



# Osteoporosis and Kyphosis — What Are the Risks?

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## Understanding Osteoporosis and Kyphosis

Osteoporosis may result in a loss of height and curvature of the spine due to fractures and other changes when the back vertebrae become weak due to mineral loss. This condition is called kyphosis, and it can be incredibly painful and disabling.

With kyphosis, the back becomes rounded and a hump may arise. Fortunately this condition may be avoided by taking steps throughout life to prevent osteoporosis from developing in the first place.

If kyphosis is already present, there are several treatment options available to ease discomfort and promote wellbeing.

## What Causes Kyphosis?

Kyphosis is a spinal deformity that may arise from several causes — osteoporosis is just one of many health conditions that may cause it. Kyphosis may arise in children, but it is not as common.

Degenerative diseases of the spine, including osteoporosis and degenerative disc disease, are common causes of kyphosis among adults. Kyphosis is most common among older people, particularly women, as osteoporotic changes are more prevalent among women who are at advanced age.

Weakened bones in the spine are subject to fracture. These types of breaks in the bones are known as compression fractures, and may occur due to trauma or, more commonly, as a result of bone weakness.

Compression fractures can be very painful. When osteoporosis is present, multiple fractures to several vertebrae may arise, and may occur spontaneously due to the lack of minerals within the bone structure.

The vertebrae may move and put pressure on each other, which is called spondylolisthesis.

A wide array of other health problems may cause kyphosis; infections, including tuberculosis, polio, endocrine system diseases and tumors, all cause kyphosis, too.

## Signs, Symptoms and Complications of Kyphosis

Long-term back pain and stiffness is common among individuals who have kyphosis. The muscles, tendons and ligaments of the back may be strained.

Other complications include:

- Abdominal distress, due to pressure on the stomach and other organs.
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- Breathing problems, and as a result, respiratory infections.
  - Fatigue, due to poor oxygenation of tissues, pain, anxiety, and pressure on the back.
  - In severe cases, the changes may put pressure on the large blood vessels within the chest cavity, increasing the likelihood of cardiac problems.
  - While not common, nerve damage may arise, creating paralysis or sensory issues below the curvature of the spine.
  - Neck pain.
  - A loss of independence and mobility if the disease is severe.
  - Social isolation and depression.
  - Some people become bedbound, particularly if osteoporotic changes are severe, as the slightest motion may cause additional fractures.

## **Prevention of Kyphosis**

The most important way to prevent kyphosis is to live a healthy lifestyle. Young people must continue to live well, as peak bone strength occurs in the 20s and 30s.

If the bones aren't cared for properly throughout the lifespan, demineralization will occur more rapidly as age advances.

A diet rich in calcium, copper, magnesium, zinc and vitamin D prevents osteoporotic changes. Weight-bearing exercises should be performed to make bones strong.

Take measures to protect your back, particularly if you have bone damage already. Maintain your posture, engage in exercises that strengthen your back and abdominal muscles, and bend from your knees.

Early diagnosis and treatment of osteoporosis is critical. Bone density testing is fast, easy and painless.

These tests provide a baseline measurement about bone health. They are also used to evaluate the success of measures taken to maintain bone density.

A wide array of medications are available to improve and promote bone strength. Your health care provider can prescribe the ones which meet your needs most effectively.

## **Treatment of Kyphosis**

Painful fractures may require medications to relieve discomfort. If the intensity of the pain is minor, or if relief of chronic mild back pain is needed, treatment with NSAIDs, such as ibuprofen, is sometimes sufficient.

More intense pain many require the use of prescription medications, such as stronger NSAIDs or narcotics. Severe fracture pain generally resolves within six to 10 weeks.

Surgery may be needed if pressure is placed on nerves or if pain is severe. There are some new techniques that are markedly less invasive than conventional back procedures; kyphoplasty is a procedure that involves injecting a cement-like substance into the vertebrae, and provides rapid pain relief for many individuals.

Flexible braces provide support and protection. Muscle relaxants, topical creams, patches and heat can be soothing and provide relief for muscle spasms.

Physical therapy, ultrasound treatments, or the use of a transcutaneous nerve stimulator (TENS) unit provide relief. Psychotherapy and support groups can help relieve psychological challenges.

Kyphosis and Osteoporosis: The Bottom Line

Prevention is the key to avoiding osteoporosis and kyphosis. If osteoporosis is present, prompt treatment is

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necessary.

Should spinal changes occur, a wide array of modalities may be implemented which make coping with this condition more tolerable.