

# What is Non-Surgical Vertebroplasty?

*Effective Pain Treatment for Spinal Fractures  
Caused by Osteoporosis*

Vertebroplasty is a minimally invasive form of treatment for vertebral compression fractures caused by osteoporosis, which fail to respond to conservative medical therapy. Indications for vertebroplasty include intolerable side effects to analgesia and little or no pain relief with analgesia, bed rest, physiotherapy and use of a corset.

Vertebroplasty is a non-surgical form of treatment performed by interventional radiologists, using image guidance or X-ray guidance, to stabilize the collapsed vertebra. This involves the injection of medical grade bone cement into the fractured spine. It can result in rapid pain relief, often within hours of the injection. It also helps to prevent further height loss of the vertebral body.

Collapsed vertebrae which do not heal and which cause persistent pain may continue to collapse if left untreated. If this occurs, Vertebroplasty may be more difficult to perform and its effectiveness at pain relief may be reduced. It is important for someone with persistent back pain from an osteoporotic vertebral compression fracture, lasting more than 6 weeks or who require high doses of analgesia or narcotics for pain relief, to consult a specialist to determine if Vertebroplasty is indicated.

*The procedure has been shown to provide continued pain relief for osteoporotic compression fractures.*



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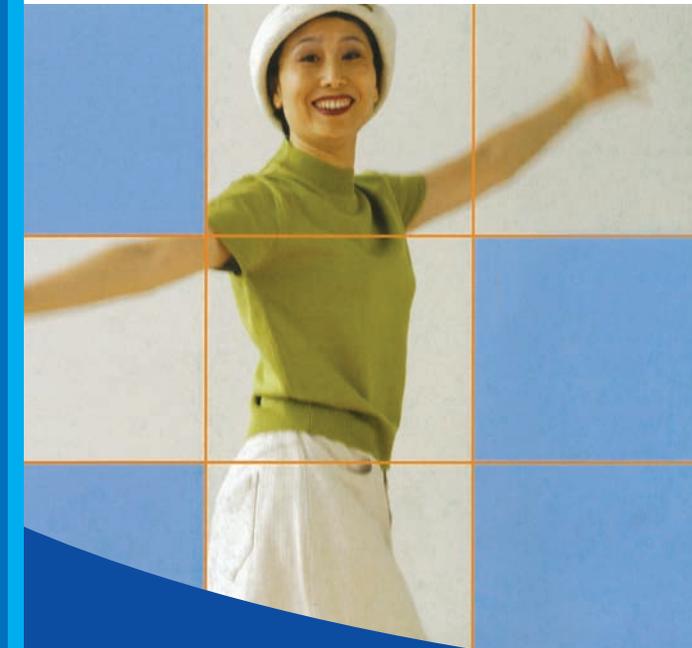
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NON-SURGICAL VERTEBROPLASTY

## Non-Surgical Vertebroplasty

PUTTING LIVES & VERTEBRAE BACK TOGETHER



## About Vertebroplasty

Vertebroplasty was first performed in France in 1984 to treat compression fractures caused by bone cancer or bone metastasis, and later to treat compression fractures caused by osteoporosis. Percutaneous vertebroplasty was introduced in the United States in 1994 and has become widely available since 1997 as a treatment for pain associated with compression fractures due to osteoporosis. The procedure has been shown to provide continued pain relief for osteoporotic compression fractures. A 1998 study by Dr. Deramond and colleagues reported on 80 patients with rapid and complete pain relief in more than 90% of osteoporotic cases. In our local series, we achieved similar results. In Mount Elizabeth Hospital, we have been performing this procedure regularly since 2001. The follow-up in this patient population ranged from one month to ten years with evidence of prolonged pain relief.



## About the Procedure

Vertebroplasty is a procedure using X-ray imaging and conscious sedation. The interventional radiologist inserts a needle through a nick in the skin in the back, directing it under fluoroscopy (continuous, moving X-ray imaging) into the fractured vertebra. The physician then injects the medical—grade bone cement into the vertebra. The cement hardens within 15 minutes and stabilizes the fracture, like an internal cast.



### Risks include:

1. Cement leakage into the spinal canal with resultant nerve injury.
2. Cement leakage into the blood stream with resultant cement embolization to the lungs.
3. Infection.
4. Bleeding from the needle insertion.
5. Allergy to the cement.

These risks are generally very low and overall risk for the procedure is estimated at less than 2%.

There is also a risk of fracture of the adjacent vertebra, but this is not higher than the risk of a second fracture resulting from osteoporosis.

## About Osteoporosis

Osteoporosis is characterised by low bone mass and structural deterioration of the bone resulting in an increased susceptibility to fractures. According to the National Osteoporosis Foundation from the United States of America, osteoporosis affects 10 million Americans and is responsible for 700,000 vertebral fractures each year. It is estimated that osteoporosis affects more Singaporean women than cancer or heart disease. Multiple vertebral fractures can result in chronic pain and disability, loss of independence, stooped posture and compression of the lungs and stomach. Nearly all vertebral fractures in healthy people are due to osteoporosis, and can occur from a minor impact, such as a bump or a fall, in those who suffer from this bone weakening disease. People who have a spinal fracture often do not realise that they may have osteoporosis, because the disease is symptomless until a fracture occurs.



There is new hope for osteoporosis patients who live with the pain and lifestyle restrictions caused by spinal fractures. Since 1994, a non-surgical procedure called vertebroplasty has brought relief - often within hours of treatment. This minimally invasive, image-guided treatment, performed by an Interventional Radiologists, significantly reduces pain and improves range of motion in more than 90% of patients treated.

Know your options. Today you have non-surgical choices and direct access to these specialists.