

CASE SCENARIO: LUMBAR SPINE

This patient is a 72-year-old woman who lives by herself, is a recreational walker, and is active in the community. This morning, she slipped on a wet kitchen floor and landed on her buttocks. She experienced immediate upper and mid-lumbar pain. She was able to travel to your clinic to be seen but complains of 8/10 pain intensity when attempting to stand erect. She has no complaint of lower extremity pain; her neurologic examination is normal.

1. Given only this information, your suspicion of a vertebral fracture is:
 - a. low because her neurologic examination is normal.
 - b. low because she is able to travel.
 - c. high because anyone who slips on a wet floor is likely to have a fracture.
 - d. high because she is a female over 70 years of age who has sustained acute trauma.

2. Which of the additional factors listed below is most likely to raise the likelihood of a vertebral fracture in this patient?
 - a. a history of cardiovascular disease.
 - b. obesity.
 - c. prolonged use of nonsteroidal anti-inflammatory drugs.
 - d. prolonged use of corticosteroids.

3. This patient received plain film radiographs and a computerized tomography scan of the thoraco-lumbar spine that yielded no evidence of fracture. She has returned to your clinic and reports that her pain intensity has decreased to 3/10 at rest. Bending forward or sitting more than 30 minutes increases her pain to 6/10. On examination, you notice that she is tender to palpation over the lumbar erector spinae muscles but not over the spinous processes of the thoracic and lumbar spines. Given only this information, the general theme of her treatment should be to:
 - a. avoid activities that are painful and use a modality-based approach because it sounds like she has a soft tissue problem.
 - b. encourage graded activity, especially walking, because she is likely to do this and evidence suggests that this will be helpful.
 - c. maintain a substantial reduction of activity because of her age and her pain levels.
 - d. prescribe a lumbar orthosis because she is elderly and has flexion-sensitive pain.

ANSWERS

1. The correct answer is **d. high because she is a female over 70 years of age who has sustained acute trauma.** If she had an acute compression fracture, she may still be able to travel, although she would likely report symptoms. Her neurological examination could still be normal with this fracture. Not everyone who sustains a fall will have a fracture, yet this is of great concern in older patients.
2. The correct answer is **d. prolonged use of corticosteroids.** This finding, when combined with other pertinent findings (female over 70 years of age with a history of trauma), greatly increases the likelihood of a vertebral fracture being present. There is no evidence that the other choices would represent a meaningful, elevated risk of fracture.
3. The correct answer is **b. encourage graded activity, especially walking, because she is likely to do this and evidence suggests that this will be helpful.** There is no evidence that modalities or substantial activity reduction would help this patient over time. The reduction in activity may lead to further medical problems associated with disuse.