

# Spinal Compression Fractures

Last Updated Friday, 28 July 2006

## Introduction

Compression fractures are the most common type of fracture affecting the spine. A compression fracture of a spine bone (vertebra) causes the bone to collapse in height.

Compression fractures are commonly the result of osteoporosis. About 700,000 cases of compression fractures due to osteoporosis occur each year in the United States. Spine bones that are weakened from osteoporosis may become unable to support normal stress and pressure. As a result, something as simple as coughing, twisting, or lifting can cause a vertebra to fracture.

An injury to the spine, such as from a hard fall on the buttocks or blow to the head, can cause a spinal compression fracture. Compression fractures may also occur if cancer from other parts of the body spreads to the spine. Cancer weakens the spine bones and makes them prone to fractures.

This guide will help you understand

- how compression fractures happen
- how doctors diagnose the problem
- what treatment options are available

## Anatomy

What parts of the spine are involved?

The human spine is made of 24 spinal bones, called vertebrae. Vertebrae are stacked on top of one another to create the spinal column. The spinal column gives the body its form. It is the body's main upright support.

The main section of each vertebra is a large, round structure called a vertebral body. Compression fractures cause this section of bone to collapse. When the fracture is due to osteoporosis, it usually occurs in the lower part of the thoracic spine, near the bottom of the rib cage.

A bony ring attaches to the back of each vertebral body. When the vertebrae are stacked on one another, the bony rings form a hollow tube. This tube, or canal, surrounds the spinal cord. The spinal cord is like a long wire made of millions of nerve fibers. Just as the skull protects the brain, the bones of the spinal column protect the spinal cord.

Severe compression fractures from forceful impact on the spine, as can happen in a car accident, can cause fragments of the vertebral body to push into the spinal canal and press against the spinal cord. This can cause damage to the spinal cord that can result in partial or complete paralysis below the waist. It is rare for a typical compression fracture from osteoporosis to cause damage to the spinal cord.

Related Document: [A Patient's Guide to Thoracic Spine Anatomy](#)

## Causes

Why do I have this problem?

Strong, healthy bones are able to withstand the forces and strains of normal activity. Compression fractures in the spine happen when either the forces are too great or the bones of the spine aren't strong enough. The vertebral body cracks under pressure. Fractures from forceful impact on the spine tend to crack the back (posterior) part of the vertebral body. Fractures from osteoporosis usually occur in the front (anterior) part of the vertebral body.

Osteoporosis is a disease that weakens bone. Sometimes the bones in the spine weaken to the point that even mild forces can lead to a compression fracture. A simple action like reaching down to pull on a pair of socks can cause a weakened vertebra to fracture. The front of the vertebra (the part closest to the front of the body) crumbles, causing the round vertebral body to become wedge-shaped. This angles the spine forward, producing a hunch-backed appearance, called kyphosis.

## Treatment

What treatment options are available?

## Nonsurgical Treatment

The majority of patients with compression fractures are treated without surgery. Most compression fractures heal within eight weeks with simple remedies of medicine, rest, and a special back brace.

Most patients are given medication to control pain. Although medications can help ease pain, they are not designed to heal the fracture. With pain under control, patients find it easier to get up and move about, avoiding the problems that come from remaining immobile in bed.

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