

# Check Eyesight to Reduce Fractures

*Impaired vision can double or quadruple the risk for hip fracture; repairing cataracts can cut fall risk.*

BY SHERRY BOSCHERT  
San Francisco Bureau

SAN FRANCISCO — Physicians who see patients with osteoporosis should have a visual acuity chart on the office wall to check eyesight, Steven R. Cummings, M.D., advised at a meeting on osteoporosis that was sponsored by the University of California, San Francisco.

Reduced visual acuity greatly increases the risk for falling and for hip fractures. Usually poor vision is due to treatable risk factors such as the need for an updated glasses prescription, or cataracts, said Dr. Cummings, who is professor emeritus of epidemiology and biostatistics at the university and director of clinical research at the California Pacific Medical Center Research Institute.

Impaired vision can double or quadruple the risk for hip fracture. At least one study shows that repairing cataracts can reduce the risk of falling by 34% (Br. J. Ophthalmol. 2005;89:53-9).



those problems, probably because “osteoporosis” and “spine fracture” are rather nonspecific terms used with different meanings.

► **Weight.** Women have a higher risk for serious fractures if they are losing weight involuntarily compared with maintaining or gaining weight. The involuntary weight loss is a marker for frailty. Fractures of the hip, humerus, spine, or pelvis commonly are referred to as “frailty fractures,” he noted.

Voluntary weight loss through diet or exercise diminishes a woman’s bone mineral density, but it’s not clear whether this increases fracture risk, he said.

► **Corticosteroid use.** Taking more than 10 mg/day of prednisone or comparable doses of other corticosteroids reduces spinal bone density by 5%-10% in the first year, with most of the loss during the first 6 months.

Higher doses of steroids reduce spinal bone density even more. Fracture risk increases even more quickly—within 1-2 months of starting corticosteroids.

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DR. CUMMINGS

“There’s a suggestion here that corticosteroids increase your risk for fractures in ways besides causing bone loss,” perhaps by killing osteocytes in bone and limiting the ability of bone to respond to stimulators, he said.

Consider starting preventive therapy to prevent fractures if patients who will be taking steroids for at least several months have low bone densities or a history of fracture, Dr. Cummings suggested.

► **Smoking.** Cigarette smoking approximately doubles the risk for hip fracture regardless of a person’s bone density, probably because smoking is associated with poorer health, weaker muscles, and impaired balance.

► **Diabetes.** Patients with diabetes have triple the risk for foot fractures and double the risk for humerus or hip fractures, compared with nondiabetic patients. If you see a patient with one of these fractures, look for diabetes, and watch for these fractures in patients already diagnosed with diabetes, he advised.

► **Stroke.** Patients who have had a stroke or who are in nursing homes are at very high risk for hip fractures, warranting pharmacotherapy to preserve and strengthen bone. Each year 4%-6% of nursing home patients develop hip fractures. In patients over age 70 who have had a stroke, 3%-5% of women develop hip fractures per year. ■

# Consider Fracture Risk Data When Prescribing Preventive Drug Tx

BY DIANA MAHONEY  
New England Bureau

NEW ORLEANS — Giving primary care physicians quantitative information about fracture risk can help them make more judicious use of preventive drug therapy for postmenopausal women at below-average risk for osteoporosis, Joan M. Neuner, M.D., said at the annual meeting of the Society of General Internal Medicine.

In a national survey targeting a random sample of primary care physicians, those who received lifetime and 5-year quantitative fracture risk estimates along with bone mineral density (BMD) reports were less likely than those given standard BMD reports to recommend preventive prescription drugs for a 70-year-old, average-weight woman with a T score of -1.01, Dr. Neuner reported.

The survey included nationally representative proportions of general internists, family physicians, general practitioners, and ob.gyns. The physicians were asked to respond to four clinical vignettes that varied with regard to patient age, weight, and hip BMD. The survey also included Likert-scaled items to measure osteoporosis knowledge, attitudes, and screening preferences.

Of the respondents, 141 randomly received standard hip BMD measures for each vignette (reported as g/cm<sup>2</sup> with T score and z score), and 138 received augmented BMD reports, which included quantitative lifetime and 5-year risk fracture estimates derived from the Study of Osteoporotic

Fractures. For each vignette, the physicians were asked to estimate the patient’s hip fracture risk, compared with average-risk women of the same age and race.

Dr. Neuner and her colleagues at the Medical College of Wisconsin in Milwaukee developed a logistic regression model to adjust the results for physician specialty, physician demographics, and physician estimates of relative fracture risk for a patient with below-average risk.

“In the unadjusted analysis, physicians who received augmented BMD reports were no more or less likely to recommend prescription medications for any of the vignettes,” Dr. Neuner said. In the adjusted model, however, 25% of the physicians who received the augmented BMD would have prescribed drug therapy for the below-average-risk 70-year-old, compared with 36% of the physicians who received the standard BMD report only—a statistically significant difference, she said.

Physicians in the standard BMD group who correctly identified the woman as having a below-average risk of hip fracture based on age, weight, and hip BMD also were less likely to recommend drug therapy, she added.

The findings suggest that adding quantitative fracture risk estimates to BMD reports “has the potential to change physician prescribing behavior” for women at low risk for osteoporosis. Similarly, educating primary care providers about risk classification could change their perceptions about who should get preventive drug therapy, Dr. Neuner said. ■

# Even Supplement Users Can Have Low Vitamin D Levels

BY HEIDI SPLETE  
Senior Writer

WASHINGTON — A whopping 97% of 78 patients hospitalized for minimal trauma fractures had vitamin D levels of less than 30 ng/mL, Christine Simonelli, M.D., said at an international symposium sponsored by the National Osteoporosis Foundation.

Even the patients who took at least 400 IU of vitamin D had inadequate vitamin D levels, added Dr. Simonelli of HealthEast Medical Research Institute, St. Paul, Minn. More than 90% of 39 patients who took at least 400 IU of vitamin D still had serum vitamin D levels below 30 nanograms per mL.

But there was a significant difference overall in the mean serum vitamin D levels between patients who took at least 400 IU of vitamin D and those who took 400 IU of vitamin D supplementation or less (16.4 ng/mL vs. 11.9 ng/mL).

Patients who took at least 400 IU of vitamin D as a daily supplement were significantly less likely to have vitamin D levels in the lowest cutoff group—less than 9 ng/mL—than were patients who took less than 400 IU of vitamin D daily.

The mean vitamin D levels were not sig-

nificantly different based on age, gender, or use of an osteoporosis medication.

The mean serum 25-hydroxyvitamin D [25(OH)D] level was 14.1 ng/mL among the 61 women in the study, and 14.3 ng/mL among the 17 men. All the patients were aged 50 years or older, all except one were white, and were hospitalized with a fracture between August 1, 2001 and January 31, 2002.

Almost all (97%) of the patients had hip fractures, and 10 (12%) of them were taking an osteoporosis medication prior to their hospital admissions. The investigators excluded patients with high-impact trauma fractures and metastatic cancer diagnoses.

A total of 14 patients (18%) were taking vitamin D only, while 36 (46%) reported taking a multivitamin only and 39 (50%) reported taking vitamin D and/or multivitamins. The study was limited by its small size, lack of ethnic minorities, and possible lack of generalizability to other populations, Dr. Simonelli and her colleagues wrote.

“Half of the patients had little or no vitamin D supplementation,” Dr. Simonelli noted.

Dr. Simonelli received research support from Merck & Co. for this study. ■