

Vertebroplasty



Treating
Compression
Fractures

Relief from Back Pain

You've been told that you have a **compression fracture** in your back. This is the collapse of one or more of the bones of the spine (**vertebrae**). Compression fractures can be very painful. But you don't have to live with pain. Your doctor may have talked to you about having a procedure that can help you. Read on to learn more about this procedure and how you can prepare for it. You can also learn how to avoid fractures in the future.

What Causes Compression Fractures?

Compression fractures can occur in weakened vertebrae. **Osteoporosis** is a condition that makes bones weak and easy to break. Certain illnesses, such as cancer, can also weaken bones. Vertebrae fracture when they are too weak to support the weight of the body. As a result, they break and collapse on themselves. Bones can be so weakened that a minor fall, bending over, or even coughing or sneezing can lead to a compression fracture. These fractures can be painful, which can limit your activities.



Symptoms of Compression Fractures

Some compression fractures cause mild to severe symptoms. Others may not cause any symptoms. If symptoms do occur, they may include:

- Mild to severe pain (may be worse with walking)
- Shortened height
- A rounded upper back (kyphosis)
- Numbness, tingling, or weakness

A Procedure Can Help

You and your doctor may have tried treatments to relieve your back pain from compression fractures. If they haven't worked, **vertebroplasty** may help. This procedure can quickly relieve your back pain caused by a compression fracture. During the procedure, special cement for bones is placed inside a fractured vertebra. This makes the vertebra stronger and better able to support your body. Then you can get back to your regular activities.



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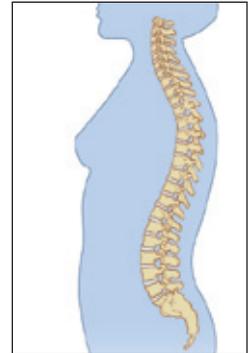
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The Spine Supports the Body

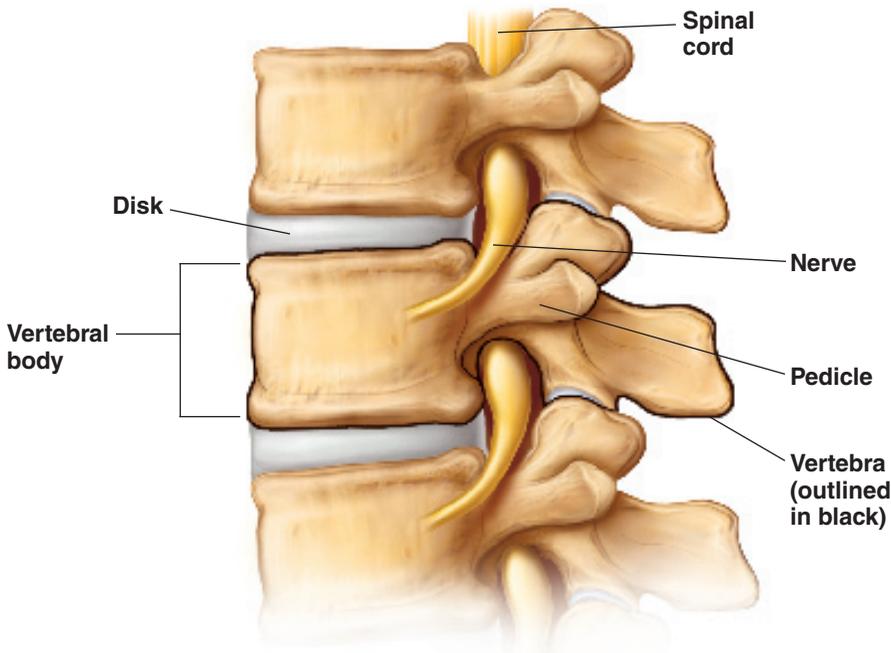
Vertebrae are bones that stack together to make up the spine. A healthy spine supports the body and lets it move freely. But moving can be painful for someone with a compression fracture of the spine. In some cases, even breathing is painful.

A Strong Spine

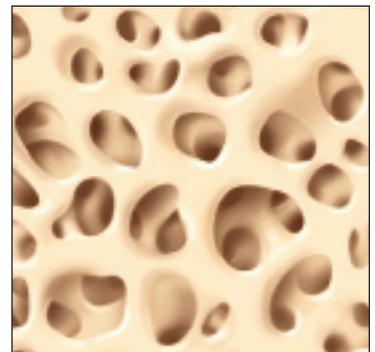
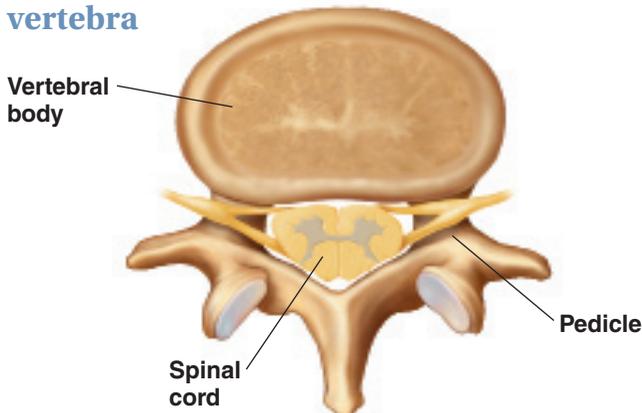
The spine supports much of the body's weight. It also protects the spinal cord and the nerves coming from the spinal cord. The main part of a vertebra is called the **vertebral body**. This is the largest section of each vertebra. Pads of tissue (**disks**) lie between the vertebrae to cushion them. A healthy spine lets you stand up straight and move without pain.



A healthy spine supports the body and helps maintain good posture.



Top view of vertebra



Inside a healthy vertebral body is a strong, dense meshwork of bone.

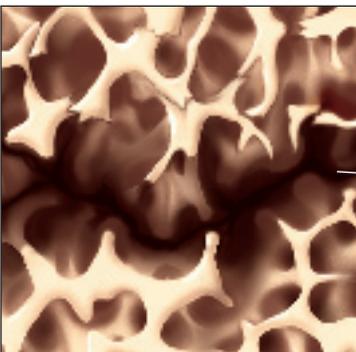
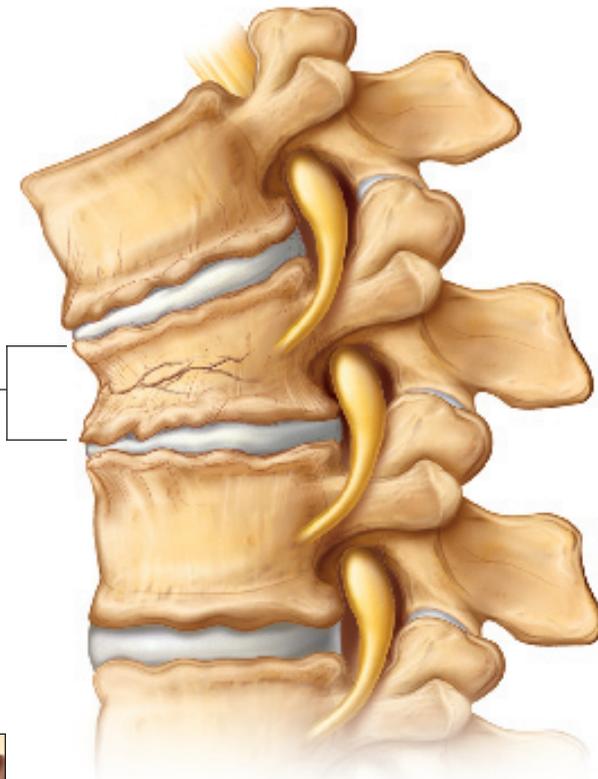
A Weakened Spine

Osteoporosis or another problem, such as a tumor, cause vertebrae to lose their strength. In fact, the weight of the body can cause the vertebral body to compress (crush). This is a compression fracture. Compression fractures can be very painful. When vertebrae fracture, the spine can't support the body well. When multiple vertebrae fracture, a rounded upper back often forms.



A weakened spine does not support the body well. This can lead to stooped posture.

Compressed vertebral body



Fracture

Inside a vertebra with osteoporosis is a thin, weak meshwork of bone.

A Way to Strengthen the Spine

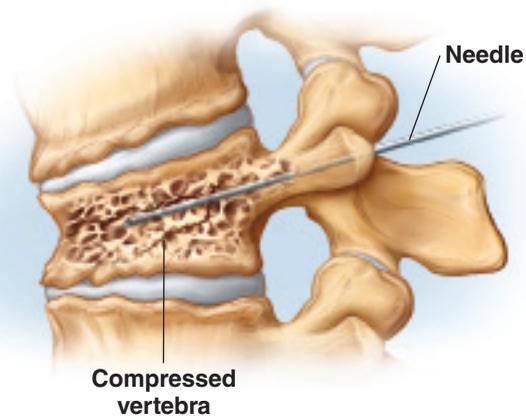
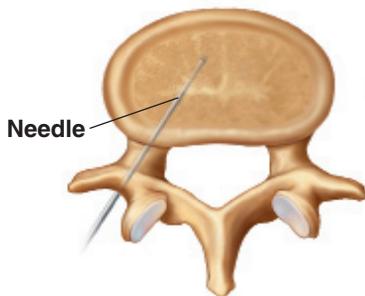
Vertebroplasty can strengthen the spine and relieve pain from compression fractures. The procedure is minimally invasive. For patients, this means smaller incisions, which can mean a faster recovery than with open surgery.

Vertebroplasty

During vertebroplasty, one or more tiny incisions are made in the back. A needle is put through the incision into the collapsed vertebra. Special cement for bones is injected through the needle into each side of the vertebra. The needle is removed and the incisions are closed. Small adhesive bandages may be used to cover the incisions.

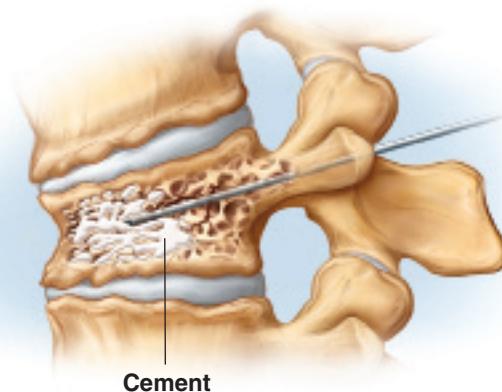
Reaching the Vertebra

The needle passes into the vertebra.



Strengthening the Vertebra

Once inside the vertebra, cement is injected through the needle. The cement hardens in minutes.



Preparing for the Procedure

Vertebroplasty can be done in a hospital or surgery center. You may need to stay overnight while you recover. Your doctor will discuss this with you before the procedure. You also will be told how to prepare before the procedure.

Your Exam and Tests

You'll have an exam to make sure you are healthy enough for the procedure. Before surgery, you may have some or all of the following tests to gather information:

- Imaging tests, such as x-rays and MRIs
- An ECG (electrocardiogram)
- Blood and urine tests

Getting Ready

- Tell your healthcare provider about all medications you take. This includes over-the-counter medications, herbs, vitamins, and other supplements.
- Ask your healthcare provider if there are medications you must stop taking before the procedure. Follow his or her instructions carefully.
- Do not eat or drink anything for at least 8 hours before the procedure.
- Arrange for an adult family member or friend to drive you home.
- Allow time to check in. You will need to sign a form stating that the procedure has been explained to you and you agree to have the procedure.



Risks and Complications

Vertebroplasty is considered safe. If complications do occur, they may include the following:

- Nerve damage
- Cement leakage
- Heart or lung problems
- New or unrelieved back pain
- Infection

Having the Procedure

Vertebroplasty is performed by specially trained doctors. The procedure is done in an operating room. There will be bright lights and loud noises. But you will be relaxed and comfortable, or even completely asleep, for the procedure.



Beginning the Procedure

- You will be asked to confirm the area of your body where the procedure will occur. This is for your protection as a patient.
- You will receive an IV (intravenous) line to give you fluids and medication.
- You will be given anesthesia. This is medication to keep you from feeling pain during the procedure. It will make you very relaxed and sleepy or completely asleep.

During the Procedure

Once the anesthesia has begun working, your doctor will start the procedure. The doctor will use x-ray images of your spine to help guide him or her through the procedure. While you are relaxed or sleeping, a healthcare professional will monitor your heart, blood pressure, temperature, and breathing. Your procedure will likely last between 30 minutes and 2 hours.

After the Procedure

You will be sent to a recovery room after the procedure. You may go home later the day of the procedure. Or, you may stay the night in a hospital room. Once you're ready to go home, you'll be told how to care for yourself.

Recovering at the Facility

Your loved ones may be able to visit you in the recovery room. Nurses and your surgeon will also check on you. You will likely feel relief from your back pain when you wake up from your procedure. Tell your nurse about any pain you have. You can be given pain medication to relieve it.

Going Home

An adult family member or friend will need to drive you home. But before you leave the hospital or surgery center:

- You'll be checked to be sure you have recovered from the anesthesia and are healthy enough to go home.
- You will be given **discharge instructions**. These tell you how to take care of yourself at home.
- You may be given a prescription for pain medication or other medications. Have someone fill these for you right away.



Recovering at Home

Once you're home, take good care of yourself. Follow all instructions you were given for what to do as you recover. You will need to see your doctor for follow up visits. These ensure that your healing is going well. Make and keep these appointments with your doctor.

When You Get Home

To help your recovery go smoothly, follow these tips:

- Take all medications as directed.
- Though you will likely feel better than you did before the procedure, ease back into your regular routine.
- As your back feels stronger, slowly increase your activity. Walking is a good start. Exercise will help you heal and regain your strength.
- Follow instructions for any exercises you are given.
- Let your doctor know if you have any questions or concerns about your recovery. Also call your doctor if you have any of the symptoms listed below.



When to Call Your Doctor

Call your doctor if you have any of these symptoms:

- Fever of 100.4°F (38°C) or higher
- New pain, weakness, or numbness in your legs
- New or unrelieved back pain

Preventing Future Fractures

You can take steps to prevent another compression fracture. One is to avoid falling, which can cause a fracture in weakened bones. Another is to treat bones weakened by osteoporosis. Work with your doctor on ways to make your bones stronger and less likely to fracture.

Avoiding Dangerous Falls

Falling often leads to bone fractures. The following tips help prevent falls:

- Wear slip-on shoes to limit bending. Be sure they have closed backs with nonskid soles to prevent slipping.
- Have someone remove throw rugs and electrical cords that you could trip over.
- Look into having safety features, such as grab bars, added to your bathroom.
- Be sure each room has proper lighting.
- Get help with chores if needed.

Strengthening Your Bones

Follow these tips to help strengthen weakened bones:

- Get some exercise every day. Exercise helps bone grow stronger.
- Ask your doctor whether you need calcium and vitamin D supplements.
- If you are prescribed medications to help strengthen your bones, take them as directed.
- Ask your doctor or physical therapist to teach you about good posture and good body mechanics.
- If you smoke, quit. Smoking weakens your bones and steals calcium.



Your Procedural Checklist

The list below outlines what to do before and after the procedure. If you have questions, be sure to get them answered before the procedure.

Before Your Procedure

- See your doctor to have any tests that he or she orders.
- Stop smoking.
- Stop taking aspirin, ibuprofen, naproxen, and other anti-inflammatory medications a week before the procedure.
- Do not eat or drink anything at least 8 hours before your procedure.
- Talk to your doctor about the medications that you take, especially blood pressure medication. He or she may want you to stop taking certain medications before your procedure.

After Your Procedure

- Schedule your first follow-up visit as advised.
- Take care of your incision as directed.
- Take calcium and vitamin D supplements and medications prescribed to help strengthen bones.
- Complete your physical therapy program, if one is prescribed.
- Ask your doctor what activities you should avoid after your procedure (and how long you should avoid them).

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