

# Ankylosing spondylitis

Ankylosing spondylitis (AS) is a type of inflammatory arthritis that targets the joints of the spine. It particularly affects the sacroiliac (SI) joint where the spine attaches to the pelvis. Symptoms include back pain, stiffness and reduced mobility. Ankylosing spondylitis is also known as rheumatoid spondylitis.

Ankylosing spondylitis is more common in Caucasians and affects twice as many men than women. The condition usually appears between the ages of 14 and 40 years, while onset after the age of 40 is extremely rare. There is no cure for AS, but medical treatment and lifestyle habits such as regular exercise can improve the person's outlook.

## Damage to the spine

The inflammation causes damage to the vertebrae (backbones). In response, the body grows more bone tissue to repair the damage. Over time, this process builds abnormal bony outgrowths (syndesmophytes) that knit together. This fusion of the vertebrae causes pain and reduces mobility, especially in the lower back. About seven in 10 people with AS will develop some degree of spinal fusion.

## Causes

The exact cause of ankylosing spondylitis is unknown, but genes are thought to play a part. Studies show that most people with AS have the gene called HLA-B27. Some HLA (human lymphocyte antigen) genes suggest the person may be more likely to get autoimmune diseases.

Only one in 20 people with this gene develop ankylosing spondylitis. Since the presence of this gene does not automatically lead to AS, other factors must be involved. Current theory suggests that a person who has the gene variant must be exposed to certain environmental triggers in order for the arthritis to develop. These triggers, however, are unknown.

## Symptoms in children

In children, ankylosing spondylitis symptoms are commonly ignored or dismissed as 'growing pains'. The symptoms particular to children may include:

- Chronic pain in the back or neck
- Chronic pain in the knees, ankles or feet
- Swollen joints
- Increased stiffness after periods of inactivity
- Reduced pain and stiffness during and after exercise.

## Symptoms in adults

Ankylosing spondylitis varies widely in its severity and progresses differently from one person to the next. Generally speaking, the symptoms in adults may include:

- Chronic back pain, particularly in the lower back and hips
- Pain in other joints (such as the knee, shoulder or foot) or tendons (such as those at the back of the heel or under the foot)
- Poor posture, since standing tall is uncomfortable or even painful
- Back stiffness
- Reduced mobility
- Difficulty standing up from a sitting position
- Difficulty walking
- Increased stiffness after periods of inactivity
- Reduced pain and stiffness during and after exercise
- Fatigue unrelieved by rest or sleep.

## Other sites of inflammation

Ankylosing spondylitis may cause inflammation in other areas of the body, including:

- Tendon (enthesitis)
- Eye (uveitis or iritis)
- Bowel (colitis)
- Lung (fibrosis)
- Heart (aortitis).

### **Complications**

Ankylosing spondylitis can cause a range of complications, including:

- Skeletal deformities such as a permanent stoop (in severe cases, the person may be unable to lift their head from their chest)
- Total fusion of the spine ('bamboo spine')
- Increased susceptibility to bone fractures
- Fusion of the rib joints and associated breathing difficulties
- Lung lesions and recurrent lung infections
- Anaemia, as a result of chronic inflammation.

### **Diagnosis**

Research suggests that ankylosing spondylitis may go undiagnosed for years, particularly in children. It takes an average of seven years for an adult with ankylosing spondylitis to finally get a diagnosis. This is unfortunate because early diagnosis and prompt treatment can improve the person's long-term outlook.

Tests used to diagnose AS may include:

- Medical history
- Physical examination
- X-ray
- Scanning procedures such as CT or MRI
- Blood test
- Genetic testing.

### **Treatment**

There is no cure for ankylosing spondylitis. Medical treatment aims to manage pain, reduce the risk of complications and improve quality of life. Options include:

- Non-steroidal anti-inflammatory medications (NSAIDs)
- Disease-modifying anti-rheumatic drugs (DMARDs)
- Corticosteroid medications
- Physical therapy, including exercises to improve flexibility and range of motion – either on land or in the water
- In rare cases, surgery to repair badly damaged joints.

### **Self-help suggestions**

Most people with ankylosing spondylitis develop some degree of spinal fusion. A key aim of treatment is to encourage good posture so that the spine will fuse in an upright rather than stooped position. Be guided by your doctor, but general self-help suggestions include:

- The most important management tool is regular exercise (including stretching), which helps to keep the spine mobile and flexible. Ask your doctor or physiotherapist for further information.
- Strong abdominal muscles contribute to good posture. Perform exercises to strengthen your abdominal muscles as recommended by your doctor or physiotherapist.
- Pay careful and daily attention to posture. Remind yourself regularly to 'stand tall'.
- If you tend to slump when seated, consider buying an ergonomic chair, lumbar support cushion or other device. Ask your doctor or physiotherapist for recommendations.
- Avoid curling into a ball when in bed. Instead, try to lie straight, either on your back or stomach.
- Don't smoke.

### Long-term outlook

Ankylosing spondylitis is a progressive disease, which means it tends to get worse over time. Certain characteristics of AS suggest a poorer outlook, including:

- Earlier rather than later onset of symptoms
- Involvement of one or both sacroiliac joints
- Uveitis or iritis (inflammation of the eye)
- Cigarette smoking
- Sedentary lifestyle
- Failure to consistently manage the condition throughout life.

### Where to get help

- Your doctor
- Rheumatologist
- Arthritis Victoria Tel. (03) 8531 8000 or 1800 011 041

### Things to remember

- Ankylosing spondylitis (AS) is a type of inflammatory arthritis that targets the joints of the spine, particularly the sacroiliac (SI) joint where the spine attaches to the pelvis.
- There is no cure for AS – medical treatment aims to manage pain, reduce the risk of complications and improve quality of life.
- The most important management tool is regular exercise (including stretching), which helps to keep the spine mobile and flexible.

**This page has been produced in consultation with, and approved by:**

Arthritis Victoria incorporating Osteoporosis Victoria

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