



Protecting Bones During Weight Loss - Eat Protein-Rich Foods

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According to an investigation published online in the *Journal of Clinical Endocrinology and Metabolism*, consuming a calorie controlled diet lower in [carbohydrates](#) and higher in protein - primarily from dairy foods - combined with daily exercise has a significantly positive impact on bone health in overweight individuals as well as obese young women.

The researchers observed that bone health improvements were particularly evident, because of the high density of bone-supporting nutrients, such as [vitamin D](#), dairy-based protein and calcium.

The researchers enrolled overweight and obese, but otherwise healthy, premenopausal women to participate in the study. The women were then split into three groups, each consumed either low, medium or high amounts of dairy foods together with lower or higher amounts of carbohydrates and protein for 16 weeks. In addition, vitamin D and calcium were graded from low to high across the three groups together with the dairy foods they consumed.

Each participant engaged in aerobic exercise seven days per week as well as two additional workouts of circuit weightlifting per week.

Andrea Josse, of the Department of Kinesiology at McMaster and lead author of the investigation, explained:

"Our findings demonstrate the importance of diet composition to the maintenance of bone health status during weight loss. Our data clearly shows dairy-source protein is important when aiming to avoid harmful consequences such as accelerated bone loss during weight loss. In our view, young women attempting to lose weight should consume a diet higher in dairy-source protein."

A prior investigation from the same team and the same participants revealed that across the groups, total weight losses were identical, although body composition change was significantly different with the higher protein, high-dairy group experiencing more significant whole-body fat and abdomen fat losses as well as greater lean mass gains.

In this investigation, the same participants consuming higher-protein and high-dairy also had considerable improvement in markers of bone formation, an increase in circulating vitamin D levels, no alterations in bone loss, as well as a decrease in levels of parathyroid hormone, which when raised is often linked to bone loss.

According to the researchers, maintaining or even improving bone health in young women, especially in women trying to lose weight, is vital for overall health, and might have considerable implications for reducing the chances of developing diseases like [osteoporosis](#) later in life.

Stuart Phillips, senior author and a professor in the Department of Kinesiology, stated:

"Our data provide further rationale to recommend consumption of dairy foods to aid in "high quality" weight loss, which we defined as loss of fat and sparing of muscle, and the promotion of bone health in young women. These women are not only at the age when achieving and maintaining peak bone mass is of great importance, but in whom adequate dairy consumption would offset sub-optimal intakes of calcium and vitamin D."

Participants who consumed marginally adequate protein while undergoing weight loss showed significantly increased levels of markers of bone loss suggesting that consuming such a diet would weaken bones in the future.

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