

Kyphoplasty / Vertebroplasty– For Patients

What is Vertebroplasty & Kyphoplasty?

Vertebroplasty and kyphoplasty are minimally invasive procedures for vertebral compression fractures (VCF), which are fractures in vertebra, the bones that make up the spinal column.

What are some common uses of the procedures?

Vertebroplasty and kyphoplasty are used to treat pain caused by vertebral compression fractures in the spine.

Typically, vertebroplasty is recommended after simpler treatment, such as bed rest, a back brace or pain medication, have been ineffective, or once medications have begun to cause other problems, such as stomach ulcers. Vertebroplasty can be performed immediately in patients who have severe pain requiring hospitalization or conditions that limit bed rest and medications. However, the sooner the treatment is done the less chance for the vertebrae to continue to collapse. Vertebroplasty is also performed on patients who:

- are too elderly or frail to tolerate open spinal surgery, or who have bones too weak for surgical spinal repair
- have vertebral damage due to a malignant tumor
- are younger and have osteoporosis caused by long-term steroid treatment or a metabolic disorder

Kyphoplasty is performed on patients experiencing painful symptoms or spinal deformities due to vertebral compression fractures resulting from osteoporosis. The procedure should be completed within eight weeks of when the fracture occurs for the highest probability of restoring the spinal bone to its normal height.

How should I prepare?

- A clinical evaluation including diagnostic imaging, blood tests, a physical exam, spine x-rays and a radioisotope bone scan or magnetic resonance(MR) imaging will be done to confirm the presence of a compression fracture that may benefit from treatment with vertebroplasty or kyphoplasty.
- You may be given bone-strengthening medication during treatment.
- You should report to your doctor all medications that you are taking, including herbal supplements, and if you have any allergies, especially to local anesthetic medications, general anesthesia or to contrast materials(also known as "dye" or "x-ray dye"). Your physician may advise you to stop taking aspirin, nonsteroidal anti-inflammatory drugs (NSAIDs) or a blood thinner for a specified period of time before your procedure.
- Women should always inform their physician and x-ray technologist if there is any possibility that they are pregnant. Many imaging tests are not performed during pregnancy so as not to expose the fetus to radiation. If an x-ray is necessary, precautions will be taken to minimize radiation exposure to the baby.
- On the day of the procedure, you should be able to take your usual medications with sips of water or clear liquid up to three hours before the procedure. You should avoid drinking orange juice, cream and milk.
- You may be instructed to not eat or drink anything for several hours before your procedure.

- You will need to have blood drawn and tested prior to the procedure to determine if your blood clots normally.
- You should plan to have a relative or friend drive you home after your procedure.

How does the procedure work?

Vertebroplasty involves injecting a special cement mixture into the small holes in weakened vertebrae to strengthen the spinal bones making them less likely to fracture again and providing pain relief.

Using image-guidance, a hollow needle called a trocar is passed through the skin into the spinal bone and a cement mixture is then injected into the vertebra.

In kyphoplasty, a balloon is first inserted through the trocar and into the fractured vertebra where it is inflated to create a cavity and also may help to push the bone back to its normal height and shape. The balloon is then removed and the cement is inserted into the cavity created by the balloon.

Will I be put to sleep (under anesthesia) during the procedure?

No. The case is done with sedation; the intravenous (IV) sedative will make you feel relaxed and sleepy. You may or may not remain awake, depending on how deeply you are sedated.

How long will the procedure take?

This procedure is usually completed within one hour. It may take longer if more than one vertebra is being treated.

What are the benefits of the procedure?

- Vertebroplasty and kyphoplasty can increase a patient's functional abilities, allow a return to the previous level of activity without any form of physical therapy or rehabilitation and prevent further vertebral collapse.
- These procedures are usually successful at alleviating the pain caused by a vertebral compression fracture; many patients feel significant relief almost immediately. Many patients become symptom-free.
- Following vertebroplasty, about 75 percent of patients regain lost mobility and become more active, which helps combat osteoporosis. After the procedure, patients who had been immobile can get out of bed, reducing their risk of pneumonia. Increased activity builds more muscle strength, further encouraging mobility.
- Usually, vertebroplasty and kyphoplasty are safe and effective procedures.
- No surgical incision is needed—only a small nick in the skin that does not have to be stitched closed.

What are the risks of the procedure?

- Any procedure where the skin is penetrated carries a risk of infection. The chance of infection requiring antibiotic treatment appears to be less than one in 1,000.
- A small amount of orthopedic cement can leak out of the vertebral body. This does not usually cause a serious problem, unless the leakage moves into a potentially dangerous location such as the spinal canal.
- Other possible complications include infection, bleeding, increased back pain and neurological symptoms such as numbness or tingling. Paralysis is extremely rare.

What are the instructions after the procedure?



Knowledge that will change your world

- A dressing has been applied to your wound to catch any drainage from wound and to protect the wound from the environment. This dressing should be left on for 24 hrs and then changed for a new dressing. Keep a dressing over the wound until no drainage is present or completely healed. After removal of this first dressing, if you notice extreme swelling or redness, please notify us immediately for instructions.
- If bleeding or bloody drainage occurs from the wound, hold mild pressure directly on the site with your fingertips over a clean cloth. Apply pressure for 10 to 15 minutes without letting up. If the bleeding does not stop, notify us.
- Check your wound daily for infection. EXTREME tenderness, redness, or drainage yellow in color suggests the possibility of infection. You should expect a moderate degree of tenderness that continues to improve.
- No tub bathing until the wound is completely healed. You may take a shower beginning the day after the procedure and replace the dressing after each shower until the wound is healed.
- You should limit your activity (up to the bathroom or to eat) until the day after the procedure. You may increase your activity, as tolerated, beginning the day after the procedure. Be careful not to overdo your activity as this could cause other vertebrae to break or collapse. We strongly recommended that you limit yourself to light and easy activities for a few days after the procedure. Do not strain or lift heavy objects (over 10 pounds).

If I have other questions, who do I contact?

For further questions or concerns about the kyphoplasty / vertebroplasty procedure, please contact Interventional Radiology at 205-934-0152, 205-934-7245, 205-975-4850.