

# Ankylosing spondylarthritis

**Ankylosing spondylarthritis** (also *morbus Bechtěrev* or *spondylitis ankylosans*) is a spondylarthritis, a group of inflammatory rheumatic diseases affecting **connection on the spine** (intervertebral, costovertebral, SI joint, discs and ligaments of the spine, sometimes root or peripheral joints). It leads to the gradual ossification of the joint capsule and ligaments and thus to the ankylosis of segments up to the entire spine (it can stiffen in any position).

## Etiopathogenesis

The disease begins at a young age (usually the 2nd-3rd decade). It is more common in men. The disease is linked to **HLA-B27**. The etiological agent has not been demonstrated. The role of intestinal microflora is considered.

## Symptoms

The symptoms of the disease are divided into three groups: axial, peripheral and extra-articular symptoms.

### Axial symptoms

The basic symptoms of the disease include **inflammatory pain** in the lower back - it arises on the basis of sacroiliitis, typically in the second half of the night and wakes the patient from sleep. It is accompanied by morning stiffness. Both pain and stiffness improve with warming up. The pain spreads to the higher areas of the spine (except for the cervical spine) - spondylitis is a treasure. Axial symptoms also include arthritis of the shoulder and hip joints.

### Peripheral symptoms

Asymmetric oligoarthritis most often develops with a preference on the lower limbs. Dactylitis (so-called sausage finger ) can also occur - affecting the interphalangeal joints of one finger and tendon.

### Extra-articular symptoms

- eyes - acute anterior uveitis,
- heart - aortic insufficiency, transmission disorders, aortitis,
- GIT - ulcerative colitis, Crohn's disease,
- lungs - fibrosis,
- kidneys - amyloidosis,
- vertebral osteoporosis

## Diagnostics

### Physical examination

During the examination, we focus on the sacroiliac joints, the development of the spine in three planes and the expansion of the chest.

- Mennel's maneuver - We push the patient's hip bones. The test is positive if the patient feels pain on the injured side.
- Schober test - Shows the development of the lumbar spine.
- Forestier flèche - This is the distance of the occiput to the perpendicular wall. It should be a maximum of 2 cm.
- lateral flexion
- chest expansion - at least 5 cm

### Imaging methods

X-rays are the first manifestation of sacroiliitis. Furthermore, syndesmophytes and ossification of tendon attachments arise, which leads to the fusion of vertebral bodies to the image of the so-called bamboo stick . Sacroileitis is often bilateral.

We distinguish 5 stages according to the location of changes.



X-ray image of the lumbar spine in lateral projection. A typical image of a bamboo stick; ossification of joints and ligaments.

<b>Risk factors</b>	HLA-B27, male
<b>Classifications and references</b>	
<b>MKN-10</b>	M45, juvenile ankylosing spondylarthritis M08.1
<b>MeSH ID</b>	D013167
<b>OMIM</b>	106300
<b>MedlinePlus</b>	000420
<b>Medscape</b>	332945

Stadium	inflammatory changes
Stadium I	unilateral sakroiliitida
Stadium II	bilateral sacroiliitis
Stadium III	lumbar spine involvement
stadium IV	thoracic spine involvement
stadium V	cervical spine involvement

Another important imaging method is magnetic resonance imaging, where a typical finding is the presence of effusion or swelling of the bone marrow.

## Laboratory tests

In the laboratory finding we find an increase in sedimentation and CRP, normocytic normochromic anemia.

## Treatment

The basis of treatment is regular, lifelong exercise, rehabilitation and physical therapy. Spa treatment is indicated for patients every year.

**Pharmacological treatment** includes:

- nonsteroidal antirheumatic drugs,
- DMARDs – effective only sulfasalazine in forms with peripheral arteritis,



- biologic therapy – TNF blocking drugs etanercept, infliximab, adalimumab, golimumab.<sup>[1]</sup>;

## Links

## Related articles

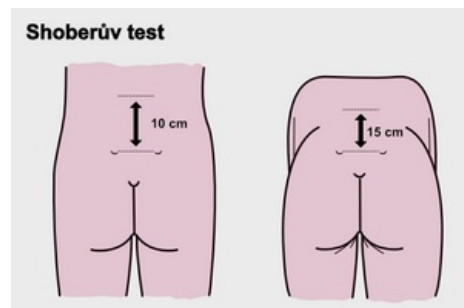
- Juvenile idiopathic arthritis
- Rheumatoid arthritis
- Psoriatic arthritis
- Manifestations of inflammatory rheumatic diseases on the musculoskeletal system and their surgical treatment

## References

- PASTOR, Jan. *Langenbeck's medical web page* [online]. ©2010. [cit. 02-06-2010]. <<https://langenbeck.webs.com/>>.
- ČEŠKA, Richard, et al. *Interna*. 1. edition. Praha. 2010. 855 pp. ISBN 978-80-7387-423-0.

## References

1. ČEŠKA, Richard, et al. *Interna*. 1. edition. Praha : Triton, 2010. 855 pp. ISBN 978-80-7387-423-0.



Schober test



Demonstration of changes in the spine in Bechterew's disease. An image of a bamboo stick and thoracic hyperkyphosis caused by ossification of inflammatory tissues