Yogurt consumption in older Irish adults linked with better bone health

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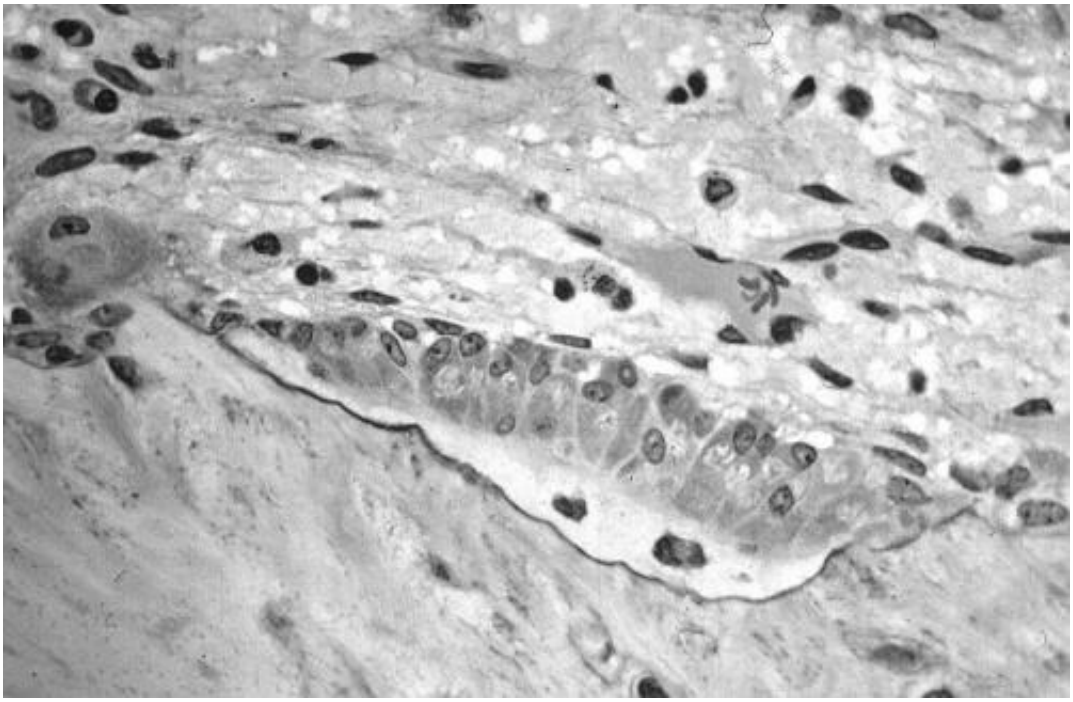

Osteoblasts actively synthesizing osteoid. Credit: Robert M. Hunt; Wikipedia.

The largest observational study to date of dairy intakes and bone and frailty measurements in older adults has found that increased yogurt consumption was associated with a higher hip bone density and a significantly reduced risk of osteoporosis in older women and men on the island of Ireland, after taking into account traditional risk factors.

The study led by Trinity College Dublin, Ireland, in collaboration with St

James's Hospital Dublin and co-investigators from Nutrition at Ulster University, Coleraine investigated participants from the Trinity Ulster Department of Agriculture (TUDA) ageing cohort study (>5000 people).

Total hip and femoral neck bone mineral density measures in females were 3.1-3.9% higher among those with the highest yogurt intakes compared to the lowest and improvements were observed in some of the physical function measures (6.7% better). In men, the biomarker of bone breakdown was 9.5% lower in those with the highest yogurt intakes compared to the lowest. This is an indication of reduced bone turnover.

To determine risk factors for being diagnosed as osteoporotic, the research team analysed a wide range of factors such as BMI, kidney function, physical activity, servings of milk or cheese, and calcium or vitamin D supplements as well as traditional risk factors for bone health (e.g. smoking, inactivity, alcohol etc.). After adjusting for all these factors, each unit increase in yogurt intake in women was associated with a 31% lower risk of osteopenia and a 39% lower risk of osteoporosis. In men, a 52% lower risk of osteoporosis was found. Vitamin D supplements were also associated with significantly reduced risks both in men and women.

Osteoporosis is a chronic condition associated with a reduction in bone strength and an increased risk of bone fracture. The associated costs of osteoporotic fractures are estimated to be over €650 million annually in Europe.

Lead author of the study and research fellow at the Centre for Medical Gerontology, Trinity, Dr Eamon Laird said: "Yogurt is a rich source of different bone promoting nutrients and thus our findings in some ways are not surprising. The data suggest that improving yogurt intakes could be a strategy for maintaining bone health but it needs verification through future research as it is observational."

Dr Miriam Casey, senior investigator of this study and Consultant Physician at St James's Hospital Dublin said: "The results demonstrate a significant association of bone health and frailty with a relatively simple and cheap food product. What is now needed is verification of these observations from randomized controlled trials as we still don't understand the exact mechanisms which could be due to the benefits of micro-biota or the macro and micro nutrient composition of the yogurt."

The study included 1,057 women and 763 men who underwent a bone-mineral-density (BMD) assessment and 2,624 women and 1,290 men who had their physical function measured. Yogurt consumption information was obtained from a questionnaire and categorized as never, 2-3 times per week and more than one serving per day. Other factors examined included daily intakes of other dairy products, meat, fish, smoking and alcohol and other traditional risk factors that affect bone health.

More information: E. Laird et al, Greater yogurt consumption is associated with increased bone mineral density and physical function in older adults, *Osteoporosis International* (2017). DOI: 10.1007/s00198-017-4049-5

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