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January 2014, Vol 168, No. 1 >

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Original Investigation | January 2014

Milk Consumption During Teenage Years and Risk of Hip Fractures in Older Adults FREE

Diane Feskanich, ScD¹; Heike A. Bischoff-Ferrari, MD, DrPH^{2,3}; A. Lindsay Frazier, MD^{1,4}; Walter C. Willett, MD, DrPH^{1,5,6}

[+] Author Affiliations

JAMA Pediatr. 2014;168(1):54-60. doi:10.1001/jamapediatrics.2013.3821.

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ABSTRACT

ABSTRACT | METHODS | RESULTS | DISCUSSION | ARTICLE INFORMATION | REFERENCES

Importance Milk consumption during adolescence is recommended to promote peak bone mass and thereby reduce fracture risk in later life. However, its role in hip fracture prevention is not established and high consumption may adversely influence risk by increasing height.

Objectives To determine whether milk consumption during teenage years influences risk of hip fracture in older adults and to investigate the role of attained height in this association.

Design, Setting, and Participants Prospective cohort study over 22 years of follow-up in more than 96 000 white postmenopausal women from the Nurses' Health Study and men aged 50 years and older from the Health Professionals Follow-up Study in the United States.

Exposures Frequency of consumption of milk and other foods during ages 13 to 18 years and attained height were reported at baseline. Current diet, weight, smoking, physical activity, medication use, and other risk factors for hip fractures were reported on biennial questionnaires.

Main Outcomes and Measures Cox proportional hazards models were used to calculate relative risks (RRs) of first incidence of hip fracture from low-trauma events per glass (8 fl oz or 240 mL) of milk consumed per day during teenage years.

Results During follow-up, 1226 hip fractures were identified in women and 490 in men. After controlling for known risk factors and current milk consumption, each additional glass of milk per day during teenage years was associated with a significant 9% higher risk of hip fracture in men (RR = 1.09; 95% CI, 1.01-1.17). The association was attenuated when height was added to the model (RR = 1.06; 95% CI, 0.98-1.14). Teenage milk consumption was not associated with hip fractures in women (RR = 1.00 per glass per day; 95% CI, 0.95-1.05).

Conclusions and Relevance Greater milk consumption during teenage years was not associated with a lower risk of hip fracture in older adults. The positive association observed in men was partially mediated

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