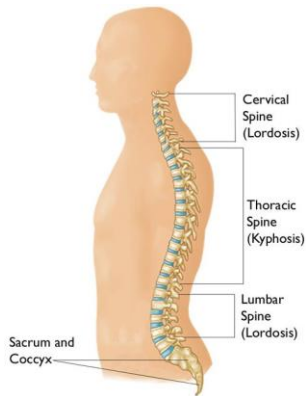


# KYPHOSIS

## Normal



## Excessive Thoracic Kyphosis



## Causes

Kyphosis can be congenital but may also be caused by degenerative disc disease (similar to arthritis) or compression fractures of the vertebrae that cause increased forward-leaning curvature of the spine.

## Symptoms

The most common symptoms of abnormal kyphosis is pain in the affected area of the spine, mostly due to undue burden and stress on the posterior elements of the spine, but also due to the degenerated discs themselves. Muscle spasms are common as the brain attempts to protect the spine and sometimes arm pain may occur if the kyphosis is also associated with stenosis and causes narrowing of the openings for the nerves.

## What is Kyphosis?

Kyphosis is a forward curvature of the spine. The natural curvature of the spine is important for balance and upright posture. This type of curvature is naturally found in the thoracic spine but may be found abnormally in the cervical or lumbar spine due to disc degeneration or injury. If kyphosis in the thoracic spine becomes exaggerated, it can cause hunchback. If kyphosis occurs in cervical or lumbar spine, it causes a reversal of the normal (lordotic) curvature of the spine. If this reversal of the normal curve in the cervical or lumbar spine occurs at only one or two levels, this is called “focal kyphosis” and may require surgical treatment (see xray below):



**Focal  
Kyphosis**

## Treatments

Often physical therapy is sufficient for building muscle to support the spine, thereby reducing pain, however, if the abnormal curve is progressive or pain is not well-controlled with other conservative treatments (such as epidural steroid injections), surgery may be indicated. Visit our YouTube Page for examples of surgeries for [focal kyphosis](#).

## Why does focal kyphosis require a fusion?

Spinal fusions permanently connect (or fuse) vertebrae in your spine to prevent abnormal motion and correct deformity. Spinal fusion surgery involves removing the abnormal disc and realigning the spine which relieves pressure on the joints causing pain. Without a fusion, the stress from the forward angulation of the vertebrae would continue to cause pain.

## Before



## After

