

ANKYLOSING SPONDYLITIS DISEASE BACKGROUND

What is Ankylosing Spondylitis?

Ankylosing spondylitis (AS) is a form of arthritis primarily affecting the spine, although other joints can become involved. It is a painful, often progressively debilitating disease, caused by inflammation of the spinal joints (vertebrae) that can result in irreversible damage. These changes in the spine may vary in severity and, in advanced cases, can lead to a stooped-over posture.¹

In the United States, the prevalence of AS is estimated to be between 0.2% and 0.5%, with nearly half a million people affected.^{2,3} While AS is believed to be largely undiagnosed, the prevalence is rising.^{4,5} AS usually appears in people in their twenties and in men in particular, with three times more men than women affected.^{5,6} Radiographic diagnosis of AS may be delayed in more than half of patients for five years.⁴ Additionally, diagnostic delays of eight years and longer have been reported.⁷

Signs and symptoms

Early signs and symptoms of AS may include pain and stiffness in the lower back and hips, especially in the morning and after periods of inactivity.⁸

Other signs and symptoms of AS may include any one of the following:⁹

- Pain and stiffness in the lower back, buttocks, and hip that continues for more than three months
- Bone fusion, affecting bones of the neck, back, or hips
- Pain in ligaments and tendons

The areas most commonly affected include:⁸

- The joint between the base of the spine and pelvis
- The vertebrae in the lower back
- The places where the tendons and ligaments attach to bones, mainly in the spine, but sometimes along the back of the heel
- The cartilage between the breastbone and ribs
- Hip and shoulder joints

Symptoms are not solely limited to the joints. People with AS may also suffer from fatigue and other symptoms.

The severity of AS varies from person to person. Some will experience serious complications, like spinal fusion (where the bones grow together), while others may suffer from sporadic back pain and overall discomfort. In almost all cases though, the condition is characterized by acute, painful episodes and remissions, or periods of time where the pain lessens.¹⁰

Up to 70% of patients who go on to develop severe AS will form spinal fusion over 10 to 15 years, which can significantly reduce mobility and impact quality of life.^{11,12,13}

Risk factors and potential triggers

Although the cause of AS is unknown, there are three main risk factors:

1. Gender: Men are more likely to develop AS than women.¹⁴
2. Age: Although there is a chance AS can occur in children and those who are much older, it generally occurs in late adolescence or early adulthood.^{1,14}
3. Heredity: Family members of those with AS are at higher risk.¹⁵

Diagnosis and treatment

Correct diagnosis requires a physician to assess the patient through a physical exam or through their medical history. The diagnosis of AS is determined based on several indicators including symptoms, physical exam, x-rays of back and pelvis, results of lab test, and measurements of the chest while breathing. At the time of the visit, physicians may also move different body parts into particular positions and press on specific areas of the pelvis to determine if the patient has AS. The x-ray allows physicians to see any noticeable changes in the joints and bones, although it may be undetected; therefore, the physician may request an MRI.¹⁴

There is currently no cure for AS, but there are treatments that can help reduce discomfort and improve function. Treatments may help reduce pain and stiffness. Treatment options include physical therapy, joint-directed exercise, medications, or surgery.^{14,15} Approximately 20-40% of patients do not respond well to standard of care biologic medicines, and there are few therapeutic options available to those people.¹⁶ Most people do not need surgery; however it is a possible treatment option for those with advanced joint disease.¹⁴

References:

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