

Steroid injection therapy may increase risk of spinal fracture

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Most aging adults will experience back pain or a spinal disorder at some time in their life. In fact, about 25.8 million visits were made to physicians' offices due to primary back problems. Treatment focuses on pain relief and is available in both non-surgical (medication or physical therapy) and surgical forms.

A [retrospective study](#) in the June 5th issue of the *Journal of Bone and Joint Surgery* (JBJS) looked at one type of back treatment– a lumbar epidural steroid injection (LESI) – and whether or not that treatment had an impact on bone fragility and vertebral fractures (spinal fractures). A higher number of injections was associated with increased risk. Authors concluded that LESIs may lead to increased bone fragility over time, and while injection therapy is useful in some cases, it should be approached cautiously for patients at risk for fractures associated with osteoporosis.

Patients at a high risk for vertebral fractures after an epidural injection include older women, those who have had an earlier fracture, those who smoke and those who are underweight. Young and active [male patients](#) have a lower risk of vertebral fracture.

"In the appropriate setting, and for the right patient, LESI provides effective symptomatic relief and improved level of function, said Shlomo Mandel, MD, MPH, lead author of the JBJS study and orthopaedic surgeon at Henry Ford Health System. "Through careful screening and monitoring steroid exposure, the risk of a fracture can be minimized. As [orthopaedic surgeons](#) who specialize in spine, we know

there is a role for injection therapy, but the challenge is to make sure it is administered safely and still provide long-term benefits."

Study Details and Key Findings:

- Authors identified a total of 50,345 patients who had medical diagnosis codes involving the spine and from that group, a total of 3,415 patients had received at least one LESI.
- 3,000 patients were randomly selected from the 3,415 injected population, and then 3,000 patients from the non-injected group were selected as a control group. The incidence of vertebral fractures was assessed.
- There was no significant difference between the injected and non-injected groups with respect to age, sex, race, hyperthyroidism, or corticosteroid use.
- An increasing number of injections were associated with an increasing likelihood of fractures, and each successive injection increased the risk of spinal fracture by 21 percent.

"It's important to remember that when contemplating an epidural steroid injection a physician should have a symptomatic history, physical findings and corresponding imaging of direct pressure on a single nerve," added Dr. Mandel. "Together with our patient, we review the benefits and risks of alternative treatments before selecting an epidural [steroid injection](#)."

Dr. Mandel and his co-authors agree that more research is warranted on this relationship. They have a prospective study on [vertebral fractures](#) and injection therapy in the works.

Provided by American Academy of Orthopaedic Surgeons

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