

# Ankylosing Spondylitis

## What is Ankylosing Spondylitis?

Ankylosing (meaning stiff or rigid) Spondylitis (meaning inflammation in the spine) is a relatively uncommon rheumatic disease that affects the spine, often causing severe backache and stiffness. Ankylosing spondylitis (AS) may also affect the hips, shoulders and the sacroiliac joint that attaches the spine to the pelvis. It could also cause inflammation of the eyes, lungs, and heart valves. It varies from intermittent episodes of back pain that occur throughout life to a severe chronic disease that attacks the spine, peripheral joints and other body organs, resulting in severe joint and back stiffness, loss of motion and deformity as life progresses.

## What Causes Ankylosing Spondylitis?

The cause of AS is unknown. However there is a strong genetic or family link. There is a common genetic marker, called HLA-B27, in most affected individuals. Only a small proportion of people carrying this gene will, however, develop AS.

## Who Gets Ankylosing Spondylitis?

AS typically strikes adolescents and young adult males between the ages of 16 and 35. It occurs in thrice as many men as women. At present there is no figure for the prevalence of local population.

## What are the Symptoms of Ankylosing Spondylitis?

Symptoms may include any of the following: chronic back pain (more the three months), stiffness in the back (particularly in the morning), pain in other joints including the neck, knees, ankles and hips, pain around tendons and in the heel, inflammation of the eyes and rashes. In rare cases, the heart or the lungs may be affected

## The Diagnosis of Ankylosing Spondylitis

There is no diagnostic test for AS. However, the symptoms would alert physicians to the possibility of AS. Delayed diagnosis is common because symptoms are often attributed to more common back problems. A dramatic loss of flexibility in the lumbar spine is an early sign of AS. Arthritis may also occur in the shoulder, hips and feet. Some patients have eye inflammation, and more severe cases must be observed for heart valve involvement. Laboratory evaluation may reveal an elevated sedimentation rate (an indicator of inflammation), anemia and a positive HLA-B27 assay. X-rays and bone scans may show characteristic changes.



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## Medication

There are a number of different types of medications that have been found to be effective in managing the symptoms of AS, and recent studies have shown that a new class of medications, the biologics or TNF Inhibitors, can potentially slow or even halt the disease progression in some people.

### 1. Nonsteroidal Anti-Inflammatory Drugs (NSAIDs)

NSAIDs are the most commonly used class of medication used in treating the pain and stiffness associated with AS. They commonly come in tablet form and are taken orally. Sometimes high doses of NSAIDs are needed to maintain relief from the symptoms of AS. This can pose a problem in that NSAIDs can cause significant side effects, especially in the gastrointestinal tract (stomach, intestines, etc.) NSAIDs can cause reduction in the protective mucus in the stomach, which can cause stomach irritation. In time, this can lead to heartburn, gastritis as well as ulcers and even bleeding. Other less common side effects from NSAIDs include headaches, dizziness, fluid retention and even confusion. A newer class of NSAIDs known as COX-2 inhibitors (or COXIBs) allegedly reduces the risk of gastrointestinal complications associated with traditional NSAID therapy.

Although NSAIDs are commonly the first line of medications used to treat ankylosing spondylitis, sometimes they aren't enough to control the symptoms. It is important to note, however, that it may take several weeks for some NSAIDs to show positive results. In severe cases of AS, NSAIDs may only be partially effective or the side effects too severe to continue their use. In this case, a doctor may prescribe one of the following medications.

### 2. Sulfasalazine

Sulfasalazine is one type of medication that can be helpful to some people with severe disease. It is known to effectively control pain and joint swelling from arthritis of the peripheral joints. Side effects are relatively infrequent, but can include headaches, abdominal bloating, nausea and oral ulcers. Rarely, someone being prescribed this medication can develop bone marrow suppression, which is why it is important for your doctor to regularly monitor your blood count.

### 3. The Biologics: TNF Inhibitors

The Tumor-Necrosis-Factor alpha (TNF- $\alpha$ ) blockers are biologic medications that have shown great promise in treating ankylosing spondylitis. Studies have shown that these drugs can potentially slow or even halt the progression of AS in some people. They have also been shown to be highly effective in treating not only the arthritis of the joints but the spinal arthritis associated with AS.

The most serious known side effect of the TNF blockers is an increased frequency of infections,

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especially tuberculosis. Thus, a TB test is usually required before starting any of the TNF therapies. A very rare possible complication is increased frequency of cancer, especially of the blood (leukemia) or of the lymphatic system (lymphoma).

## **Treatment**

This will usually include a combination of medication, exercise and education to help the patient understand the condition in order to decide what treatment will be most effective for them. The treatment of AS is often a team effort between the person and several types of health care professionals, including doctors, physiotherapists and occupational therapists.

Rehabilitation therapies are essential. Proper sleep and walking positions, coupled with abdominal and back exercises, help maintain posture. Exercises help maintain joint flexibility. Breathing exercises enhance lung capacity, and swimming provides aerobic exercise.

In severe cases of AS, surgery can be an option in the form of joint replacements, particularly in the knees and hips. Surgical correction is also possible for those with severe flexion deformities (severe downward curvature) of the spine, particularly in the neck, although this procedure is considered risky.

Remember: it is the doctor's job to relieve pain and the patient's job to keep exercising and to maintain a good posture.

## **What is the outlook?**

AS is a lifelong problem and people often fail to continue treatment, in which case permanent posture and mobility losses occur. However, much can be done to control and reduce its effects.

## **Suggestions**

Not every patient will return to normal, even if the exercises are followed, but serious deformities can be prevented. Even though a cure is not available at present, you can do a lot to prevent major problems from developing.

## Posture

Maintaining a good posture is important at all times, whether sleeping, sitting or standing, so that the joints do not fuse in undesirable positions. Every effort must be made to keep the spine straight as AS tends to cause flexion of the spine, especially if not treated.

It is rare for the spine to stiffen completely, but if this should happen, the patient should do everything he can to stiffen in a straight rather than bent position.

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## Rest

A period of rest in hospital or at home may be needed if the AS is very active and you are experiencing a lot of pain and stiffness. However you must still continue to exercise your chest, back and limbs to keep them supple.

When lying in bed it is important to lie flat on your back. Some time should also be spent lying on your face (prone position). You could do this for 20 minutes before getting up in the mornings and for 20 minutes before going to bed at night.

If you do this regularly it will help prevent your back and hips from becoming bent.

## Your Bed

Your mattress should be firm to prevent any tendency for spinal curvature from developing later. If you find that it is too yielding, you can put a sheet of plywood or chipboard 70 x 150 x 1 cm between the mattress and the bed frame.

If you are travelling and find that the bed in the hotel is too soft you could pull the mattress off the bed onto the floor and sleep on that.

## Chairs

High chairs with a firm seat and upright firm back are better for keeping the spine in a good posture. The seat of the chair should not be too long otherwise you will find difficulty positioning your lower back into the base of the chair back. Do not spend time sitting in low soft chairs as they will result in bad posture and increased pain.

## At Work

Pay attention to the position of your back when at work. A job that allows you to change from sitting to standing and walking from time to time is the most suitable. When seated at a desk or bench, adjust your seat to the proper height and try to move your back from time to time. The most unsuitable job is one where you have to stoop or crouch over a bench for long periods.

If you have a heavy or tiring job, try to have a break before doing other activities at home or elsewhere. Resting flat for 20 minutes at midday is also helpful. Try also to lie for part of this time in the prone position.

If you have a job that involves a lot of stooping or back strain talk this over with your doctor. He may be able to advise you or help you change to more suitable work. Some AS sufferers have found it useful to show this booklet to their doctors or employers in explaining their needs.

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## Exercise

Your doctor or physiotherapist will suggest a programme of exercise to be done every day. This will help you keep posture and activity as normal as possible. Exercise helps to reduce stiffness and to strengthen the muscles surrounding the joints.

If you sometimes feel too stiff and sore to exercise try taking a hot bath or shower to loosen up. Start the exercises slowly and plan them for times of the day when you are least tired and have the least pain. This way you will gain the most benefit from your exercises.