

Dairy foods may improve bone health during diet and exercise in overweight premenopausal women

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A recent study accepted for publication in The Endocrine Society's *Journal of Clinical Endocrinology & Metabolism* (JCEM) found that consumption of dairy foods and higher protein resulted in improvements in markers of bone formation and reductions in markers of bone degradation in overweight and obese young women over 16 weeks of diet- and exercise-induced weight loss.

Previous studies have shown that higher body weight is associated with greater bone mass and that [weight loss](#) through dieting can adversely affect [bone health](#). While the individual effects of dairy, calcium, protein and exercise on bone during weight loss have been studied in premenopausal women, no trial until now has combined all these strategies together into one study to support bone health.

"Our findings show that a diet with a high proportion of dairy foods and higher than recommended protein intake was associated with improved markers for bone health," said Stuart Phillips, PhD, of McMaster University in Hamilton, Ontario and senior author of the study. "Thus, to avoid deleterious consequences to their bone health, women who are attempting weight loss through dieting should practice consumption of more protein from dairy sources."

In this study, researchers conducted a controlled randomized weight loss intervention trial involving 90 premenopausal overweight or obese women which was designed to achieve weight loss and be supportive of bone health. Phillips and his colleagues employed modest dietary calorie restriction and daily exercise including aerobic and resistance training with varied intakes of protein and dairy foods. Researchers used dual-energy X-ray absorptiometry (DXA) scans to assess bone

mineral density and content, and analyzed participants' urine and blood samples to evaluate serum levels of several bone health biomarkers.

Results from the study showed that the consumption of diets higher in protein with an emphasis on dairy foods during a diet and exercise period, positively affected markers of bone turnover, calcium, vitamin D status and bone metabolism in overweight and obese premenopausal women.

"Our data provide a good rationale to recommend consumption of [dairy foods](#) to aid in high quality weight loss, which we define as loss of fat as opposed to muscle, and the promotion of bone health in young women who are at the age when achieving and maintaining peak [bone](#) mass is of great importance," said Phillips.

More information: The article, "Diets higher in dairy foods and dietary protein support bone health during diet- and exercise-induced weight loss in overweight and obese premenopausal women," appears in the January 2012 issue of *JCEM*.

Provided by The Endocrine Society

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