

Vertebral Compression Fracture

There are approximately ten million Americans with osteoporosis and well over 30 million who are reported as having low bone mass, causing them to be at risk for the development of a vertebral compression fracture. While many believe that osteoporosis is a 'woman's disease' the numbers affected may surprise you. Of the 10 million affected by osteoporosis, 8 million are women and 2 million are men.



Fractured vertebral body

Who gets vertebral compression fractures?

Vertebral compression fractures are a common spinal break in those affected with osteoporosis, affecting over 752,000 individuals each year (Lietman, et al., Cases Journal, 2009). The condition is a major concern to the medical community due to the staggering numbers and increased rates of people with low bone mass and osteoporosis.



In some cases symptoms are highly present, but occasionally minor and even no symptoms may be seen. This is especially true in men who suffer unknowingly from the condition or are not aware of the minor symptoms showing up and requiring medical treatment.

It is not uncommon for a patient to acquire a second vertebral compression fracture following the first, due to the weakness placed on adjacent vertebra.

What are the characteristics of the condition?

The primary clinical symptoms include one or more of the following. They may also show up in a combination of several symptoms at a time.

- A sudden onset of pain due to trauma
- Increase or decrease in pain when lying down, sitting, standing or walking
- Limited range of motion and spinal mobility
- Loss of height
- Deformity in the spine
- Overall disability



This is what an acute vertebral compression fracture looks like on an MRI.

How is a vertebral compression fracture diagnosed?

A complete medical history must be obtained in combination with a physical examination. Your pain management doctor may be able to diagnose a vertebral compression fracture based on simple examinations and history, but x-rays and other digital imaging may be needed to confirm the diagnosis. The following tests help to diagnose a patient with this condition in order to establish an effective treatment plan.

- **X-rays** – An x-ray will reveal the break and outline of the joints around the vertebra. Improper bone alignment, degeneration of the disc, and spurs on the bones may be revealed through the x-ray images. Bone spurs are often looked for because they may cause some of the symptoms due to the irritation of the nerve roots that they may present.
- **CT scan** – This diagnostic test is used to reveal the nature of the vertebral compression fracture. Details can be gathered that were not visible with x-rays, such as the development of stenosis or bony fragments that have ended up in the spinal canal.
- **MRI** – This diagnostic test provides a powerful display of the spine and reveals all areas affected and those that are causing the patient painful problems. It is a very helpful test to see if the fracture is still trying to heal – it will “light up.” If it does not light up, it is an older fracture and a procedure will not help.



Is there treatment that does not involve surgery?

While some patients may only receive relief from a surgical procedure, traditional and conservative methods are available. Most non-surgical treatment involves reducing the pain by bed-rest, bracing and medications. Those with chronic pain may not receive sufficient relief and may need a kyphoplasty or vertebroplasty with a pain management doctor.

A vertebral compression fracture that is allowed to heal on its own, without a surgical procedure, can take up to three to six months.

When conservative treatment is ineffective there are minimally invasive procedures, such as a vertebroplasty or kyphoplasty that may provide substantial relief. Recent advances in spinal medicine have prompted new procedures that are less invasive.

Can the pain be eliminated through treatment?

There is no treatment that offers 100% guarantee of being pain free. Most surgical procedures to treat vertebral compression fracture do help, however, there is a percentage of patients who are left with some degree of pain.



Kyphoplasty Procedure

The overall goal of treatment, whether surgical or home-care, is pain relief. A pain management specialist can work with you to design a treatment route that provides the best possible relief outcome. Since the pain associated with this kind of condition can be

debilitating, it is important to control the pain so that daily activities and work can be carried out.

A [kyphoplasty](#) or [vertebroplasty](#) has been shown to provide over 85% pain relief in most patients. The procedure is usually performed as an outpatient, and represents a great option if other conservative options fail.