

OSTEOSCOOP

News on current events in osteoporosis and rheumatology

Alcohol consumption and bone density: could be worse

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Hip fractures are common causes of morbidity and mortality in older adults, with a lifetime cost for hip fractures which is a major burden in public health. Two of the most important proximal factors leading to hip fracture are low bone density (osteopenia or osteoporosis) and falls. Alcohol consumption may influence each of these factors. Although alcohol use has been associated with an increased risk for falls, leading to injury or death in a variety of populations, this relation among older adults has not been established.

As part of the Cardiovascular Health Study, a population-based cohort study was performed [1] on adults aged 65 years and older from four U.S. communities. 5865 participants reported their use of beer, wine, and liquor yearly. Cases of hip fracture unrelated to malignancy or motor vehicle accidents using hospitalization discharge diagnoses were identified. A subgroup of 1567 participants underwent dual-energy x-ray absorptiometry scans to assess bone mineral density.

A total of 412 cases of hip fracture occurred during an average of 12 years of follow-up. There was a significant U-shaped relationship between alcohol intake and risk of hip fracture. Compared with long-term abstainers, the adjusted hazard ratios for hip fracture were 0.78 among consumers of up to 14 drinks per week and 1.18 among consumers of 14 or more drinks per week. Alcohol intake was associated with bone mineral density of the total hip and femoral neck in a stepwise manner, with approximately 5% higher bone density among consumers of 14 or more drinks per week than among abstainers. These relationships were all similar among men and women.

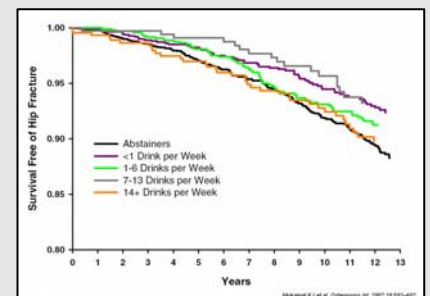
In conclusion, among older adults, moderate alcohol consumption has a beneficial effect on the risk of hip fracture and on bone mineral density at the hip. The mechanism(s) underlying this effect remains to be elucidated.

1. Mukamal KJ et al. *Osteoporos Int*. 2007;18:593-602.

Kaplan-Meier estimates of survival free of hip fracture among Cardiovascular Health Study (CHS) participants according to baseline alcohol consumption

A U-shape effect of alcohol consumption is evidenced.

From [1]



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