

## **Before You Start Bone-Building Meds, Try Dietary Calcium and Supplements**

*Source: University of Illinois/ACES News*

Has a bone density scan placed you at risk for osteoporosis, leading your doctor to prescribe a widely advertised bone-building medication? Not so fast! A University of Illinois study finds that an effective first course of action is increasing dietary calcium and vitamin D or taking calcium and vitamin D supplements.

“For many people, prescription bone-building medicines should be a last resort,” said Karen Chapman-Novakofski, a U of I professor of nutrition and co-author of a literature review published in a recent issue of *Nutrients*.

The study reported that adults who increase their intake of calcium and vitamin D usually increase bone mineral density and reduce the risk for hip fracture significantly. These results were often accomplished through supplements, but food is also a good source of these nutrients, she said.

“I suspect that many doctors reach for their prescription pads because they believe it’s unlikely that people will change their diets,” she noted.

The scientist said that prescription bone-building medications are expensive, and many have side effects, including ironically an increase in hip fractures and jaw necrosis. They should be used only if diet and supplements don’t do the trick.

“Bisphosphonates, for instance, disrupt normal bone remodeling by shutting down the osteoclasts--the cells that break down old bone to make new bone. When that happens, new bone is built on top of old bone. Yes, your bone density is higher, but the bone’s not always structurally sound,” she said.

A bone density test measures quantity, not quality, of bone. “Although the test reports that you’re fine or doing better, you may still be at risk for a fracture,” said Chapman-Novakofski.

A woman in midlife can get enough calcium in her diet without gaining weight, said lead author Karen Plawecki, director of the U of I’s dietetics program.

“Menopausal women should consume 1,200 milligrams of calcium a day. Three glasses of 1 percent to skim milk will get you up to 900 milligrams. The rest can easily be obtained through calcium-rich and calcium-fortified foods,” Plawecki said.

According to Plawecki, the number of foods fortified with calcium and vitamin D is increasing exponentially. Examples are soy milk, orange juice, yogurt, crackers, cereal, bread, breakfast bars, and even pancakes.

The researchers also looked at the effects of dietary protein, vitamin K, soy, and sodium in their literature review. The new USDA food pyramid guidelines recommend that Americans decrease their sodium intake.

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“Following a low-sodium diet does seem to have a positive effect on bone density. Some people have the habit of adding a generous sprinkle of salt to most foods before eating, but there’s more involved here than learning not to do that. You have to choose different foods,” Plawecki said.

Smoked or processed meats, bacon, lunch meat, and processed foods all contain a lot of sodium and could sabotage bone health. “Cheese is also very high in sodium so try to get your calcium some other way more often,” Plawecki said.

She recommends a “portfolio diet” that contains a number of nutrients, not just extra calcium and vitamin D. For bone health, the researchers also encourage consuming adequate protein, less sodium, and more magnesium and potassium.

“That can be done by following a diet that’s high in fruits and vegetables, has adequate calcium and protein, and is light on salt,” she said.

Chapman-Novakofski noted that the National Osteoporosis Foundation recommends more physical activity. She suggests a combination of aerobic, strength, balance, and flexibility exercises with a focus on improving your core muscles so you can catch yourself if you start to fall.

Whatever sort of exercise you’re doing, you have to introduce new forms of activity every so often because your bones will stop responding to the same old routine and rebuilding will slow, she said.

Plawecki and Chapman-Novakofski set out to determine the impact of dietary, supplemental, and educational interventions over the last 10 years and reached their conclusions after reviewing 219 articles in scientific journals.

For more information, visit their website about osteoporosis at <http://urbanext.illinois.edu/osteoporosis/>.