

## Kyphosis

Kyphosis is a spinal deformity in the sagittal (side – on) plane. The normal shaped spine has a kyphosis in the thoracic spine and a lordosis in the lumbar and cervical spine. A lordosis is the opposite of a kyphosis. Some conditions can cause the spine to be more kyphotic than it should be whereas others can make it more lordotic (rare).

Postural kyphosis is very common in patients with spinal stenosis who need to lean forward to relieve pressure on nerves in their backs. True structural kyphosis is fixed. The most common cause of structural kyphosis is spinal fracture – either low energy or high energy. Other causes include inflammation (e.g. ankylosing spondylitis), degeneration, tumours or infections. If no cause is found then the term idiopathic hyperkyphosis is used. This is sometimes referred to as Scheuermann's disease but this is a misleading term. It is not really a disease and is a diagnosis that one makes on imaging. Unfortunately, one of the most common causes of a kyphosis in the lumbar spine (or a loss of lordosis/flat back) is surgery.

Kyphosis may cause pain, problems with standing up straight and looking forward or cosmesis. Diagnosis is made by clinical examination together with xrays. MRI scan may be indicated and sometimes special xrays are needed to see if the kyphosis moves and/or how the spine adapts above and below.

Physiotherapy, bracing and other non-operative measures are often of little benefit but can be tried as they are low risk. If the problem is purely cosmetic then I would not suggest any form of surgical treatment due to the small but serious risks involved.

When surgery is indicated then the exact nature of this depends upon the root cause. The simplest approach is to perform isolated posterior spinal surgery although anterior surgery is often also needed. If the deformity is fixed then the spinal column needs to be divided around the nerves and reset in a different position – known as an osteotomy. Surgery is a significant undertaking for kyphosis (especially in revision surgery) and the decision making is key. Patients should be absolutely clear about the risks involved and what is hoped to be achieved.