

# Bone density can improve in spine, femur post-spine surgery

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Image courtesy of Blausen Medical

Following successful lumbar spine surgery, the bone mineral density (BMD) of the vertebral body and femoral neck can increase but appears to related to post-operative walking ability, according to a study published in the March 15 issue of *Spine*.

(HealthDay)—Following successful lumbar spine surgery, the bone mineral density (BMD) of the vertebral body and femoral neck can increase but appears to related to post-operative walking ability, according to a study published in the March 15 issue of *Spine*.

Yoshiharu Kawaguchi, M.D., Ph.D., from University of Toyama in [Japan](#), and colleagues followed 47 patients (older than 60 years of age) who had lumbar spine surgery. Dual-energy X-ray [absorptiometry](#) was used pre-operatively and at one and two years after [surgery](#) to measure BMD of the vertebral body and the femoral neck. The Japanese Orthopaedic Association score was used to evaluate surgical results and activities of daily living. Walking ability was evaluated using the Nurick

scale.

The researchers found that the average pre-operative BMD of the lumbar spine and the femoral neck gradually decreased post-operatively. In the group rated excellent according to the post-operative Nurick scale, BMD of the femoral neck had increased at the end of the two-year follow-up period. Based on the post-operative categorization by the Nurick scale grades, there were significant differences in the percent change of BMD of both the vertebral body and the femoral neck.

"The percent change of BMD of both the vertebral body and the femoral neck was related to post-operative walking ability," the authors write.

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