

**Kyphoplasty** is a minimally invasive spinal surgery procedure. It is used to treat painful progressive vertebral body collapse/fracture (VFC). VFCs may be caused by osteoporosis or the spread of tumor to the vertebral body. Osteoporosis is related to the softening of bones. It causes the building blocks of the spine to weaken and collapse. This results in severe pain and a progressive hunchback. Certain forms of cancer can also weaken the bone and cause the same problem.

Kyphoplasty is not appropriate for:

- Patients with young, healthy bones, or those who sustained a vertebral body fracture or collapse in a major accident.
- Patients with spinal curvature such as scoliosis or kyphosis that is due to causes other than osteoporosis.
- Patients who suffer from spinal stenosis or herniated discs with nerve or spinal cord compression and loss of neurological function not associated with a VCF.

The kyphoplasty procedure involves the use of a balloon to restore the vertebral body height and shape. This is followed by bone cement to strengthen it. The procedure may be performed under intravenous sedation. The patient may need local anesthetic or general anesthetic. The patient lies face down on the operating room table and two x-ray machines are used to show the collapsed bones.

The surgeon makes two small (less than 3 mm) incisions. A tube is inserted into the center of the vertebral body and through this tube, balloons are placed into the center of the vertebral body. The balloons are inflated which pushes the bone back toward normal height and shape and creates a cavity. Once the cavity is created the inflatable balloon is removed. The mixed bone cement fills the cavity in a slow and controlled fashion and the cement hardens. Then all tubes are removed and the incision is closed with a single stitch.

Patients can go home the same day as their surgery and it is recommended that patients go back to all normal activities of daily living as soon as possible with no restrictions. Results show kyphoplasty is a safe and effective method of vertebral reconstruction and stabilization in the treatment of osteoporotic VFCs.

However like all surgeries, there are risks. Complications may require additional treatment. These may be medications or additional surgery. Kyphoplasty is associated with excellent pain relief of pain caused by vertebral body collapse. Well over 95% of patients rate the treatment a success. They are able to return to all of their pre-VCF function. Patients typically do not need any form of physical therapy or rehabilitation after a kyphoplasty. Because bone cement hardens within 15 minutes, there really is no healing that needs to happen from the patients standpoint.

Occasionally, patients complain of persistent pain after kyphoplasty. This may be due to irritation of tissue involving the procedure itself. It is more likely due to the underlying arthritis and degeneration of the spine. Pains due to the procedure will typically diminish within two weeks. If the pain is due to the arthritic degenerative changes in the spine, the usual treatment is medication and an ongoing exercise program.

Restoring vertebral body height and size is best accomplished when kyphoplasty is performed soon after the VFCs happen. After kyphoplasty, severe osteoporosis may cause other fractures at other levels in some patients. All patients must take bone strengthening medications during treatment. If more vertebrae collapse, kyphoplasty can also be used at those other levels. Kyphoplasty has a tendency to help prevent more fractures because it keeps the spine lined up in its native upright position. The usual risks of local or general anesthetics apply. These risks depend on the patient's overall health. There is a small risk of bone cement leaking from within the boundaries of the vertebral body. In most cases, this rare event (less than 10%) does not cause any problems. In very rare circumstances the cement may irritate or damage the spinal cord or nerves. This can cause pain, altered sensation or even, very rarely, paralysis, (estimated risk is 1 in 10,000). Should the cement leak further, more significant surgery may be needed to stop the irritation of the nerves or spinal cord. There is also a very small chance of the cement traveling to the lungs. There is an even smaller chance of the cement block becoming infected at the time of surgery or even years later.

#### **Postoperative Kyphoplasty Instructions**

- Showering: Wait 48 hours. Do NOT soak in a bathtub, hot tub or swimming pool for 3 weeks. Use only soap and water on the incision and pat dry. Do not scrub incision.
- Wound care: Leave bandage on for 48 hours then change bandages as needed, check for signs of infection.
- Signs of infection: Please notify your physician if you have any of the following: Temperature greater than 100.5, extreme tenderness at the wound, excessive redness and/or swelling, or large amounts of drainage. If you think you may have an infection please contact your physician immediately.
- Driving: You may begin driving after your first visit for your wound check.
- Medications: you may take anti-inflammatory medications such as Motrin or Celebrex for 30 days after surgery only as prescribed. The pain medication prescribed may be taken as ordered. You should take a stool softener twice a day, drink plenty of water and eat high fiber foods to avoid constipation. Please begin taking Calcium with Vit D 1200mg-1400mg per day or your PCP may need to prescribe bone strengthening medications.
- Smoking: Smoking will interfere with your healing. If you smoke, you may end up having another surgery or more problems.
- Activity: No heavy lifting or strenuous activity. Avoid bending.
- Sexual Relations: you may resume sexual relations two weeks after surgery.

**Please contact our office if you have any questions or concerns.**