

The Surprising Connection Between Bones, Fat, and Nutrition

Sometimes research can take years to have a positive effect on people's lives, but not so with a clinical and translational research study at Rutgers. This research uses new findings and those from previous studies to ultimately prevent osteoporosis and bone loss. Each current group of study participants benefits from findings that optimize their diet during weight loss.

With funding mainly from the National Institutes of Health, Dr. Sue Shapses, a professor in the Department of Nutritional Sciences, has discovered ground-breaking information about how dieting affects bones. Since 1991, she has provided behavior modification and nutritional counseling for weight loss for hundreds of people at Rutgers, as well as at Columbia University. While the participants are losing weight, Shapses and her research team are engaged in basic research to learn more about the absorption rates, hormonal regulation, and bone quality during weight loss. At the end of each study, key results are discussed with the participants, including tests of bone density and metabolic rate.

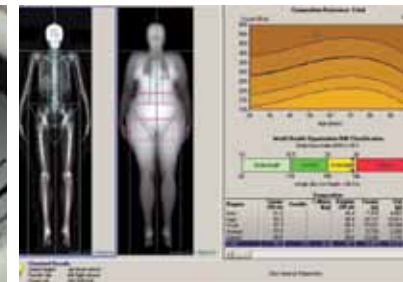
Shapses is also studying the effects of gastric bypass surgery, which may have dramatic effects on bones, in addition to the extreme weight loss. Methods to minimize bone loss are currently being examined, with a focus on dietary protein intake.

Hormones play an important role in bone loss, and Shapses is focusing on how different hormones react to weight loss. She has shown that parathyroid hormone and estrogen are important regulators of calcium absorption during weight loss. She also suspects that restricting calories may increase cortisol levels and vitamin D demands, thereby lowering calcium absorption. The unique hormonal profile of the obese is currently being examined to better understand how there is simultaneous regulation of bone and fat tissue.

There is much more to be learned about obesity, weight loss, and other nutritional diseases affecting bones. To support this research, please contact The Office of Development at 732-932-9000, ext. 576 or development@sebs.rutgers.edu for more information.

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