

Adult Scoliosis

Adult scoliosis is a sideways curve of the spine — more than ten degrees on an X-ray — in someone who has finished growing. This leaflet explains the condition and the idea that matters most in adults: it is rarely the size of the curve that counts, but whether the spine is balanced, whether it causes pain, and whether it is trapping nerves.

THE BIG PICTURE

It is about balance, not just the curve

In a growing child, treatment is driven by the size of a curve and how fast it is changing. In an adult the spine has stopped growing, and the picture is dominated by symptoms — back pain, leg pain from trapped nerves, stooping, and the effort of staying upright — and by balance. A modest curve that has unbalanced the body can be far more disabling than a larger curve that stays well balanced. On top of the curve, the ordinary wear of adult life is usually added, and it is often this wear, not the curve itself, that causes the symptoms.

IN PLAIN TERMS

A curve on an adult's X-ray is only part of the story. What counts is whether the spine is balanced, whether it hurts, and whether it is pressing on nerves.

1 Sagittal, coronal and global balance

The spine works as a single balanced column from the head to the pelvis, keeping the head poised over the pelvis with the least effort. When a curve develops, the body compensates to stay upright — tilting the pelvis back, flattening the upper back, even bending the knees. Surgeons measure this on standing X-rays using parameters such as pelvic incidence (a fixed measure of pelvic shape), lumbar lordosis (the lower-back curve, which should roughly match it), pelvic tilt, and how far forward the trunk has drifted. A large mismatch between the lordosis a person needs and the lordosis they have is strongly linked to pain and disability.

THE KEY IDEA

A curve the body can still balance is generally well tolerated. A spine that has tipped forward, so you can no longer stand straight or look ahead without effort, is far more disabling — even if the curve is smaller. That is why assessment uses standing, full-length X-rays.

2 The types of adult scoliosis

Adult idiopathic — A curve that began in adolescence and has been carried into adult life, where the original structural curve is now combined with the wear of age. Curves that were large at the end of growth are the ones most likely to progress slowly through adult life.

De novo (degenerative) — A new curve developing in later life, usually after fifty, in a previously straight spine. It is driven by uneven wear of the discs and facet joints, is usually in the lower back, and very often comes with spinal stenosis — narrowing around the nerves — producing back pain together with leg pain or aching on walking.

Secondary — Scoliosis arising from another cause — a previous fracture, a neuromuscular condition, metabolic bone disease, or previous spinal surgery — assessed in the context of that cause.

3 Symptoms

- Aching mechanical back pain, often worse with activity and from the muscles holding you upright.
- Leg pain, numbness or weakness from trapped nerves; and leg aching on walking that eases on sitting or leaning forward (from stenosis).
- A visible stoop or lean, loss of height, difficulty standing straight or looking ahead, and fatigue.
- Sometimes concern about the change in shape — uneven shoulders or waist, or a rib or flank prominence.

Symptoms track far more closely with balance and nerve compression than with the size of the curve.

SEEK PROMPT REVIEW IF YOU NOTICE

New or progressing weakness or numbness in the legs; increasing difficulty walking or frequent falls; or any disturbance of bladder or bowel control. Seek urgent help for numbness in the saddle area between the legs or sudden loss of bladder or bowel control.

4 How it is assessed

Assessment combines a history and examination — including a full neurological check and an assessment of standing posture and balance — with imaging. The cornerstone is full-length, **standing** X-rays of the whole spine, because the deformity and any imbalance only show their true extent under gravity and largely disappear lying down. Low-dose EOS imaging is ideal where repeated monitoring is needed. An MRI assesses the discs and nerves, a CT gives fine bone detail for planning, and a bone-density (DEXA) scan checks for osteoporosis, which is common and affects both risk and planning.

REASSURANCE

The great majority of adults with scoliosis are managed well without surgery, and it is usually a manageable condition compatible with a full, active life.

5 How it is treated

Non-surgical care

First-line for most people: physiotherapy and core and postural strengthening, activity modification, pain management, and treating osteoporosis. Image-guided injections can relieve nerve-related leg pain. These manage symptoms and maintain function; they do not straighten an established adult curve, and in adults bracing is used only for symptomatic support, not to correct the curve.

Surgery

Considered for the minority with disabling pain despite non-surgical care, progressive deformity, significant nerve compression, or real loss of balance. The aims are to free the trapped nerves, realign the spine (restoring the lower-back curve and bringing the head back over the pelvis), and stabilise with a fusion. Restoring alignment is the strongest predictor of a good result. This is major surgery with meaningful complication and reoperation rates, especially in older patients or where bone is weak, so selection and planning are crucial. In the right person the improvement in pain and function can be substantial.

6 What happens next

Most people begin with non-surgical care and regular review with standing X-rays to track any progression. If symptoms, deformity or imbalance advance, a specialist assessment clarifies whether surgery could help. Treatment is always individualised to the person's symptoms, balance, bone quality and general health.

THE KEY MESSAGE

In adults, what matters most is balance — whether the spine stays aligned over the pelvis so you can stand upright comfortably — not the size of the curve. Adult scoliosis comes in types: an old idiopathic curve carried from adolescence, and a new de novo degenerative curve from later-life wear. Assessment needs standing X-rays. Most people do well without surgery; for disabling or unbalanced deformity, surgery to free the nerves and restore alignment can be life-changing, though it is major surgery with real risks.

A NOTE BEFORE YOU START

This information is for general education and does not replace the advice of your clinical team. Please use it to ask better questions, not to make decisions on your own.

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