

FACT SHEET — INFLAMMATORY

Axial Spondyloarthritis (AxSpA)

Including ankylosing spondylitis — inflammatory back pain that responds to movement

Axial spondyloarthritis (AxSpA) is a chronic inflammatory condition primarily affecting the spine and sacroiliac joints. It is the most important inflammatory cause of back pain to identify because it requires specific medical management and behaves very differently from mechanical back pain. It is frequently misdiagnosed as mechanical back pain for years before the correct diagnosis is made.

■ See your GP for assessment if you have:

- Back pain onset before age 45 with gradual, insidious onset
- Morning stiffness lasting more than 30 minutes that improves with movement
- Back pain that improves with exercise but not with rest
- Night pain that wakes you in the second half of the night
- Buttock pain — one side or alternating
- A family history of ankylosing spondylitis, psoriasis, or inflammatory bowel disease
- Associated features: eye inflammation (uveitis), skin psoriasis, or gut symptoms

Understanding the condition

AxSpA is an umbrella term covering both non-radiographic AxSpA (where changes are not yet visible on X-ray) and ankylosing spondylitis (where characteristic changes on X-ray are present, including sacroiliitis and spinal fusion in advanced disease). The distinction matters for diagnosis but the underlying biology and treatment are the same.

The condition is driven by chronic inflammation in the sacroiliac joints and spinal entheses (the points where ligaments and tendons attach to bone). Over time, the inflammatory process can lead to new bone formation and, in advanced cases, fusion of spinal segments (bamboo spine).

The inflammatory pattern — the key to diagnosis

Morning stiffness >30 minutes	The most reliable single feature. Inflammatory back pain causes prolonged morning stiffness that gradually eases with movement. Mechanical pain typically eases within minutes.
Improves with exercise	Inflammatory pain characteristically improves with movement and exercise. This is the opposite of mechanical pain, which typically worsens with activity.
Not improved by rest	Rest may worsen inflammatory back pain or at least provides no relief. Many patients feel better when they get up and move around.
Second-half night pain	The inflammatory process is most active in the early hours. Many patients wake between 2–4am with pain and stiffness that forces them to get up and move.
Buttock pain	Pain in one or both buttocks — reflecting sacroiliac joint involvement. Alternating buttock pain is particularly characteristic.

Onset before 45	AxSpA typically presents in young adults. New back pain with these features in someone over 45 is less likely to be AxSpA, though not impossible.
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Diagnosis and investigations

- **Blood tests:** CRP, ESR (markers of inflammation), HLA-B27 (present in 85–90% of ankylosing spondylitis cases, 60–80% of non-radiographic AxSpA)
- **Pelvic X-ray:** to assess sacroiliac joints for sacroiliitis
- **MRI sacroiliac joints:** detects early inflammation before X-ray changes develop — the most sensitive investigation
- **BASMI score:** clinical measurement of spinal mobility performed by a rheumatologist

Treatment

NSAIDs (anti-inflammatories)	The first-line medical treatment. Regular use of NSAIDs (ibuprofen, naproxen, diclofenac) significantly reduces inflammation and pain in AxSpA. Some patients achieve excellent control with NSAIDs alone.
Exercise and physiotherapy	The single most important non-drug treatment. Regular aerobic and stretching exercise maintains spinal mobility and reduces pain. Swimming, walking, and specific AxSpA exercise programmes are all beneficial.
Biologic therapy	TNF inhibitors (adalimumab, etanercept) and IL-17 inhibitors (secukinumab) are highly effective for patients not responding to NSAIDs. Prescribed by rheumatologists.
JAK inhibitors	Newer oral medications (tofacitinib, upadacitinib) for patients who cannot use biologics or have not responded.
Manual therapy	Gentle mobilisation and exercise guidance from an osteopath or physiotherapist can complement medical management. High-velocity manipulation requires careful assessment.

Related fact sheets

Sacroiliac joint dysfunction	Mechanical SIJ pain — different from the inflammatory SIJ involvement in AxSpA.
Psoriatic arthritis	Inflammatory arthritis associated with psoriasis that can affect the spine similarly.
Inflammatory back pain in young adults	The broader context of back pain under 40.

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