MINIMALLY INVASIVE
neurosurgery

Kyphoplasty, Explained

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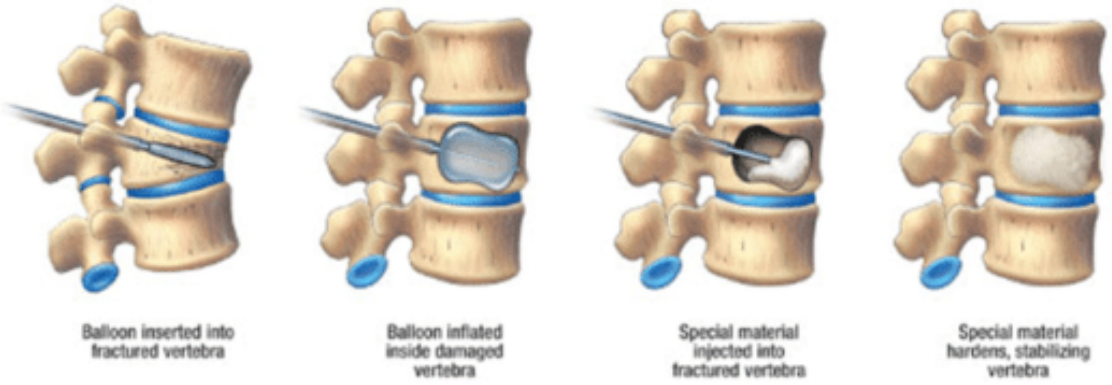
Overview

A Kyphoplasty is a surgical procedure that corrects compression fractures within the spine. A small incision is made in your back at the area of concern. Using specialized surgical tools, Dr. Baker then enters the spine, placing a deflated balloon in the fractured area. He'll then inflate the balloon to restore your spine's original height, filling it immediately afterwards with a special cement to keep its shape. Dr. Baker then removes the tube and closes the site with surgical glue.

The Details

To explain the Kyphoplasty, it's helpful to know why it's performed: compression fractures. A compression fracture is a type of break in your vertebrae—the stacked bones in your back that create your spine. Normally, our spine supports your weight, lets you move, and protects your spinal cord. But when this support fails, the vertebrae collapse, making them (and you) shorter in height. This collapse can also cause pieces of bone to press on the spinal cord and nerves, blocking blood and oxygen from the cord and causing your symptoms. Usually, compression fractures are caused by osteoporosis—a type of bone loss that causes bones to break easily. Other causes include spinal injuries (like car accidents or sports injuries) and spinal tumors.



But what about the Kyphoplasty? The word "Kyphoplasty", when broken down into its parts, describes what happens during the surgery: a formation or molding ("plasty") of the spine's original curve ("kypho"). To begin this process, Dr. Baker introduces a tube or probe into the vertebral bone through a tiny incision in your back. Using X-ray imaging as guidance, he drills into the vertebral bone. This creates a path for a special deflated balloon, which is inflated inside the vertebra to it's original height. The resulting empty space is filled with orthopedic cement called polymethylmethacrylate (PMMA). The cement hardens very quickly—in a matter

of minutes—and afterwards, the balloon is deflated and removed, leaving only the dried PMMA and restoring the shape of your spine. Dr. Baker then closes the site with surgical glue.

Vertebroplasty?

Sometimes, a procedure called a “Vertebroplasty” is performed instead of a kyphoplasty. This is essentially the same as a kyphoplasty, but with one key difference: in vertebroplasty, the orthopedic cement or PMMA is inserted into the bone of the collapsed vertebra through a needle and syringe, guided by something called “fluoroscopic guidance”—no balloon required. That said, it achieves the exact same thing as a kyphoplasty (pictured below).