

[IMAGE]

Standing Tall

Worried about shrinking as you get older? Before you laugh, bear in mind that excessive curvature and shrinkage of the upper spine in the elderly can sometimes result in a deformity known as a "dowager's hump," which causes severe pain and loss of movement. Developing this condition may be preventable, however: Risk for excessive spinal curvature appears to be influenced by lower bone mineral density (BMD) and poor posture.

Disc degeneration and loss of vertebral bone density from aging lead to weakening and deformity of spinal disc structures, induced by gravity and postural stress, according to a recent study appearing in the journal *Spine*. A biomechanical full-spine model created using X-rays predicted osteoporotic spinal deformity and height loss in aging patients. The computerized model calculated reductions in vertebral strength, taking into account osteoporosis and a person's posture.

In people with low BMD and poor posture, gross deformities of the spine developed, including spinal fracture deformities in the upper back; abnormal increases in curvature; and decreases in vertebra height. These deformities caused a 25% reduction in spinal height and a 9% decrease in total body height in models of elderly individuals.

Traumatic wear and tear is not necessarily the cause of severely curved upper spines or back shrinkage. These problems may instead be caused by the stresses of everyday living, as a combination of low BMD and poor posture. Upwards of 10 million Americans have osteoporosis, and a significant number of these individuals have less-than-perfect posture. Don't let yourself be one of them. Exercise your back and torso, consume adequate calcium in your diet and maintain proper upright posture to help defend against unhealthy spinal curvature. Your chiropractor can provide you with plenty of information on maintaining a healthy back.

Reference:

Keller TS, Harrison DE, et al. Prediction of osteoporotic spinal deformity. *Spine* 2003;28(5), pp. 455-462.

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