Back Pain: Can a Kyphoplasty or Vertebroplasty Help?

Spinal fractures can cause a lot of pain. Two surgeries, vertebroplasty and kyphoplasty, can help relieve discomfort.

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The simple procedures kyphoplasty and vertebroplasty could relieve the back pain caused by spinal fractures.

Kyphoplasty and vertebroplasty are surgeries used to treat vertebral compression fractures, which are spinal injuries that often occur in someone with osteoporosis. Though each uses a slightly different technique, these two back pain treatments accomplish the same thing – strengthening the fractured vertebra by injecting a cement-like material into it.

“The intent [of both kyphoplasty and vertebroplasty] is the same – to provide pain relief,” says Ram Mudiyam, MD, an orthopedic spine surgeon at Hoag Orthopedic Institute in Irvine, Calif., and a member of the clinical faculty at the University of Southern California. Both kyphoplasty and vertebroplasty are minimally invasive back surgery procedures. In vertebroplasty, the first of the two procedures to be developed, doctors insert a needle into your back and use it to push cement into the fractured bone. In kyphoplasty, doctors inflate a balloon inside the bone to make space before injecting the bone cement. This restores shape to the vertebra and reduces the procedure’s overall risk.

Are You a Candidate for Kyphoplasty or Vertebroplasty?

Though kyphoplasty and vertebroplasty are most often used on people with osteoporosis, they can also help if you have bone cancer and your bones are weakened or if you’ve suffered an injury to your spinal cord from an accident. However, not everyone with a vertebral compression fracture needs a bone-strengthening procedure.

“I would perform this on patients whose fractures have not healed,” says Jeffrey Goldstein, MD, an orthopedic surgeon and director of the spine service at the NYU Hospital for Joint Diseases in New York City. “If they have healed, we generally don’t treat it with this. The spine will often get better on its own.”
Some people also aren't suitable candidates for kyphoplasty and vertebroplasty. For instance, if you have a vertebra that is severely fractured and shattered, it may leak cement, making the procedure too risky to perform. You may also be unable to have the procedure if your fracture occurred in your upper spine because these bones are small, making it hard to use a needle.

**Pros and Cons: What You Can Expect From Kyphoplasty or Vertebroplasty**

Many people who undergo kyphoplasty or vertebroplasty find that it gives them at least some degree of pain relief. Some people who've developed a hunched posture because of their fracture also find that it's easier to walk upright after the surgery. In addition, the minimally invasive nature of the procedures means that you'll probably have a short recovery time. “It’s pretty quick,” Dr. Goldstein says. “You can leave the hospital walking.” The cost of the procedure varies but is generally covered by Medicare and private insurance.

The risks of kyphoplasty and vertebroplasty are relatively low, but unwanted effects can occur. You may have some pain where the needle was inserted, and you run a small chance of infection from the needle. Because the procedure uses anesthesia (either local or general), you also face minor risks from the anesthetic itself. In extremely rare cases, the cement may leak from the bone and find its way into a vein, causing a clot that behaves much like a pulmonary embolism. It can also leak into the spinal canal, causing neurological effects. Be aware that scientific literature on the effectiveness of kyphoplasty and vertebroplasty has shown mixed results. Several studies have found the procedures to be effective methods of pain relief from vertebral compression fractures, but a pair of landmark studies published in The New England Journal of Medicine concluded that these bone-strengthening procedures are no more effective than placebos in treating fractures. However, many physicians still recommend kyphoplasty and vertebroplasty for some patients. “I’m a believer in it, and I do recommend it being done from time to time,” says Kevin Gill, MD, an orthopedic spine surgeon and chairman of orthopedic surgery at the University of Texas Southwestern Medical Center at Dallas.

Physical therapy is usually not needed after kyphoplasty or vertebroplasty. However, if your vertebral fracture occurred because of osteoporosis, you may be advised to take measures to strengthen your bones and prevent another injury. There are many ways to treat osteoporosis and prevent further bone loss, including prescription medications, calcium supplements, and regular exercise. “If you don’t fix your underlying disease, the bone cement’s not going to do very much,” Dr. Gill says.

Think of kyphoplasty and vertebroplasty as stopgap measures to help you recover more quickly from your spinal fracture. “The key is to realize that this is primarily useful for pain relief so patients can function and get back on their feet quicker,” Dr. Mudiyam says.

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