Kyphoplasty

The goals of the kyphoplasty surgical procedure are to stop the pain caused by a compression fracture (often resulting from osteoporosis), to stabilize the bone, and to restore some or all of the lost vertebral body height due to the compression fracture.

What happens during the kyphoplasty procedure?
During kyphoplasty surgery, a small incision is made in the back through which the doctor places a narrow tube. Using fluoroscopy to guide it to the correct position, the tube creates a path through the back into the fractured area through the pedicle of the involved vertebrae.

Using X-ray images, the doctor inserts a special balloon through the tube and into the vertebrae and then gently and carefully inflates it. As the balloon inflates, it elevates the fracture, returning the pieces to a more normal position. It also compacts the soft inner bone to create a cavity inside the vertebrae.

The balloon is removed and the doctor uses specially designed instruments under low pressure to fill the cavity with a cement-like material called polymethylmethacrylate (PMMA). After being injected, the pasty material hardens quickly, stabilizing the bone.

Kyphoplasty surgery to treat a fracture from osteoporosis is performed at a hospital under local or general anesthesia. Other logistics for a typical kyphoplasty procedure are:

- The kyphoplasty procedure takes about one hour for each vertebra involved.
- Patients will be observed closely in the recovery room immediately following the kyphoplasty procedure.
- Patients may spend one day in the hospital after the kyphoplasty procedure.

Patients should not drive until they are given approval by their doctor. If they are released the day of the kyphoplasty surgery, they will need to arrange for transportation home from the hospital.

What should I expect after kyphoplasty?
Pain relief will be immediate for some patients. In others, elimination or reduction of pain is reported within 2 days. At home, patients can return to their normal daily activities, although strenuous exertion, such as heavy lifting, should be avoided for at least 6 weeks.

Patients should see their physician to begin or review their treatment plan for osteoporosis, including medications to prevent further bone loss.

Am I a candidate for kyphoplasty?
Kyphoplasty cannot correct an established deformity of the spine, and certain patients with osteoporosis are not candidates for this treatment. Patients experiencing painful symptoms or spinal deformities from recent osteoporotic compression fractures are likely candidates for kyphoplasty. The procedure should be completed within 8 weeks of when the fracture occurs for the highest probability of restoring height.

What are the risks and complications of kyphoplasty?
Some general surgical risks apply to kyphoplasty, including a reaction to anesthesia and infection. Other risks that are specific to the kyphoplasty procedure and vertebroplasty include:

- Nerve damage or a spinal cord injury from malpositioned instruments placed in the back
- Nerve injury or spinal cord compression from leaking of the PMMA into veins or epidural space
- Allergic reaction to the solution used to see the balloon on the X-ray image as it inflates

It is not known whether kyphoplasty or vertebroplasty will increase the number of fractures at adjacent levels of the spine. Bench studies on treated bone have shown that inserting PMMA (bone cement) does not change the stiffness of the bone, but human studies have not been done. Osteoporosis is a chronic, progressive disease. As stated earlier, patients who have sustained fractures from osteoporosis are at an increased risk for additional fractures due to the loss of bone strength caused by osteoporosis.

You may call (404) 778-7000 if you have any questions.