

Study examines loop diuretic use and fractures in postmenopausal women

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The use of loop diuretics does not appear to be associated with changes in bone mineral density, falls or fractures in postmenopausal women, according to a report in the January 26 issue of *Archives of Internal Medicine*, one of the *JAMA/Archives* journals. However, prolonged use of loop diuretics may increase fracture risk in this group.

Developing osteoporosis and heart failure are of particular concern for many postmenopausal women; half of them experience osteoporosis-related fractures in their lifetime and at age 40 their lifetime risk for developing heart failure is one in five, according to background information in the article. Loop diuretics are commonly prescribed for the treatment of congestive heart failure. These agents "increase calcium excretion and, in some studies, hypercalciuria is associated with low bone mineral density, a risk factor for fractures," the authors note.

Laura D. Carbone, M.D., M.S., of the University of Tennessee Health Science Center, Memphis, and colleagues examined the use of loop diuretics and changes in bone mineral density, falls and fractures in 133,855 women enrolled in the Women's Health Initiative (WHI) from October 1993 to December 1998. Bone mineral density was measured for 300 diuretic users and 9,124 non-users at baseline and at year three of the study. Falls and fractures were recorded for an average of 7.7 years.

Of the participants, 3,411 used loop diuretics and 130,444 did not. The association between loop diuretic use and total fractures, hip fractures,

clinical vertebral fractures and falls was not significant. However, women who had used loop diuretics for more than three years had modest increased risks for other clinical fractures and total fractures.

"No significant differences were found between loop diuretic users and nonusers in baseline bone mineral density of the total hip, lumbar spine, total body, year three bone mineral density of the total hip, lumbar spine, total body or change in bone mineral density measurements from baseline to year three," the authors write.

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