Vertebral Compression and Sacral Fractures

What are vertebral compression fractures?
Vertebral compression fractures occur when the bones in your spine collapse and are twice as common as hip fractures. When vertebral compression fractures occur, the usual rectangular shape of the bone becomes compressed, causing pain. These compression fractures can involve the collapse of one or more vertebrae in the spine. The most common symptom of vertebral fracture is sudden onset of back pain, which can persist for weeks to months. The diagnosis of a vertebral fracture can be made by an interventional radiologist through the use of appropriate imaging, such as MRI. If left untreated, vertebral fractures frequently lead to chronic symptoms such as decreased mobility, decreased activity, back pain, or spinal deformity.

Pelvic fractures (sacral) are common particularly in patients with osteoporosis. When the sacrum fractures, pain is produced that can be debilitating. Unlike an extremity fracture we cannot provide a direct plaster or fiberglass cast. Conservative therapies such as rest and analgesics can help but many fractures do not respond to such treatment. Sacroplasty is a technique that “internally casts” a sacral fracture with liquid cement and provides significant pain relief.

These fractures can be caused by osteoporosis, a disease that results in the loss of normal bone density, mass, and strength. Osteoporosis is a widespread problem in the United States, causing more than 700,000 fractures per year. Major consequences of compression fractures due to osteoporosis include back pain, hunchback and height loss.

Treatment
Interventional radiologists are board-certified physicians who deliver minimally invasive treatments with less risk, less pain and less recovery time than traditional surgery to treat conditions that impact a person’s quality of life, such as vertebral compression fractures.

Vertebroplasty
Vertebroplasty is a minimally invasive treatment developed to treat pain caused by vertebral compression fractures, and has been safely performed since 1987. Using fluoroscopic (x-ray) imaging, an interventional radiologist precisely inserts a needle into the collapsed vertebral body through a small incision in the skin. This image-guided technique (a technique guided by live x-rays) allows the doctor to accurately access the fracture while minimizing any trauma to surrounding tissue. A medical-grade liquid cement is then injected into the center of the vertebrae. As the cement solidifies, the broken bone is stabilized. The treatment is performed with the patient face-down and sedated for their comfort.
Afterwards, many patients feel immediate relief from pain, and can be discharged home the same day.

As with any treatment, vertebroplasty has some risks, which include: infection, cement dislodgement, and in rare cases, spinal cord injury.

**Kyphoplasty**

Kyphoplasty is similar to vertebroplasty and is equally effective in stabilizing compression fractures. As with vertebroplasty, a needle is inserted into the fractured vertebra, using x-ray imaging. A balloon is then positioned into the collapsed bone and inflated to create a cavity for cement injection. This step also restores some degree of height to the bone before cement injection. Many patients feel immediate pain relief and are able to resume regular activities within a few days. Your doctor will most likely schedule a follow-up visit and explain limitations, if any, on physical activity.

**Sacroplasty**

Sacroplasty is similar to vertebroplasty but the cement is injected into the sacrum and the sacrum fracture instead of the vertebral body. It is done for insufficiency fractures to reduce pain and improve stability.