

Diuretics associated with bone loss in older men

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Older men who take loop diuretics, commonly prescribed drugs for heart failure and hypertension, appear to have increased rates of hip bone loss than men who are not taking this medication, according to a report in the April 14 issue of *Archives of Internal Medicine*, one of the JAMA/Archives journals.

“Loop diuretics are one of the most commonly prescribed medications among older adults,” the authors write as background information in the article. These medications increase the amount of calcium excreted in urine, potentially damaging bones over the long term. In observational studies, use of loop diuretics has been associated with an increased risk of hip and other fractures. “However, there is uncertainty as to whether this increased fracture risk is attributable to negative effects on bone mineral density, fall-related mechanisms (e.g., dizziness and orthostasis [low blood pressure when standing up]), or associated comorbidities [co-occurring illnesses].”

Lionel S. Lim, M.D., M.P.H., of Griffin Hospital, Derby, Conn., and colleagues studied 3,269 men age 65 and older (average age 72.7). At an initial examination between 2000 and 2002 and at a follow-up visit an average of 4.6 years later, the men answered questions about medication use and brought in containers for all medication taken during the past 30 days. Bone mineral density of the total hip and two subregions was measured.

A total of 84 men continuously used loop diuretics between the two time

periods, 181 used them intermittently and 3,004 did not use them. After adjusting for other related factors, the average annual rate of decline in total hip bone mineral density was -0.33 percent in non-users, -0.58 percent in intermittent users and -0.78 percent among continuous users.

“Compared with rates of hip bone loss among non-users of diuretics, adjusted rates of loss were about two-fold greater among intermittent loop diuretic users and about 2.5-fold greater among continuous loop diuretic users,” the authors write. Findings were similar at the subregions of the hip.

“We conclude that loop diuretic use in older men is associated with increased rates of hip bone loss,” the authors write. Future research should address the underlying mechanisms, they note. “Our findings suggest that health care providers should take into account loop diuretic use when evaluating older men for risk factors for bone loss and fracture risk.”

Source: JAMA and Archives Journals

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