

Kyphoplasty: A New Treatment for Osteoporotic Compression Fractures in the Spine

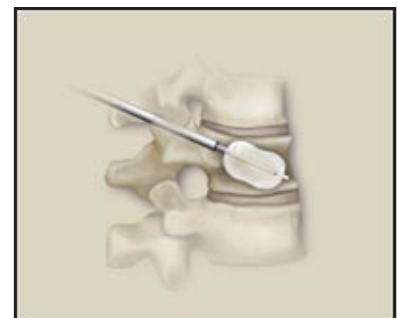
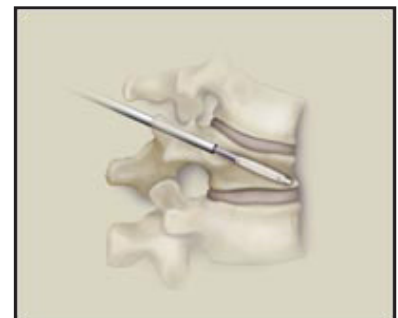
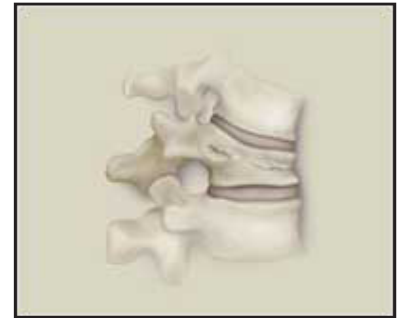
By Gregory C. Keller, M.D.

What is osteoporosis?

Osteoporosis ("porous bone") is a disease characterized by low bone mass and structural changes in bones allowing them to become fragile and weak. This can lead to fracture even when there has been no significant trauma. The hip, wrist, and spine are the areas usually involved. Although we will all experience bone loss as we grow older, there are things that we can do to minimize the risk of fracture. Knowing that bone is laid down in the first three decades of life, the best prevention for osteoporosis is to build up strong bones during childhood and early adulthood. Adequate calcium and vitamin D intake and weight bearing exercise enables us to obtain maximum bone mass. Furthermore, avoidance of smoking and excessive alcohol intake can help slow the rate of bone loss.

It is important to remember that bone loss occurs without symptoms, making osteoporosis a "silent disease." Fortunately there is a safe and simple radiographic test that can determine whether you are at increased risk for fracture. Most insurance companies will pay for this test, and every woman older than fifty should have her bone mass measured. For women at high risk (family history, long-term steroid use, and certain diseases), this study should be done even before menopause. Although there is no cure for osteoporosis, several medications have been approved by the FDA to treat this disease.

If the condition is diagnosed early, then treatment can reduce the chances of a fracture. Unfortunately, the diagnosis of osteoporosis is often not made until a fracture occurs.



Fractures of the spine due to osteoporosis occur more than 700,000 times each year, affecting over a quarter of a million people. This makes it one of the most common causes of new onset back pain in older adults. These fractures can occur with little or no trauma. Patients with painful spinal fractures due to osteoporosis generally receive conservative care. This includes bed rest, bracing, and pain medication. Obviously these are not ideal solutions since these patients cannot afford to stay in bed until the fractures heal (this often requires 10 to 12 weeks). Even with a brace and pain medications, many patients are unable to resume an active lifestyle for many months. Open surgical repair of these injuries is rarely recommended.

The long-term consequences of the fractures can be devastating. There is 23-37% increased mortality compared to patients without such a fracture. This can be due to many factors including malnutrition, chronic obstructive pulmonary disease (COPD), and pneumonia. Patients who survive are often plagued with chronic pain and deformity, which adversely affects their quality of life.

Fortunately a new treatment for spinal fractures due to osteoporosis is now available. Kyphoplasty is a technique whereby a small balloon is inflated within the fractured vertebrae body. This allows the surgeon to elevate the compressed endplate back to its normal shape (which minimizes the resultant deformity). Cement is then packed into the void after the balloon is deflated and removed. As the cement hardens, it provides support for the fractured bone alleviating pain and preventing further deformity. The procedure takes about an hour to perform and can often be done under IV sedation and local anesthetic. The only evidence that the patient has undergone surgery is the Band-Aid covering the entry sites. The results of this treatment can be dramatic. Patients who were previously unable to even sit up can often walk out of the hospital within hours of the procedure. Kyphoplasty gives us the opportunity to reduce the significant morbidity and mortality associated with vertebral compression fractures due to osteoporosis. The spine center at the Jacksonville Orthopaedic Institute has been chosen as the only local site to have access to this new technology during the early phase of its introduction. If you or someone you know could benefit from this procedure, please discuss it with you doctor or call us for a consultation.