

# METABOLIC BONE DISEASES AFFECTING THE SPINE

## Osteoporosis

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Patients with osteoporosis may present with pain following minimal trauma, loss of height and exaggerated thoracic kyphosis. Medications used to prevent and treat osteoporosis include calcium, vitamin D, bisphosphonates (alendronate, risedronate, once-yearly intravenous zoledronic acid), denosumab, strontium ranelate, selective oestrogen receptor modulators (SERMs) such as raloxifene, hormone replacement therapy and teriparatide . Patients with painful thoracic fractures may be treated with short-term bed rest, analgesics and a spinal orthosis. If the back is still painful 6 weeks after the injury , patients may be considered for vertebroplasty or kyphoplasty . Vertebroplasty involves the injection of polymethylmethacrylate (PMMA) bone cement under pressure into the vertebral body with fluoroscopic guidance. The goals of the procedure are to stabilise the spine and decrease the pain associated with compression fractures. Kyphoplasty , on the other hand, involves inserting bilateral bone tamps with balloons into the vertebral body . These are inflated under fluoroscopic control with the bone tamp re-expanding the body , and elevating are then deflated and removed, and PMMA is placed in the - cavity created by the balloons. The goals of kyphoplasty are spinal stabilisation, pain relief and restoration of vertebral body height . Significant complications have been reported, including nerve root injury and spinal cord injury resulting from cement extravasation, along with cement embolism, infection and hypotension.

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