

Is family history of osteoporosis associated with osteoporosis preventive behavior in US women? A population-based study

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Background

To assess the relationship between the prevalence of reported doctor-diagnosed osteoporosis and family history in a representative sample of women in the United States, examine whether this association can be explained by other risk factors for osteoporosis, and evaluate whether high-risk individuals based on familial risk are more likely to report preventive behaviors.

Methods

Prevalence of reported osteoporosis was estimated in a sample of 8073 women aged 18 years and over from the National Health and Nutrition Examination Survey (NHANES), 1999-2004. Respondents reported whether any of their 1st degree relatives and grandparents had ever been diagnosed with osteoporosis.

Results

The overall prevalence of osteoporosis in women was 8.3%. A positive family history was reported in 19.8% of the participants and was significantly and independently associated with osteoporosis (OR, 95% CI: 2.50, 1.97-3.17). This association was stronger when participants reported having 2 or more affected relatives (OR, 95% CI: 8.31, 4.62-14.94). When stratified by age, the association between family history and osteoporosis was observed only in women aged 35 and over. Women with a positive family history of osteoporosis were more likely to report preventive behaviors such as taking a supplement containing calcium and/or vitamin D (OR, 95% CI: 1.42, 1.17-1.72), being physically active (OR, 95% CI: 1.24, 1.01-1.53) and using estrogen (OR, 95% CI: 1.24, 1.00-1.55) compared to women with no family history of osteoporosis.

Conclusion

Findings from this study indicate that family history is a significant and independent risk factor for osteoporosis in US women aged 35 and over. In addition to general education campaigns to increase awareness about osteoporosis risk factors and prevention, public health efforts should help identify high-risk women who may benefit most from targeted prevention strategies.