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In adults over the age of 40 years, who consume 3 servings of dairy products per day, as recommended by the United States Department of Agriculture (USDA) Dietary Guidelines, is there a reduced risk of having low bone mineral density (BMD)?

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Background: Low BMD is a major cause of morbidity and mortality in older adults due to an increased risk of fractures.In the United States, over half of adults aged 50 and older,about 53.6 million people, suffer from low BMD in the forms ofosteopenia and osteoporosis.

Purpose: To determine if adults over the age of 40 years that consume the USDA recommended amount of dairy (3 cups/day) are at a reduced risk of having low BMD.

Methods: Goal of meta-analysis: investigate effects of dairy consumption on bone health in adults. Key Terms used in search: bone, mineral density, calcium, dietary calcium, dairy, osteoporosis, osteopenia. Focused on literature published within the last 10 years. Databases searched: Pubmed, Cochrane central register of controlled trials (CENTER), Web of Science. We found 22 relevant studies which were examined by two members of the group for validity and relevance, further reducing the final number of studies to 10.

Results: A positive correlation was noted between dietary calcium intake with higher BMD across all 10 studies, however, the risk reduction of fractures showed mixed results across the studies.As dietary calcium consumption from dairy sources increased, risk of osteoporosis decreased in adults. (95% CI; P <0.05).Intake of over 1,000 mg of calcium from dietary sources over a lifetime, was associated with reduced odds of developing osteoporosis regardless of other risk factors. (OR = 0.80; 95% CI). Other dietary components were varied among the 10 studies, but all included calcium as main intervention.

Conclusion: Consuming calcium through dairy products = Protectiveagainst osteoporosis in adults >40 years old.Increase in dietary calcium → decrease osteoporosis & fractures → increase in quality of life, morbidity and mortality.Increased dietary calcium may improve compliance and reduce side effects vs. PO low BMD medications and supplements.

Biography

Paige Savage is second year physician assistant student at the University of Texas Medical Branch in Galveston, TX. She is currently taking the class Investigative Studies and have written the abstract for the course. She will be graduating on August, 11th 2017 and will take the PANCE shortly after that.

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