

# Teriparatide injections improve pedicle bone quality

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Daily injection of teriparatide significantly reduces the incidence of pedicle screw loosening at one year following surgery to correct degenerative spondylolisthesis in osteoporotic postmenopausal women, according to a study published in the April 15 issue of *Spine*.

(HealthDay)—Daily injection of teriparatide significantly reduces the incidence of pedicle screw (PS) loosening at one year following surgery to correct degenerative spondylolisthesis in osteoporotic postmenopausal women, according to a study published in the April 15 issue of *Spine*.

Seiji Ohtori , M.D., Ph.D., from Chiba University in Japan, and colleagues studied 62 women with osteoporosis diagnosed with degenerative [spondylolisthesis](#) who underwent decompression and one- or two-level instrumented posterolateral fusion with a local [bone graft](#). Patients were divided into three groups: a teriparatide group (daily

subcutaneous injection of 20 µg of teriparatide; 20 patients), a bisphosphonate group (daily oral administration of 2.5 mg of [risedronate](#); 20 patients), and a control group (no medication for osteoporosis; 22 patients). Radiographic, clinical, and computed tomography evaluations were conducted 12 months after surgery.

The researchers found that at follow-up the incidence of PS loosening was 7 to 13 percent in the teriparatide group, 13 to 26 percent in the risedronate group, and 15 to 25 percent in the control group. In the teriparatide group the incidence of PS loosening was significantly lower than that in the risedronate or the control group. In the risedronate group, PS loosening was not significantly different from that in the control group.

"Our findings suggest that administration of [teriparatide](#) increased the quality of the lumbar spine bone marrow and pedicle cortex," the authors write.

**More information:** [Abstract](#)  
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