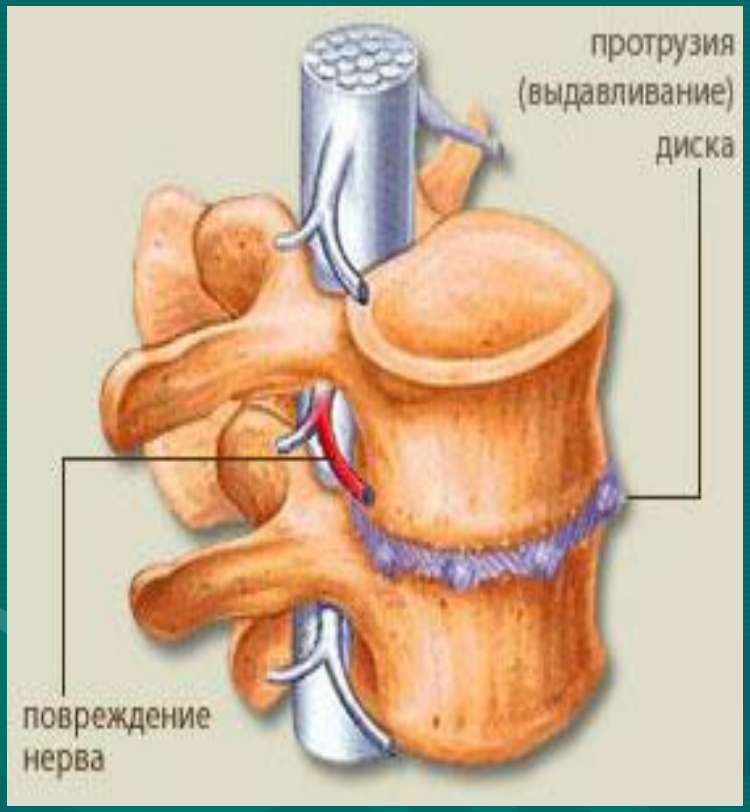
Рис. 3. Структурные изменения в межпозвоночном диске

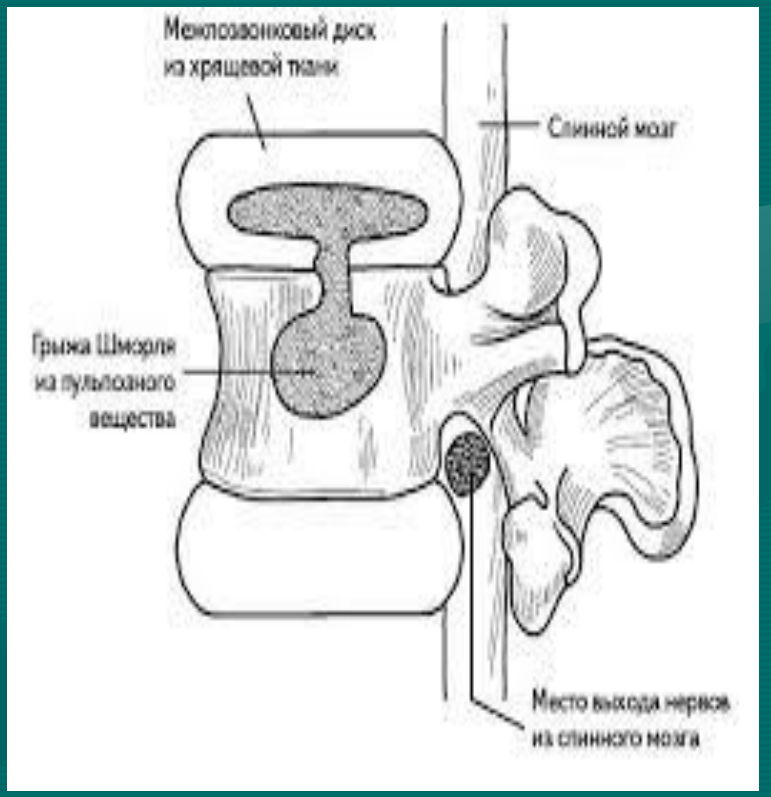
Protrusion - a fragment of the pulpous nucleus is introduced into the defect of the FC (rupture of collagen bundles of the FC plates) under high pressure.

Hernia - complete rupture of all plates of the FC and the posterior longitudinal ligament intimately associated with it.

Thus, in the first place, the disk loses its functions as the active element of the PDS - the properties of the shock absorber.

MORPHOLOGY OF DEGENERATIVE SPINE DISEASES



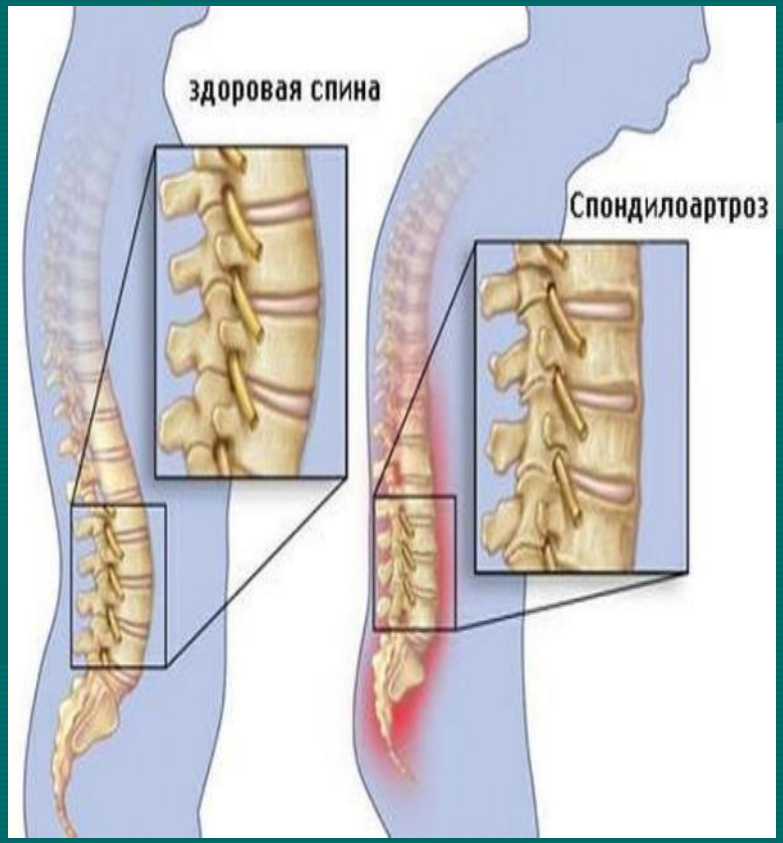


Classification of degenerative diseases of the spine

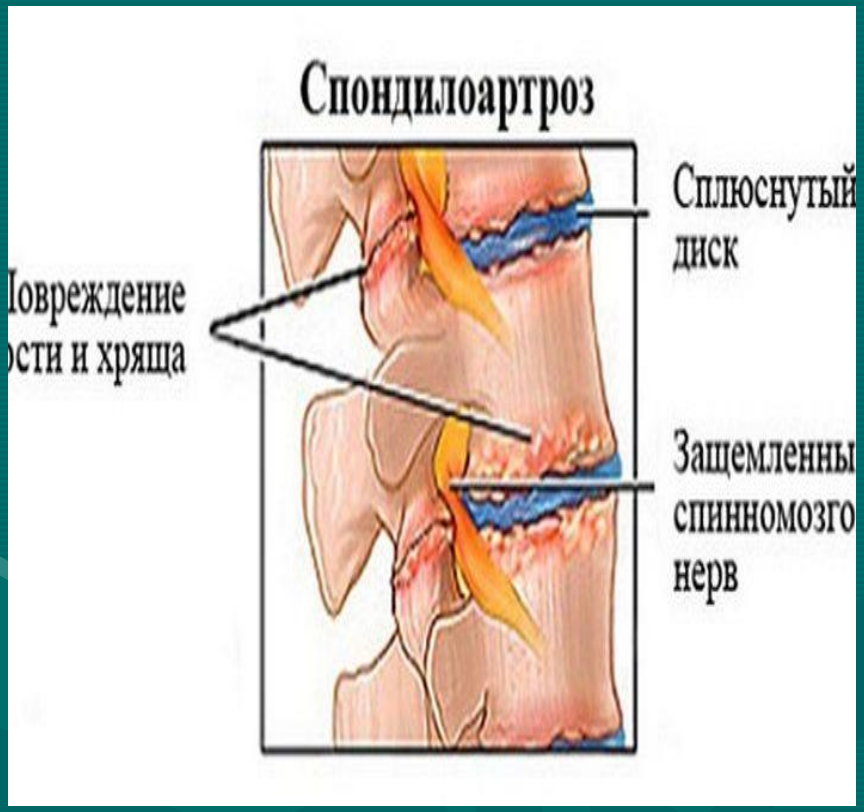
With osteochondropathy, the primary processes of dystrophy, degeneration and destruction primarily affect the vertebral bodies, then MD and the elements of the posterior support complex also with total damage to all elements of the VMS.

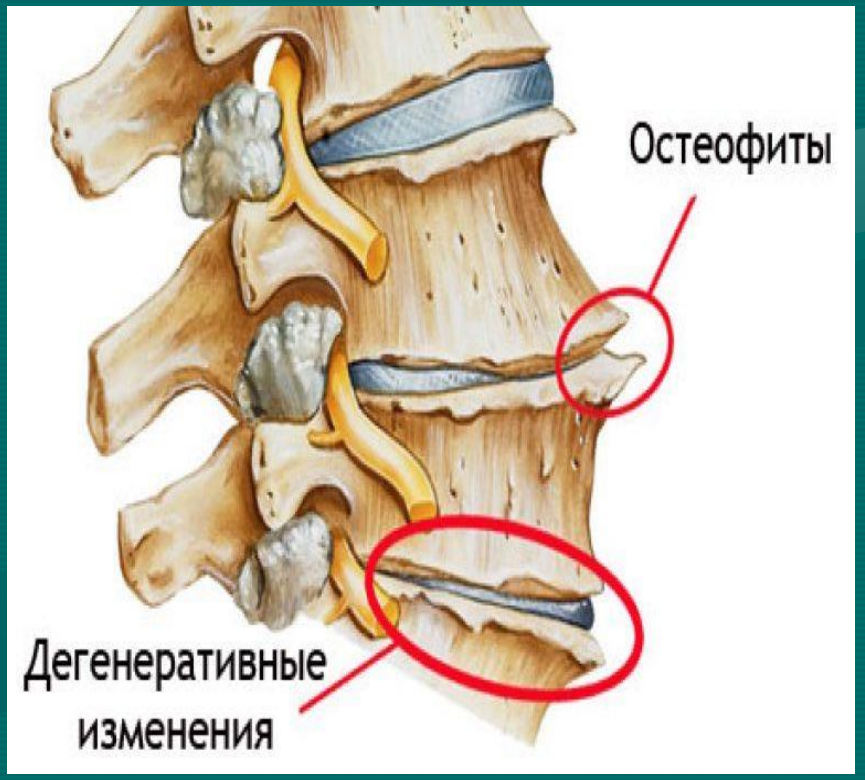
Classification of degenerative diseases of the spine

Primary spondylarthrosis is characterized by primary processes of dystrophy, degeneration and destruction of elements of the posterior support complex, secondary damage to MD, with subsequent involvement of the vertebral bodies and total damage to all elements of the VMS.



Spondyloarthrosis





Spinal OA is characterized by dissociation between the radiological and clinical picture of the disease - even significant progression of morphological changes in the apophysial joints, including the formation of large osteophytes, usually does not manifest clinically; with osteochondrosis - on the contrary, there is a clear connection between the destruction of the intervertebral discs, determined by x-ray, and clinical manifestation (radicular syndrome).

Of course, spinal OA and osteochondrosis are diseases that are often concomitant with each other, since changes in the synovial joints dramatically increase the load on the discs, which leads to osteochondrosis, and vice versa.

With a significant bulging of a disc fragment, it is possible: compression of the root - radiculopathy, blood vessels - radiculosemia, spinal cord - myelosemia.

In this situation, the pain can be not only local in nature, but can also be transmitted to different parts of the arms and legs, depending on the affected segment of the spine.

In connection with the loss of elasticity by the disc, the intervertebral joints in which osteoarthrosis is formed - spondylarthrosis are also subjected to increased stress.

n response to the ongoing processes, a reflex protective muscle spasm occurs, designed to fix the unstable affected segment of the spine. Despite its protective role, muscle spasm is another serious cause of pain in acute constipation.

diagnosis of osteochondrosis

When making a diagnosis of osteochondrosis, the level of damage, the features of the clinical syndrome (radicular pain, dyscalgia, visceral form, etc.) should be reflected; clinical phase of the disease (exacerbation, remission); additional radiological features (disc herniation, spondylarthrosis, etc.). In common forms of OCH, the level of damage is indicated.

Cervical osteochondrosis

Features of blood supply and innervation of the cervical spine and spinal cord explain the variations of cervical osteochondrosis syndromes (radicular, spinal, reflex, radiculopathy, etc.). The proliferation of osteophytes can lead to compression of the vertebral arteries, especially with over-extension and rotation of the head; to compression of the roots in the intervertebral foramen

Thoracic osteochondrosis

Radicular syndromes in thoracic acute obstructive pulmonary disease are often combined with symptoms of diseases of the internal organs.

The main clinical symptoms are: pain, aggravated by physical exertion. They can be amplified by axial load, vibration, shaking in transport.

There is a restriction of the mobility of the thoracic region. Tension of the longest back muscles.

OSTS of lower thoracic localization can cause abdominal pain with intestinal discomfort. ! Vegetative phenomena must be differentiated from the clinic of an acute abdomen.

Hyperdiagnosis in such situations leads to unjustified surgical interventions.

Pain in the right hypochondrium can simulate the pathology of the biliary tract.

A disorder of the function of the urinary tract can be with the localization of the pathological process in the lower thoracic region.

A decrease in potency in men and a decrease in libido in women can be associated with autonomic disorders in lower thoracic osteochondrosis.

Lumbar osteochondrosis

It is characterized by pain.

Pain in the lumbosacral region (lumbalgia) is relatively rare.

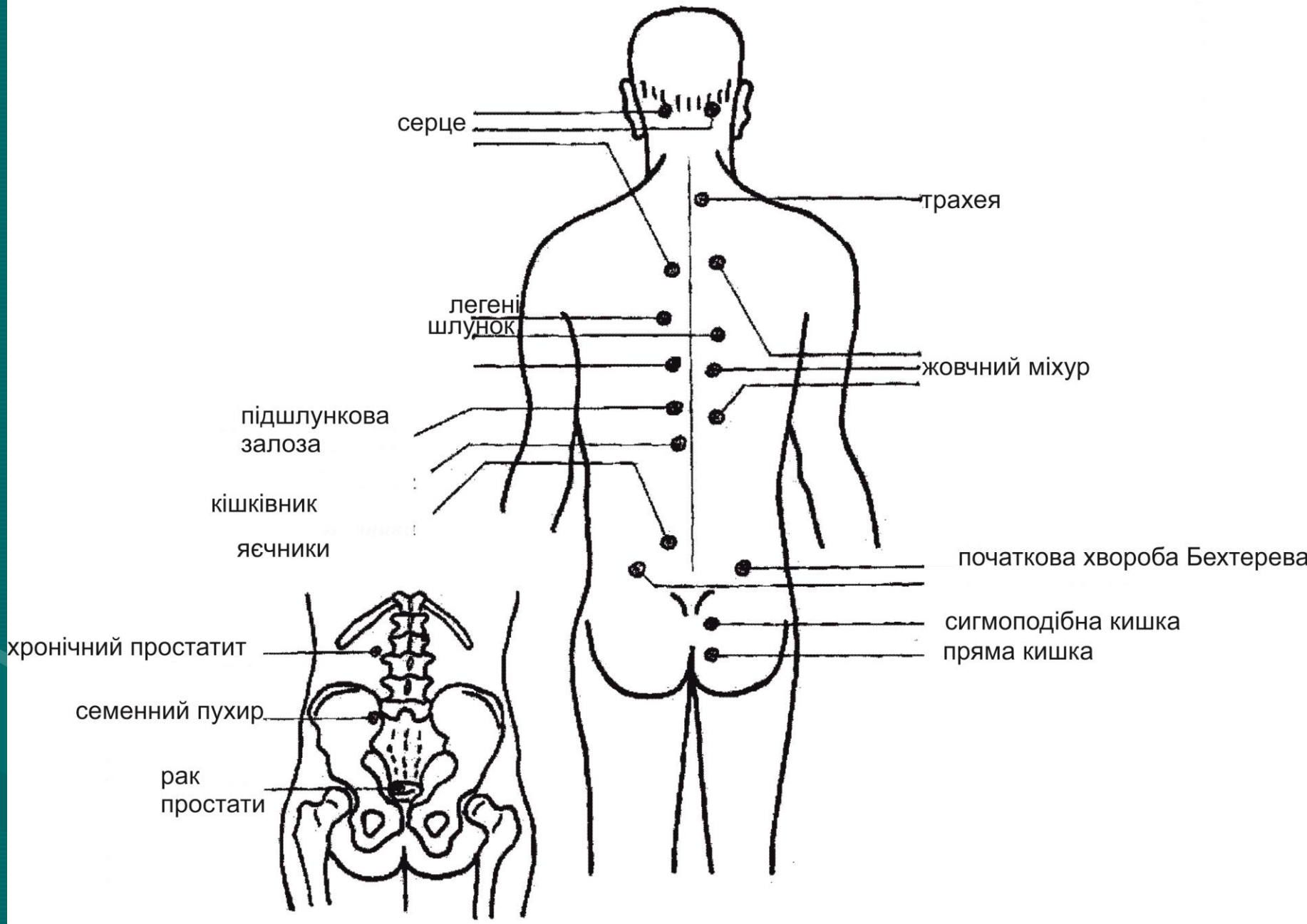
Pain in the lumbosacral region with irradiation in the leg (lumbar ischialgia) is observed in 89.5% of patients with lumbar OCH.

Pain radiating only to the leg (sciatica) is much less common and is associated with compression of the roots of the spinal nerves at an appropriate level.

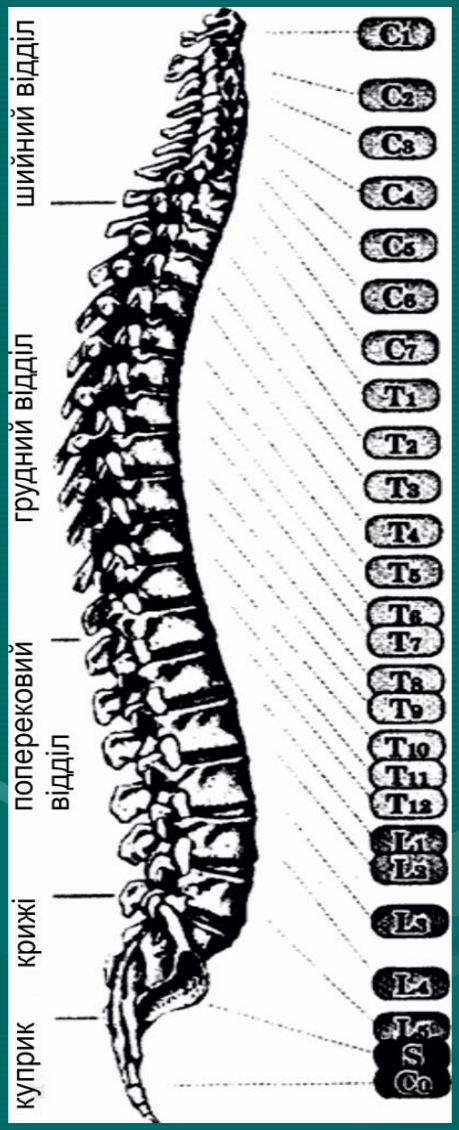
Vegetative disorders are often symptomatic. Patients may be mistakenly treated for obliterating endarteritis. With horse tail compression, neurogenic bladder dysfunction occurs in 10% of patients.

With damage to the upper lumbar discs, there may be dysfunction of the gallbladder and colon.

There is a limitation of spinal mobility, lateral inclinations, rapid fatigue of the back muscles, insecurity in “one’s back”, painful axial load.

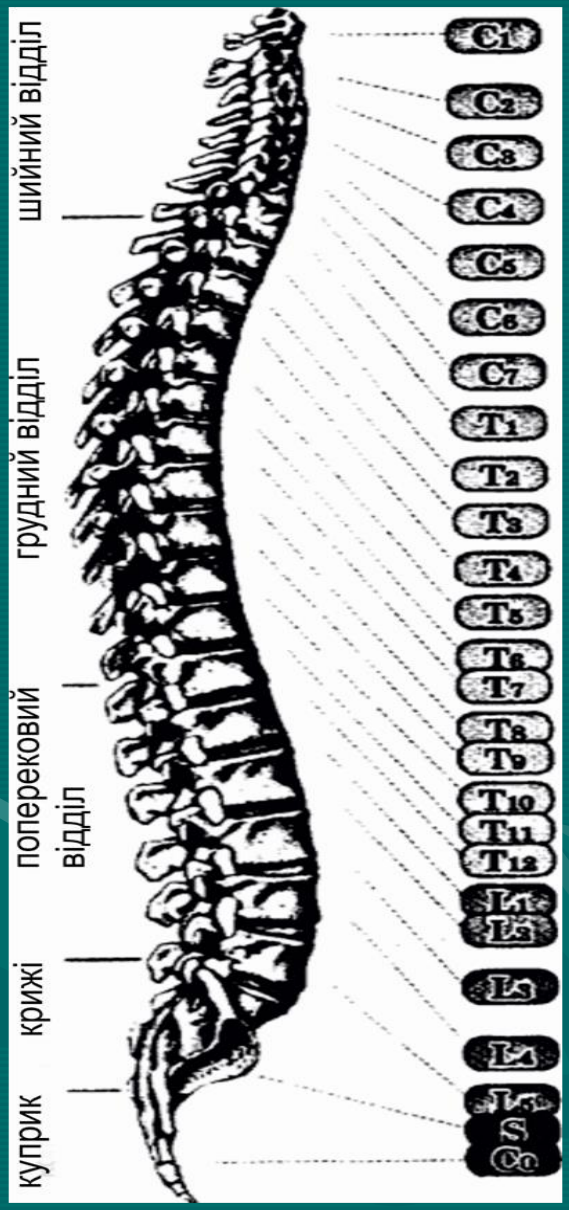

серце
трахея
легені
шлунок
жовчний міхур
підшлункова
залоза
кішківник
яєчники
початкова хвороба Бехтерева
сигмоподібна кишка
пряма кишка
хронічний простатит
семенний пухир
рак
простати

The consequences of infringement of the spinal nerves



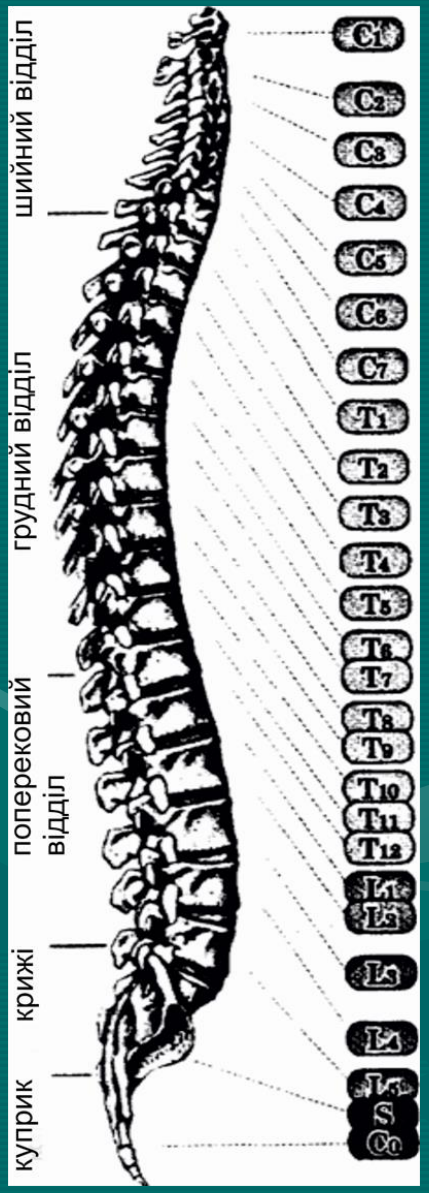
- C1, C2 - psychosis, neurasthenia, hysteria, headache, dizziness, insomnia, cerebral hemorrhage, hydrocephalus, trismus, hemiplegia, amnesia, epilepsy, torticollis, renal sinusitis, hormonal disorders, strabismus.
- C3 - deafness, blindness, conjunctivitis, trismus, diseases of the eyes, nose, ear.

The consequences of infringement of the spinal nerves



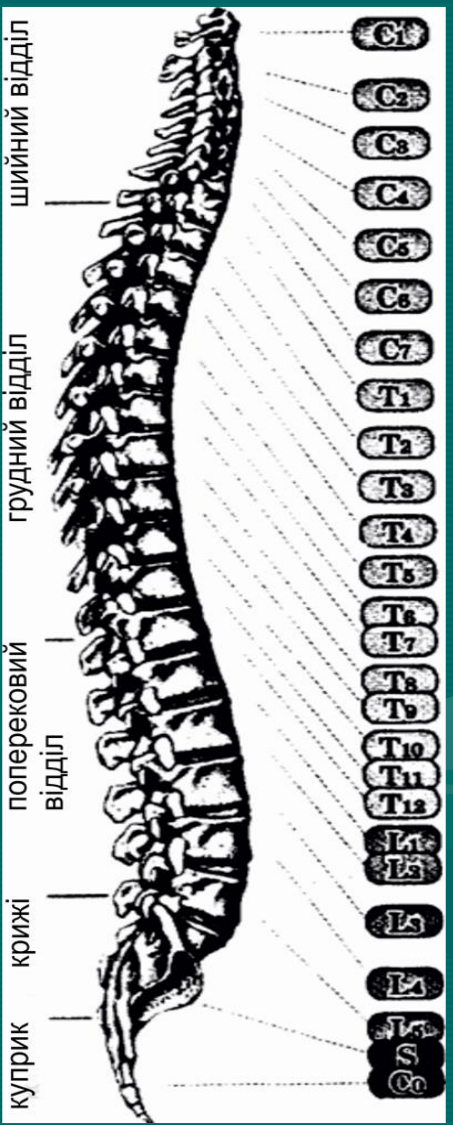
- C4, C5 - neurasthenia, hysteria, loss of taste, trigeminal neuralgia, adenoiditis, cerebral hemorrhage, headache, trismus, tonsillitis, vomiting, nose and ear diseases.
- C6 - eye diseases, diseases of the organs of the oral cavity, pharyngitis, laryngitis, tonsillitis, tonsillitis, loss of taste.
- C7 - shortness of breath, asthma, chronic bronchitis, shoulder-scapular periarthritis, mumps, thyroid disease.
- T1 - labored breathing, cough, bronchial asthma, graphospasm, allergy.
- T2 - myocarditis, endocarditis, pericarditis, cardiomegaly, bronchitis, atherosclerosis.
- T3 - pleurisy, pneumonia, pulmonary edema, bronchospasm, pulmonary emphysema, pulmonary tuberculosis.

The consequences of infringement of the spinal nerves



- T4, T5 - hepatomegaly, jaundice, hepatitis, cirrhosis, heart disease, neurasthenia, hysteria, hypochondria, gout.
- T5, T7 - stomach cancer, dyspepsia, pyloric stenosis, gastric and / or duodenal ulcer, gastroptosis, anorexia, intercostal neuralgia.
- T8, T9 - liver disease, splenomegaly, diaphragmatic hernia, nausea.
- T10, T11, T12 - kidney disease, hematuria, diabetes insipidus, dyspepsia, diarrhea, cholelithiasis, a tendency to constipation.

The consequences of infringement of the spinal nerves



- L1, L2 - hepatomegaly, chronic constipation, diarrhea, colitis, intestinal tuberculosis, cancer of the abdominal organs.
- L3, L4 - menstrual irregularities, cystoma, uterine cancer, antiflexion and uterine retroflexion, urethritis, infertility, testicular disease, hemorrhoids, cystitis, bladder stones, anal fistula, prostatomegaly, enuresis, sciatica.
- L5, S1 - sciatica, lower paraplegia, rheumatism, diseases of the bladder, diseases of the joints of the lower extremities, gout, coccialgia.

FEATURES OF MANIFESTATION OF PAIN DEPENDING ON THE CHARACTER OF THE PATHOLOGICAL PROCESS IN THE JOINTS

- **INFLAMMATION**
- **The pain is most intense in the morning and in the second half of the night, i.e. after a long rest. It decreases after movements and in the evening is less pronounced**

- **OSTEOARTHROSIS**
- **Morning and "starting" pains are characteristic. Pain when walking on unevenness, standing and climbing stairs indicate a pronounced lesion of the cartilage and subchondral plate. The pain is static. With prolonged walking, pain occurs due to sagging of thinned or damaged bone trabeculae.**

- EXPRESSED VASCULAR IMPAIRMENTS
- The pain is dull, aggravated by sudden shocks (sneezing, coughing), disappearing when walking.
-
- IMPAIRMENT OF THE “JOINT MOUSE”
- Blockade pain, acute, intense, recurring with repeated blockade of the joint

REMEMBER!

- Constant (day and night) "bone pain" is characteristic of tumor metastases

- Arthralgia is a particular symptom of not only diseases of the joints themselves, but also arises with a variety of diseases that are far from the genesis, as well as as a result of exposure to adverse environmental factors, in particular meteorological. Any acute and chronic infection, intoxication, neuroendocrine disorders (with diabetes mellitus, thyrotoxicosis) can cause joint pain of various durations and intensities.

Treatment of degenerative-dystrophic diseases of the joints and spine

TASKS OF TREATMENT:

a decrease in the severity of the symptoms of the disease;

functional activity improvement;

slowing the progression of degenerative processes.

Treatment of degenerative-dystrophic diseases of the joints and spine

To perform these tasks, there are non-drug and drug treatments. These include:

patient education and social support;

decrease in overweight;

physiotherapy;

physiotherapy;

the use of mobility aids;

other rehabilitation methods;

non-traditional methods of treatment (acupuncture, homeopathy, etc.);

systemic pharmacotherapy;

local pharmacotherapy (application, intraarticular administration of drugs), as well as surgical treatment.

Orthopedic appliances

Orthesis

MEDICINAL THERAPY

All drugs used in osteoarthritis are conventionally divided into two groups:

symptomatic

pathogenetic, or modifying the disease.

Share also:

slow-acting drugs and

high-speed drugs.

! All drug therapy is aimed at relieving pain and inflammation.

Unified clinical protocol for osteoarthritis medical care.

UNIFORMAL CLINICAL PROTOCOL OF PRIMARY, SECONDARY (SPECIALIZED), THIRD (HIGHLY SPECIALIZED) MEDICAL ASSISTANCE AND MEDICAL RETAIL

Osteoarthrosis

2016

Osteoarthrosis treatment

MEDICAMENTOUS THERAPY

analgesics


ТРАМАДОЛ®
хлоргидрат трамадола
Здоров'я
фармацевтична компанія
Трамадол
10 ТАБЛЕТОК, ВКРИТИХ ОБОЛОНКОЮ, ПО 0,5 Г
ЗАСТОСОВУВАТИ ЗА ПРИЗНАЧЕННЯМ ЛІКАРЯ
ЗБЕРІГАТИ В СУХОМУ, ЗАХИЩЕНОМУ ВІД СВІТЛА МІСЦІ
ЗБЕРІГАТИ В НЕДОСТУПНОМУ ДЛЯ ДІТЕЙ МІСЦІ
ВІДПУСКАЮТЬ ЗА РЕЦЕПТОМ
ЗАСТОСОВУВАТИ ЗА ПРИЗНАЧЕННЯМ ЛІКАРЯ
ЗБЕРІГАТИ В СУХОМУ, ЗАХИЩЕНОМУ ВІД СВІТЛА МІСЦІ
ЗБЕРІГАТИ В НЕДОСТУПНОМУ ДЛЯ ДІТЕЙ МІСЦІ
ВІДПУСКАЮТЬ ЗА РЕЦЕПТОМ


БОЛІНЄТ
Ефективне позбавлення болю
ІБУПРОФЕН 200 М
БОЛІНЄТ
10 ШИПУЧИХ ТАБЛЕТОК
Ефективне позбавлення болю
ТАБЛЕТКИ,
ПОКРЫТЫЕ ОБОЛОЧКОЙ-
при хронических болях
ШИПУЧИЕ ТАБЛЕТКИ-
для снятия острой боли

Osteoarthrosis treatment

MEDICAMENTOUS THERAPY

Non-steroidal ANTI-INFLAMMATORY DRUGS


НИМЕСУЛИД
ЦЕЛЕБРЕКС
200 мг целекоксиб
30 капсул
МЕЛБЕК
Мелоксикам 7,5 мг
10 таблеток
Nise
20g
Analgesic and anti-inflammatory
Найз
20 г
Кеторолак
КЕТОРОЛ
10 мг
20 таблеток, покрытых оболочкой
Диклоберл 100
10 супозиторіїв
Налгезин ФОРТЕ
Кеторолак-Здоровье
10 ампул по 1 мл
MELOXICAM
ЛЕКХІМ
МЕЛОКСИКАМ
20 ТАБЛЕТОК ПО 0,015 г
ЗА РЕЦЕПТОМ
Диклак Гель 5%
100 г


найкращий засіб при
ревматоїдному артриті, остеоартриті
і анкілозуючому спондилоартриті
ФЕДІН-20
3 х 10 капсул
Пироксикам капсулы Ф.США 20 мг
Федин-20
20 мг


Олфен™
Діклофенак натрію
Розумний хід проти болю

meloxicam

протизапальний
аналгетичний
антипіретичний

Короткотривале симптоматичне лікування болю

тривале полегшення за 60 хв.

ЛОКСИДОЛ

ЛОКСИДОЛ. Склад: *діюча речовина:* meloxicam; 1 ампула (1,5 мл) розчину містить мелоксикаму 15 мг. **Фармакотерапевтична група.** Нестероїдні протизапальні та протиревматичні засоби. Код АТХ М01А С06. **Показання.** Короткотривале симптоматичне лікування гострого нападу ревматоїдного артриту та анкілозивного спондиліту, коли пероральний та ректальний шляхи застосування мелоксикаму не можуть бути застосовані. **Протипоказання.** Гіперчутливість до мелоксикаму або до інших складових лікарського засобу, або до активних речовин з подібною дією, таких як НПЗП, аспірин. Мелоксикам не слід призначати пацієнтам, у яких виникали симптоми бронхіальної астми, нюсові поліпи, ангіоневротичний набряк або кропив'янка після прийому аспірину чи інших НПЗП; шлунково-кишкова кровотеча; тяжка печінкова недостатність; тяжка ниркова недостатність; тяжка серцева недостатність; лікування періопераційного болю при коронарному шунтуванні (КШ); III триместр вагітності; вік пацієнта до 18 років. **Побічні реакції.** Більшість побічних ефектів, що спостерігаються, шлунково-кишкового походження. Можлива пептична виразка, перфорація або шлунково-кишкова кровотеча, іноді летальна, особливо у пацієнтів літнього віку (див. розділ «Особливості застосування»). Після застосування спостерігалася нудота, блювання, діарея, метеоризм, запор, диспепсія, абдомінальний біль, мелена, блювання кров'ю, виразковий стоматит, загострення коліту та хвороби Крона (див. розділ «Особливості застосування»). З меншою частотою спостерігався гастрит. **Категорія відпуску.** За рецептом. **Виробник.** К.О. Ромфарм Компані С.Р.Л., Румунія. **Замовник.** «УОРЛД МЕДИЦИН ЛІМІТЕД», Грузія. *ЗАТВЕРДЖЕНО Наказ Міністерства охорони здоров'я України №6 від 11.01.2016 р. Реєстраційне посвідчення № UA/14841/01/01. Інформація надана скорочено. З повною інформацією про препарат можна ознайомитися в інструкції для медичного застосування препарату. Інформація для медичних та фармацевтичних працівників, а також для розповсюдження в рамках спеціалізованих заходів з медичної тематики.*

Інформація про рецептурний лікарський засіб для професійної діяльності спеціалістів у галузі охорони здоров'я.

WORLD MEDICINE
Pharmaceutical Company

Додаткова інформація за тел.: (044) 495 25 30 • e-mail: info@worldmedicine.ua

www.worldmedicine.ua

Диклоберл – нестероидный противовоспалительный, анальгетический препарат, купирует боль ревматического и травматического происхождения с восстановлением нарушенных функций и физической активности

Нимесил – селективный ингибитор ЦОГ-2 для лечения болевых синдромов различного происхождения, артрита, остеоартроза, бурсита, тендинита и лихорадки при инфекционно-воспалительных заболеваниях

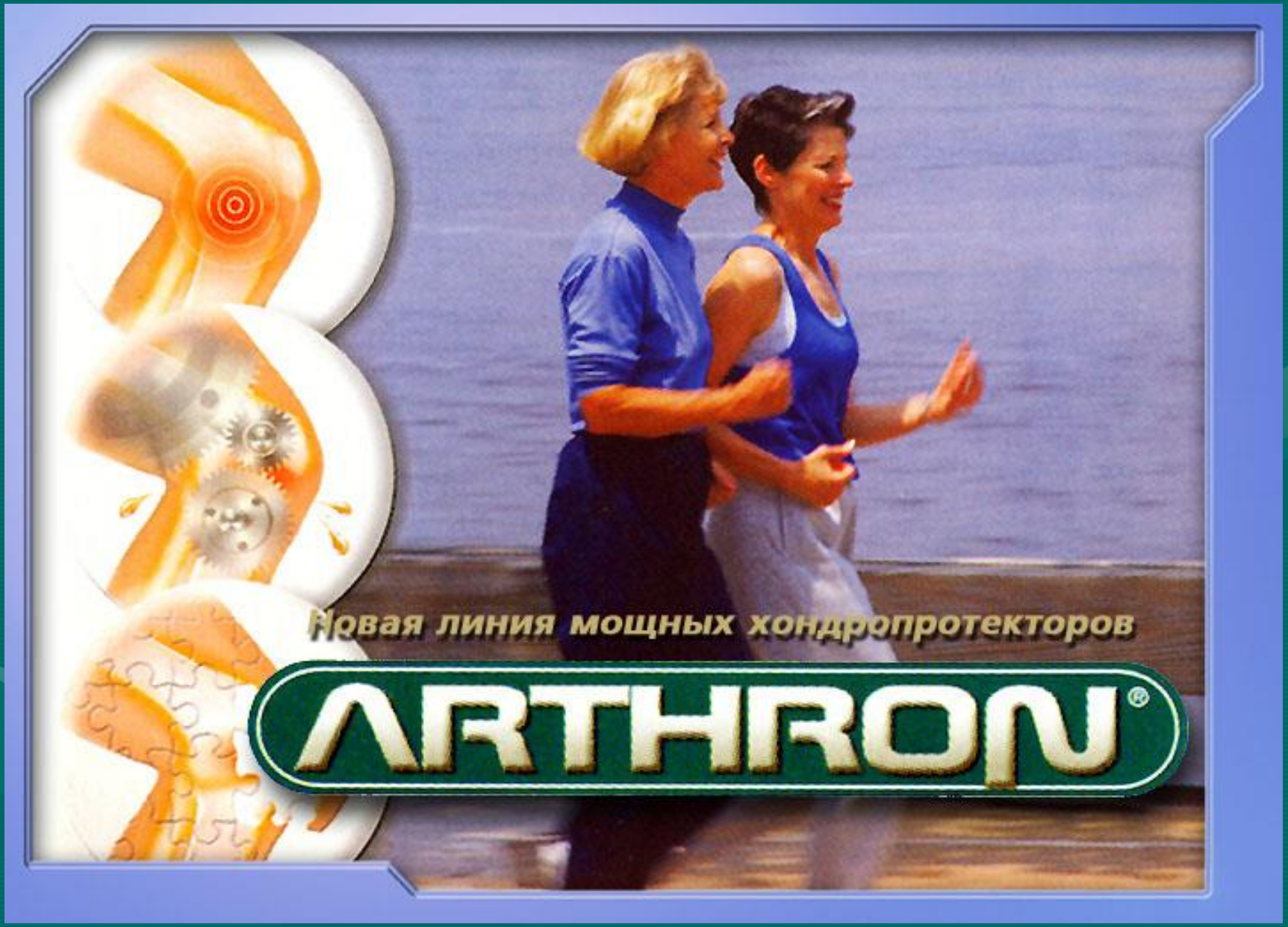

Мовалис®
15 мг/1,5 мл
Раствор для внутримышечного введения
3 ампулы по 1,5 мл
Boehringer
Ingelheim


Парацетамол
RENEWAL
Парацетамол
20 таблеток по 500 мг
для приема внутрь
ОТ БОЛИ И ЖАРА


ксефокам
Лорноксикам 4 мг
нестероидное противовоспалительное средство
10 таблеток
таблетки покрытые пленочной оболочкой
Перед применением проконсультируйтесь с врачом!
Хранить при температуре не выше 25 °С
Хранить в недоступном для детей месте!
Отпуск из аптеки по рецепту врача
Производитель:
Никомед Дания АпС, Дания
NYCOMED
www.nycomed.ru

MEDICAMENTOUS THERAPY

chondroprotectors


Новая линия мощных хондропротекторов
ARTHRON®

ARTHRON

КОНСТРУКТИВНАЯ ТЕРАПИЯ ЗАБОЛЕВАНИЙ СУСТАВОВ

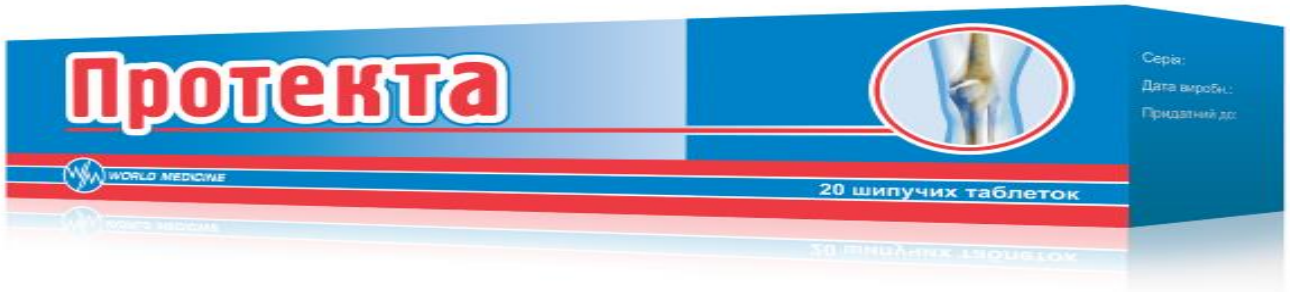

СТРУКТУМ 500 мг
STRUCTUM®
хондроитина сульфат
500 мг
Хондроитин сульфат натрия
60 капсул

Твій наступний крок – ПРОТЕКТА

профілактика захворювань суглобів

- хондропротекторний і остеотропний ефекти;
- стимулює синтез колагену;
- сприятливо впливає на метаболізм хряща;
- проявляє помірну протизапальну дію.

1 таблетка на добу



ПРОТЕКТА. Склад. *1 таблетка містить: основні речовини:* кальцію карбонату – 1400 мг (еквівалентно 500 мг кальцію), глюкозаміну сульфату калію хлориду – 1000 мг (еквівалентно 750 мг глюкозаміну сульфату), метилсульфонілметан – 750 мг, натрію хондроїтину сульфат – 660 мг (еквівалентно 600 мг хондроїтину сульфату), марганцю глюконату дигідрат – 20 мг, вітамін D_3 (холекальциферол) – 300 МО; *допоміжні речовини:* кислота лимонна безводна (Е 330), натрію гідрокарбонат (Е 500), сорбіт (Е 420), декстроза безводна, ароматизатор натуральний «Апельсин», підсолоджувачі: ацесульфам калію (Е 950) та аспартам (Е 951). **Рекомендації щодо споживання.** Рекомендується в якості дієтичної добавки до раціону харчування як додаткове джерело глюкозаміну сульфату та хондроїтину сульфату, макро- та мікроелементів, вітаміну D_3 з метою покращення регенерації хрящової тканини, усунення дефіциту кальцію та вітаміну D_3 в організмі. **Спосіб застосування та рекомендована добова доза.** Вживати дорослим та дітям віком від 15 років і старше по 1 таблетці на добу незалежно від прийому їжі. **Застереження щодо вживання.** Аспартам є джерелом фенілаланіну! Дієтичну добавку не рекомендовано хворим на фенілкетонурію та дітям до семи років. Не рекомендується приймати хворим на цукровий діабет. **Протипоказання.** Індивідуальна чутливість до складових компонентів, вагітність та період лактації. Дієтична добавка. Не є лікарським засобом. **Виробник.** «КЕНДІ ЛТД», Болгарія. **Заявник.** «УОРЛД МЕДИЦИН ЛІМІТЕД», Велика Британія. *Висновок державної санітарно-епідеміологічної експертизи від 11.10.2012 р. №05.03.02-03/99728. Інформація надана скорочено. З повною інформацією про препарат можна ознайомитися в інструкції щодо застосування препарату. Інформація для медичних та фармацевтичних працівників, а також для розповсюдження в рамках спеціалізованих заходів з медичної тематики.*

WORLD MEDICINE
Pharmaceutical Company
Додаткова інформація за тел.: (044) 495 25 30 • e-mail: info@worldmedicine.ua
www.worldmedicine.ua

ТЕРАФЛЕКС

Новий ступінь свободи

УНІКАЛЬНИЙ
КОМБІНОВАНИЙ
ХОНДРОПРОТЕКТОР

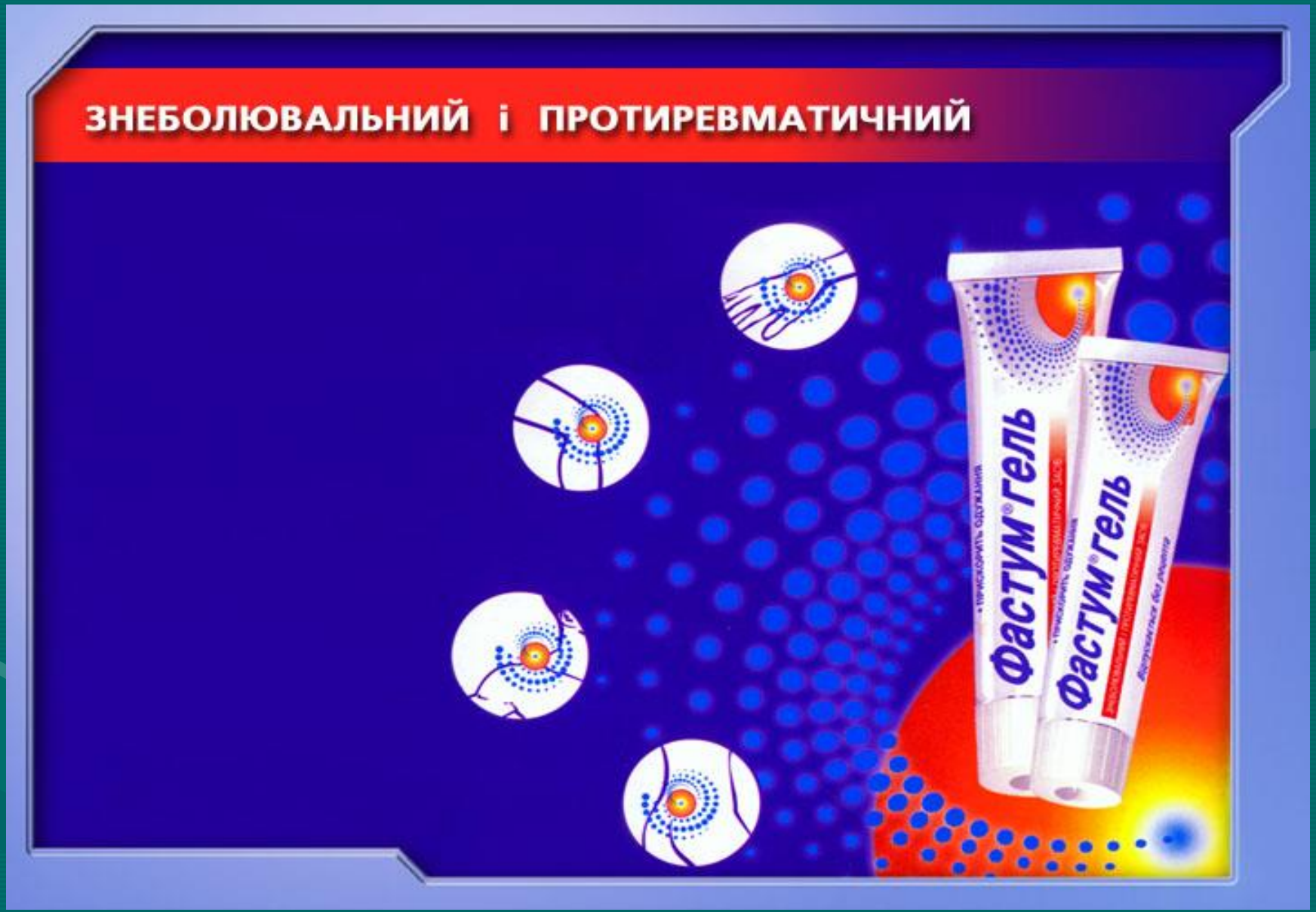
Снимает боль и лечит воспаления

Гель Финалгель® содержит активное противовоспалительное лекарственное средство, которое оказывает двойное действие.

Проникает под кожу и снимает боль непосредственно в месте ее появления.

Лечит воспалительный процесс, препятствуя образованию веществ, его вызывающих.

ФИНАЛГЕЛЬ®


ЗНЕБОЛЮВАЛЬНИЙ і ПРОТИРЕВМАТИЧНИЙ
Фастум®гель
Фастум®гель

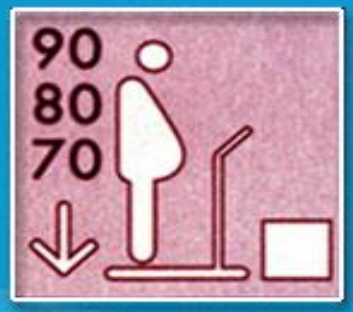

ДИП РИЛИФ
Ибупрофен: уменьшает воспаление, обеспечивает эффективное, длительное снятие боли
Ментол: быстро успокаивает боль
ГЕЛЬ ДВОЙНОГО ДЕЙСТВИЯ
ДИП РИЛИФ
ГЕЛЬ ДВОЙНОГО ДЕЙСТВИЯ
ДИП РИЛИФ

Препараты гиалуроновой кислоты

Normalization of muscle tone

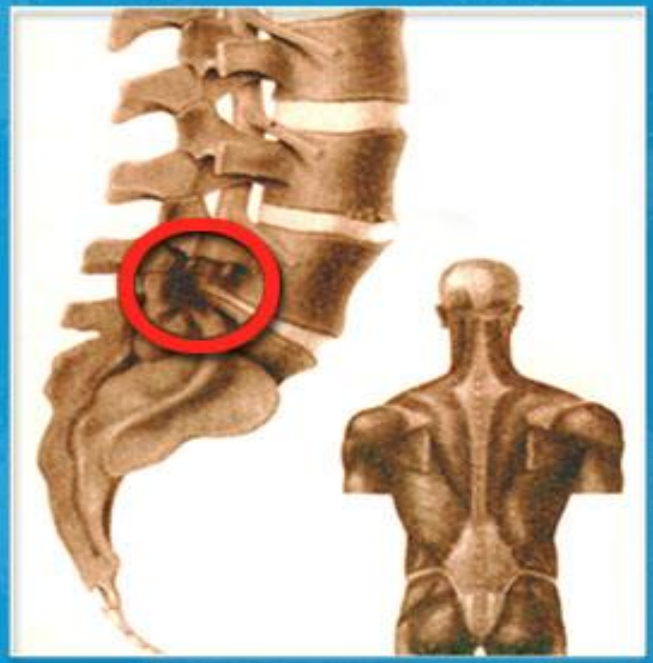
СИРДАЛУД® + Вольтарен® Рапид

* уменьшение боли
* восстановление подвижности
* улучшение самочувствия



Исключение факторов риска, уменьшение перегрузок, подвижный образ жизни

Ограничение поднятия тяжестей, исключение переохлаждения и физических перегрузок



Microcirculators


Актовегин®
раствор для инъекций
40 мг/мл
Актовегин®
200 мг
Актовегин®
раствор для инъекций
40 мг/мл

Antioxidants

Кокарніт

КОМПЛЕКСНИЙ МЕТАБОЛІЧНИЙ ПРЕПАРАТ*

20 мг	50 мг	0,5 мг	10 мг
НІКОТИНАМІД	КОКАРБОКСИЛАЗА	ЦІАНОКОБАЛАМІН	АТФ

+ гліцин

ПІДТРИМУЄ ЖИТТЯ КЛІТИНИ

*КОКАРНІТ. Показання. Неврити, нейропатії (у т. ч. при цукровому діабеті, перніціозній анемії); невралгії різного походження; міалгія, ішіалгія; люмбаго, радикуліт; бурсити, тендиніти; ішемічна хвороба серця; міокардити; міокардіопатії. Протипоказання. Підвищена чутливість до будь-якого з компонентів препарату; кардіогенний шок та інші види шоку; декомпенсована серцева недостатність, синдром пролонгації інтервалу QT, тяжкі форми брадиаритмій. Спосіб застосування та дози. По 1-2 ампули препарату 1 раз на добу (внутрішньом'язово). Тривалість лікування залежить від перебігу захворювання. Побічні реакції. Неврологічні розлади: головний біль, запаморочення, короткочасна втрата свідомості, відчуття стиснення у голові, фобії, нервове збудження, парестезії. Місцеві реакції: зміни у місці введення, включаючи біль, гіперемію, свербіж, набряк. Передозування. Симптоми: запаморочення, слабкість, тремор, шлуночкові порушення. Категорія відпуску. За рецептом. Виробник. Е.І.П.І.Ко., Єгипет. Заявник. УОРЛД МЕДИЦИН ЛІМІТЕД, Велика Британія. *ЗАТВЕРДЖЕНО Наказ Міністерства охорони здоров'я України №873 від 20.11.2014 р. Реєстраційне посвідчення №UA/8392/01/01. Інформація надана скорочено. З повною інформацією про препарат можна ознайомитися в інструкції для медичного застосування препарату. Інформація для медичних та фармацевтичних працівників, а також для розповсюдження в рамках спеціалізованих заходів з медичної тематики.*

Інформація про рецептурний лікарський засіб для професійної діяльності спеціалістів у галузі охорони здоров'я.

WORLD MEDICINE
Pharmaceutical Company

Додаткова інформація за тел.: (044) 495 25 30 • e-mail: info@worldmedicine.ua

www.worldmedicine.ua

Antioxidants

Antioxidants

Antioxidants

Antioxidants

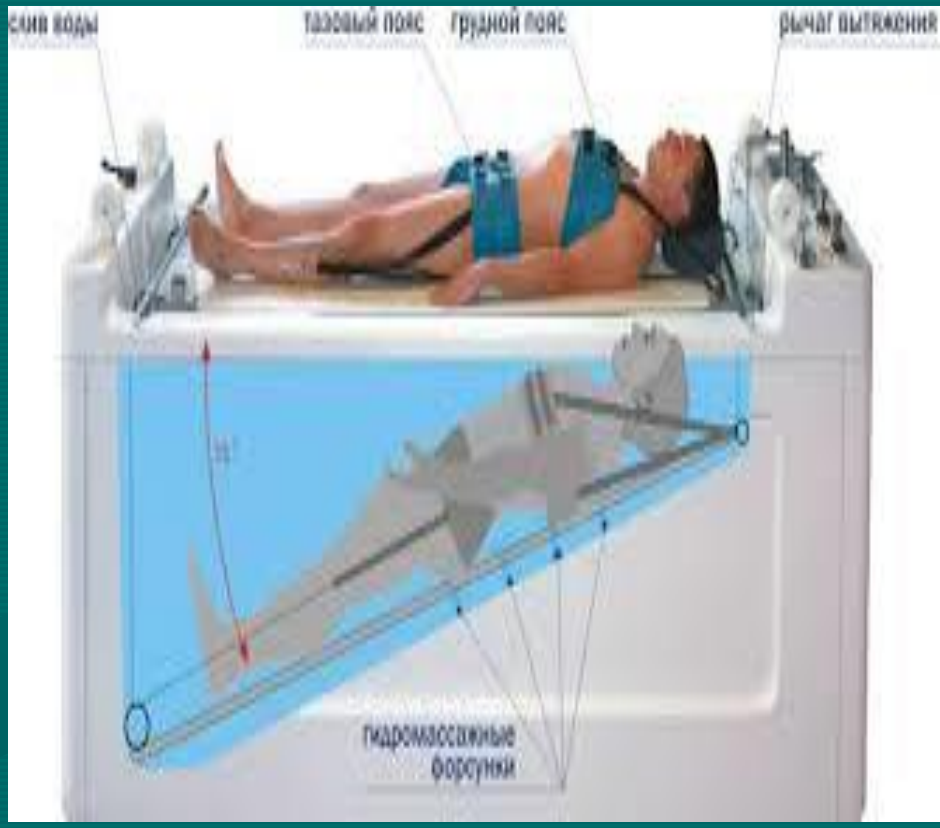
Preparations for improving intraosseous circulation

Spa treatment

Spa treatment

Spa treatment

Traction therapy



Kinesiotherapy

Kinesiotherapy

ЛЕЧЕНИЕ БОЛЕЙ

в позвоночнике и суставах

ДВИЖЕНИЕМ!

THANKS FOR ATTENTION!