

## For five years, Dr. Peter Munk has been helping to free patients from the agonizing pain associated with spinal compression fractures.

Five years ago, there was virtually nothing Dr. Peter Munk could recommend to alleviate the pain suffered by patients with compression fractures of their vertebrae. Now, he performs about 90 Vertebroplasty procedures a year, with amazing results.

### technology overview

Vertebroplasty is used to treat fractures or instability of the vertebrae. Physicians use a fluoroscope to guide a hollow needle through the skin and into the vertebra. Then, they inject bone cement through the needle and into the cavity in the vertebra to stabilize the fracture. Both needle and bone cement are visible on the fluoroscope, allowing doctors to precisely position them for optimum results.

“This is the single most rewarding procedure I perform,” says Dr. Munk, a radiologist and head of the musculo-skeletal division at Vancouver General Hospital. “Prior to this technology, there was nothing that could be done for patients to reduce their pain.”

Compression fractures in spinal vertebrae often occur in patients with osteoporosis or bone cancer. It can

produce agonizing, often incapacitating pain. Many patients become completely dependent on assistance from caregivers for daily living.

“If they don’t have somebody to help them out, many have to be institutionalized,” says Dr. Munk. “That’s what it boils down to.”

Until recently, the only treatment for these compression fractures was rest, often complete bed rest, and narcotics to help manage the pain. However, for older patients with osteoporosis, bed-rest can be problematic. Many find their bodies become “de-conditioned” by extended rest and they may become permanently bed-ridden.

For the past five years, however, Dr. Munk has been helping patients find relief from their pain through a minimally-invasive procedure called Vertebroplasty. Normally performed by orthopaedic surgeons, neurosurgeons or radiologists, the procedure typically takes about one hour and involves injecting bone cement into a fractured vertebra to relieve pain and help improve function. It normally takes about an hour, does not require general anesthetic and

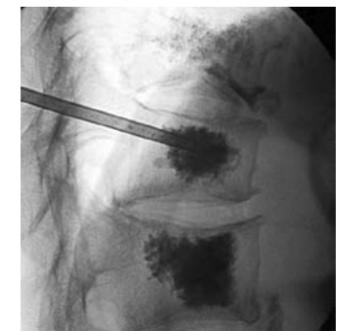
patients are usually in and out of the hospital on the same day.

“Very rapidly, sometimes within hours, patients have a dramatic improvement in their condition,” says Dr. Munk. “Most patients go home and the next morning they usually resume most of their normal activities... unless their normal activities include moving pianos!”

Patients who work can often return to work the next day. Their need for narcotic therapy is significantly reduced and they are less burdensome to the health system.

Vertebroplasty also holds promise for patients whose bones have been ravaged by cancer.

“In patients with malignant diseases, you can radically change the way that they’re treated and improve their quality of life beyond measure,” says Dr. Munk who has treated cancer patients suffering from agonizing pain and too weak for traditional surgery. Vertebroplasty dramatically improved their quality of life, reduced the number of drugs they needed and the intensity of the nursing care they required.



### fast facts

- About 85% of vertebral compression fractures are due to primary osteoporosis.<sup>1</sup>
- Acute osteoporotic vertebral fracture may be a crippling disorder causing severe back pain with associated morbidity and prolonged hospitalization.<sup>2, 3</sup>
- Until recently, bed rest, narcotic analgesia, and physical support were the only treatments for acute vertebral compression fractures, with these having limited efficacy.<sup>4</sup>
- Coping with chronic severe pain and disability due to a spinal deformity adversely affects a person’s overall level of functioning and quality of life.<sup>5</sup>

1 Ahrar K, Schomer DF, Wallace MJ. “Kyphoplasty For The Treatment of Vertebral Compression Fractures” Seminars in Interventional Radiology 2002; 19(3):235-243  
 2 Ross P. “Clinical Consequences of Vertebral Fractures” American Journal of Medicine. 1997;103(suppl)305-43S  
 3 Centre JR, Nguyen TV, Schneider D, et al. “Mortality After All Major Types of Osteoporotic Fracture in Men and Women: An Observational Study” Lancet. 1999;353:878-882.  
 4 Tamayo-Orozco J, Arzac-Palumbo P et al. “Vertebral Fractures Associated With Osteoporosis: Patient Management.” American Journal of Medicine. 1997; 103(suppl) 44S-50S.  
 5 Medical Advisory Secretariat, Ontario MOHLTC “Balloon Kyphoplasty” Health Technology Literature Review p. 13 (December 2004)