Vertebral Compression Fractures & Kyphoplasty

What is kyphoplasty?
Kyphoplasty (say "KY-foh-plas-tee") is a procedure to fix a fracture— called a "vertebral compression fracture"— in the spine. It is done primarily to relieve pain from compression fractures of the spine, but also to restore anatomic structure which helps to prevent worsening or new fractures. The principles of kyphoplasty are no different than fixing any other fracture, the goals are to re-align or "reduce" the fracture (restore the normal anatomy as able, restore the height of the compressed bone closer to its normal height) and fixate the fracture (similar to casting) so the fracture is stabilized and no longer causes pain.

What are the benefits of kyphoplasty?
The main benefits are: rapid and sustained pain relief/reduction, improved function and mobility, improved quality of life, and reduced chance of death.

What are the downsides of kyphoplasty?
The overall complication rate is very low and serious complications are exceedingly rare. Potential complications include: bleeding, infection, nerve damage, allergic reaction, bone cement leakage or embolus (clot).

What are the alternatives to kyphoplasty?
The alternative to interventional care (kyphoplasty) is continuing conservative care which consists of: pain control with medications, bracing, activity modification bedrest, and physical therapy. Often, patients have side effects with pain medications, do not tolerate bracing, bedrest has other undesirable side effects (muscle wasting, blood clots, worsening bone health/osteoporosis etc.), and are unable to participate in therapy due to pain.

When should kyphoplasty be considered?
When a patient is not responding to conservative care— meaning the patient still has significant functional limitations, ongoing pain, and impaired quality-of-life— kyphoplasty should be considered to avoid the unintended consequences a compression fracture can have on a patient. Not surprisingly, patients who get kyphoplasty when indicated, have a lower mortality at one-year because of improvements to their function after the procedure.
Importantly, **there is no minimum waiting time prior to deciding to move forward with kyphoplasty**. A patient's degree of functional impairment (disability), pain, and imaging findings should guide the decision to move forward with kyphoplasty, regardless of how long "conservative care" has been attempted.

How is kyphoplasty performed?
Kyphoplasty is an outpatient procedure that usually takes about 1-1.5 hours, depending on how many levels are being treated. The patient is placed under deep sedation or, usually, general anesthesia and the skin on the back is numbed up. A small incision is made in your back, less than the width of a pen. The fracture is accessed with a needle. Then either a balloon or a "spine jack" device is inserted into the fractured bone (vertebra). The balloon is inflated then deflated or the jack is gradually opened to restore the fractured vertebra (bone) back to its normal height. Finally, cement is carefully instilled into the fractured vertebral body. If a spine jack is used, it stays in place, adding additional structure and support to the fracture and cement fills in-and-around the jack. Not every patient is a candidate for a spine jack implant.

What can I expect after the procedure?
Many patients feel near-immediate pain relief. Most will have some degree of minor post-procedural discomfort, but patients should expect to resume normal activities within 2-5 days. Strong pain medications are usually not required after this procedure and patients should be able to wean off pain medications after a successful kyphoplasty. The bone cement is completely hardened before you wake up from the anesthesia. Patients follow up in the clinic a couple weeks after the procedure. We recommend avoiding heavy lifting (no more than 10 pounds), more as a general precaution given weakened bone (osteoporosis) that caused the compression fracture in the first place.

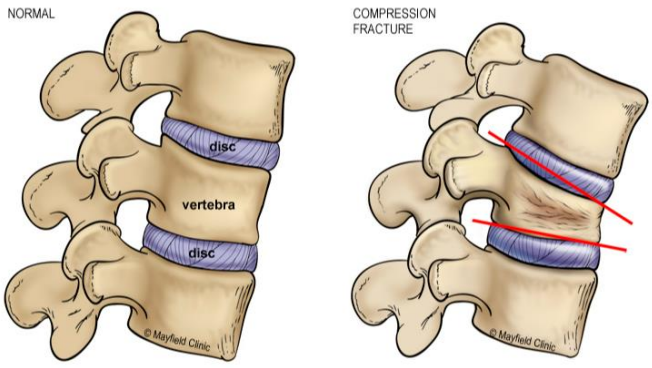
You can read more about kyphoplasty at Saint Alphonsus here:

https://www.saintalphonsus.org/blog/blogs/medical-innovations/kyphoplasty

https://www.saintalphonsus.org/specialty/pain-management/kyphoplasty

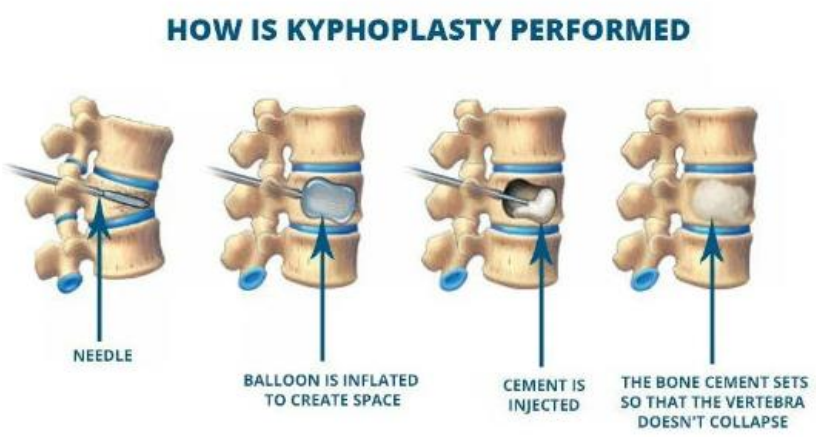
Dr. Jason Williams, MD, is dual-board certified in both anesthesiology and interventional pain medicine. He practices at Saint Alphonsus Regional Medical Center in both Boise and Nampa. Dr. Williams is passionate about kyphoplasty as a tool to restore function and improve quality-of-life in his patients. He was also the first physician to perform the SpineJack procedure for vertebral compression fractures at Saint Alphonsus.

Compression Fracture



Balloon Device

Click Here for Balloon Kyphoplasty Animation Video



SpineJack Device

Click here for SpineJack Animation Video

Unexpanded

Two SpineJacks are placed into the vertebral body.

SpineJacks expanded (no cement)

The SpineJacks are expanded to reduce the fracture and restore the anatomy.

SpineJacks expanded (with cement)

Cement is injected to stabilize the fracture.