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## NEUROSURGERY

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## Balloon Kyphoplasty

*If you have been diagnosed with a spinal fracture/vertebral compression fracture (VCF) caused by osteoporosis, cancer or benign tumors, balloon kyphoplasty may be a treatment option.*

### What Is Balloon Kyphoplasty?

Balloon kyphoplasty is a minimally invasive, orthopedic procedure for stabilizing spinal fractures that may reduce back pain, correct angular vertebral deformity and restore vertebral body height.

### Why Do I Need A Balloon Kyphoplasty?

The National Osteoporosis Foundation cites osteoporosis as a major public health threat affecting 44 million Americans, or 55 percent of people 50 years of age and older. Osteoporosis causes 1.5 million fractures annually, with more than 700,000 of these fractures occurring in the spine.

Spinal fractures can also be caused by cancer, the most common being multiple myeloma, breast, lung and prostate. According to the Multiple Myeloma Research Foundation, 55-70% of Multiple Myeloma patients already have VCFs at the time of diagnosis and 15-30% develop new VCFs annually.<sup>1</sup>

The change in the shape of the vertebral body following fracture alters the body's center of gravity. Multiple spinal fractures can affect the alignment of the entire spine. Over time, this alteration in spinal configuration may lead to reduction of motion and strength and well as visible spinal deformity known as kyphosis or "dowager's hump."<sup>2</sup>

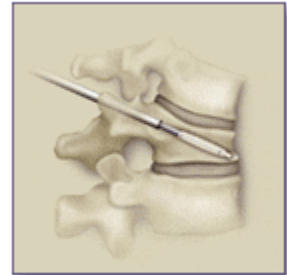
### How Is Balloon Kyphoplasty Performed?

Balloon kyphoplasty typically takes about one hour per fracture treated. It can be performed on an inpatient or outpatient basis and under local or general anesthesia (both determinations are based on medical necessity). Your physician will discuss with you which options are appropriate for you.



### **Step 1: Balloon Placement**

An incision is made approximately 1 cm in length. Using a needle and cannula (tube), the spine specialist creates a small pathway into the fractured bone. A small, orthopedic balloon is guided through the tube into the vertebra. The procedure is done on both sides of the vertebral body.



### **Step 2: Balloon Inflation**

Next, balloons are carefully inflated in an attempt to raise the collapsed vertebrae and return it to its pre-fracture position.



### **Step 3: Cavity Creation**

In an attempt to create a void (cavity), the balloons are inflated in the vertebral body. Once the vertebral body is in the correct position, the balloon is deflated and removed.



### **Step 4: Cavity Fill**

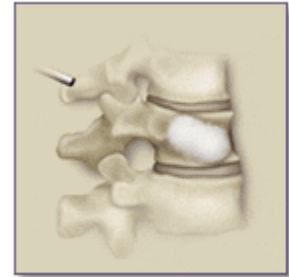
The cavity is filled with bone cement.





### **Step 5: Internal Cast**

The bone cement forms an "internal cast" to support the surrounding bone and prevent further collapse.



### **How Long Will It Take Me To Recover?**

The balloon kyphoplasty procedure typically takes about one hour per fracture and may require an overnight hospital stay. Your physician will discuss with you which options are appropriate for you based on your overall condition.

After the procedure, you will likely be transferred to the recovery room for about an hour for observation. While in the hospital, you may be encouraged to walk and move about.

Your surgeon will have a specific post-operative recovery/exercise plan to help you return to your normal daily life as soon as possible. Patients usually report relief from pain and are able to walk and move about soon after the procedure. Your doctor will schedule a follow-up visit and explain limitations, if any, on your activity. Following a balloon kyphoplasty, you may notice a rapid improvement of some or all of your symptoms, including pain; other symptoms may improve more gradually.

Work closely with your physician to determine the appropriate recovery protocol for you, and follow his or her instructions closely to optimize the healing process.

To determine whether you are a candidate for a balloon kyphoplasty, please talk to your doctor.

### **Are There Any Potential Risks Or Complications?**

Although the complication rate for KYPHON<sup>®</sup> Balloon Kyphoplasty is low, as with most surgical procedures, serious adverse events, some of which can be fatal, can occur, including heart attack, cardiac arrest (heart stops beating), stroke, and embolism (blood, fat or cement that migrates to the lungs or heart). Other risks include infection; leakage of bone cement into the muscle and tissue surrounding the spinal cord and nerve injury that can, in rare instances, cause paralysis; leakage of bone cement into the blood vessels resulting in damage to the blood vessels, lungs and/or heart.