



SCCG News

SENIOR CARE CONSULTANT GROUP
Consultant Pharmacists . . . Dispensing Knowledge

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Vitamin D Deficit Affects More Than Bones

Inadequate levels of vitamin D may help to explain not only morbidities such as osteoporosis but also less-appreciated effects of vitamin D insufficiency that worsens bodily functions and are commonly thought to be related to aging alone, Dr. Neil Binkley said at a conference sponsored by the American Society for Bone and Mineral Research. "I would like to suggest to you that vitamin D inadequacy might be contributing to what we are currently accepting as old age-related morbidity," said Dr. Binkley, co-director of the University of Wisconsin Osteoporosis Clinical Center and Research Program, Madison.

The prevalence of densitometric osteopenia markedly increases with advancing age, and at any given bone density, age has a "profound impact" on the risk of fracture, he said. But many conditions other than osteoporosis that are affected by vitamin D status have been labeled as "age-related" morbidities, including sarcopenia, falling, overactive bladder, swallowing dysfunction, worsening lung function, macular degeneration, and cognitive decline.

"I'd ask you to always consider that perhaps some of these other age-related morbidities are what are causing this dramatic effect of age on fracture," he said.

- **Sarcopenia.** The expression of vitamin D receptors declines in muscle with aging. In muscle, vitamin D also may be involved with calcium transport and actinmyosin interaction. A study of 1,008 older adults has suggested that vitamin D inadequacy is associated with sarcopenia. After a 3-year follow-up, men and women with baseline 25 (OH)D levels less than 25 nmol/L were more than twice as likely to develop sarcopenia (based on either grip strength or muscle mass) than were those with a higher level of 25 (OH)D.
- **Falling.** It is not known whether vitamin D status and muscle strength are casually related, but "it is, however, clear that vitamin D status is related to the risk of falling in both older men and older women," Dr. Binkley said. The risk of falling is increased by orthopedic disabilities, visual impairment, central or peripheral neurologic dysfunction, and muscle weakness, which may be the main risk factor, he said. A meta-analysis of double-blind, randomized trials showed that vitamin D reduced the risk of falling by 22%.

- **Overactive bladder.** Bladder dysfunction also may be associated with muscle weakness, leading to poorer coordination of the muscles used to control urination. Overactive bladder affects 30%-40% of adults older than 75 years of age and two-thirds of nursing home residents; it is defined as urinary urgency with or without incontinence, usually with frequency and nocturia. In a study of nearly 6,000 community-dwelling women aged 40 years or older, women in the highest quintiles of vitamin D intake had the lowest risk of developing overactive bladder.
- **Difficulty Swallowing.** Up to 40% of individuals older than 60 years have problems swallowing, which can lead to undernutrition, sarcopenia and aspiration pneumonia. Dysphagia associated with aging classically has been felt to reflect neurologic disease such as Parkinson's or stroke, but more recent work has shown that even normal healthy adults swallow more slowly and generate lower tongue pressures than do younger adults.

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Nurses Rank 'Most Trusted' for 8th Consecutive Year

When it comes to honesty and ethical standards, nurses are the best. At least, that's the consensus among Americans who participated in a recent USA Today/Gallup poll. This marked the eighth consecutive year that nurses took top honors.

"We are honored and gratified by those findings," said Deborah Burger, RN, president of the 70,000-member California Nurses Association/National Nurses Organizing Committee. "These poll findings reflect, I believe, a public recognition of who champions their health, safety and well-being when they are ill and at their most vulnerable," Burger said. She added that, with more than 3 million nurses in the country, almost everyone has contact with a nurse or has one in their family.

"Doctors tend to be problem solvers that deal with

particular parts of the body, whereas nurses deal with the whole person," says the Rev. John Paris, a professor of bioethics at Boston College. Paris teaches ethics to nursing students. "Nurses spend more time with patients than other healthcare professionals." Paris added that the public rates nurses the highest because they take the time to listen, not only to patients but to their families, and that they take their concerns seriously.

Healthcare professionals accounted for the top five positions. Pharmacists came in second, followed by veterinarians, medical doctors and dentists.

At the bottom of the rankings were HMO managers, advertising practitioners and car salesmen. The annual survey was based on interviews with 1,009 adults.

Balance Training Technique May Help Reduce Falls

Researchers believe they have found an improved way of helping decrease falls among the elderly. Their study of more than 200 elderly with balance problems found that an exercise program called "combined balance and step training" helped improve balance and mobility better than recently popularized Tai Chi classes do.

The CBST program focuses on "dynamic" balance, or a person's ability to respond quickly and safely to a sudden loss of balance. It includes exercises such as changing direction to walk backward or sideways, changing speed, walking on a plank and stepping over small obstacles.

Tai Chi classes also focus on weight shifting, stepping in different directions and balancing, but with slower, flowing motions. Regular Tai Chi practice among the elderly has helped cut their risk of falls as well as lower blood pressure and reduce arthritis symptoms.

Study participants who went through the CBST training showed greater improvement in their stepping length and speed than participants randomly placed in the Tai Chi group. In addition, the CBST subjects also made greater strides in their balance as well as basic walking ability.



Caregiving Update

Using better hygiene and other preventative steps can virtually prevent often-deadly infections stemming from catheter use, according to a recent study conducted throughout 108 Michigan hospitals. The study focused on procedures designed to reduce infection, including better hand-washing, special cleaning and insertion procedures, and removing unnecessary catheters when possible. At the start of the study, there were 27 infections for every 10,000 days a catheter was in place, according to researchers from Johns Hopkins University in Baltimore. Three months into the project, the rate had dropped to zero, and remained low for the 18-month-long study.

Plain soap and water work just as well as hand sanitizers or antibacterial soaps if used correctly and often, according to a new report in the *Harvard Health Letter*. Washing hands with soap and water for just 15 seconds removes 90% of bacteria, wrote Dr. Anthony Komaroff, who reviewed numerous studies. Many people do not wash their hands often enough or dry them thoroughly, experts agree. In addition, Komaroff notes that latest alcohol-based gel hand sanitizers, while a useful alternative to soap and water, need to be used in a quantity that allows for complete coverage of all surfaces of the hands.

Medication Update

Patients are asking whether proton pump inhibitors (omeprazole, etc) increase the risk for fractures. New research suggests a higher risk of hip fractures in patients using PPIs for over a year, especially at higher doses. Researchers speculate that PPIs might impair calcium absorption by inhibiting gastric acid. But patients shouldn't panic. This doesn't prove that PPIs lead to fracture, and the increased risk seems small. For now, patients should seek advice on chronic acid suppressive therapy to get enough calcium and vitamin D. For older patients on PPIs, calcium citrate is recommended; it's less affected by gastric acidity. Also, patients should use PPIs and H2-blockers only when needed, and at the lowest effective dose. Patient's needs should be periodically reassessed for these drugs.



Women are hearing that they can take a break from their oral bisphosphonate (*Fosamax*, etc). We know that bisphosphonates remain in the bone for years. But it wasn't known how long the benefits might last after they're stopped. Now there's evidence that some postmenopausal women can stop taking alendronate for up to 5 years, after initial treatment for 5 years. These women have some bone loss after stopping the drug, but their bone density usually remains above their pretreatment level. They may also have a slightly higher risk of vertebral fractures, but the risk of other fractures is the same as those who continue. Experts say that 5 years of a bisphosphonate might be enough for women who have a good response and are at low risk for fractures. However high-risk women should stay on their bisphosphonate. These are women with a history of fractures, multiple risk factors, or a very low bone density. Women who stop treatment are advised to get bone density screenings at least every 2 years. Restarting if bone density falls >8% in one year, >10% in 2 years, or >5% below pretreatment levels is suggested. Getting adequate calcium and vitamin D, staying active, and not smoking is very important.

Some physicians are using anticholinergics (*Detrol*, *Ditropan*, etc) for urinary symptoms in men with benign prostatic hyperplasia. Most of us were taught not to use these drugs in men with BPH due to concerns about urinary retention. But there's no easy way to tell if urinary symptoms are due to BPH or an overactive bladder. And the risk of urinary retention with these drugs is low, especially in men with good urinary flow rates. Alpha-blockers (*Cardura*, *Flomax*, etc) is the continued initial recommendation for men with symptomatic BPH, adding *Proscar* or *Avodart* if needed for an enlarged prostate. These drugs reduce the progression of BPH. If men still complain of urge incontinence, urgency, or frequency, trying an anticholinergic is suggested, but ONLY if their urine flow is good. Men should report urgency that is accompanied by weak flow, hesitancy, or a feeling of incomplete emptying, as this could be a sign that their condition is progressing, and can set them up for urinary retention if it's left untreated.

Rumor vs. Truth



Rumor: Cold-fX is unsafe for women with cancer or a family history of cancer.

Truth: Emails are circulating that claim *Cold-fX* "feeds" hormonal cancers such as breast or uterine cancers. This herbal cold and flu remedy contains an extract of North American ginseng (*Panax quinquefolium*). The rumor probably started because of studies showing that ginseng has estrogenic effects. It's true that some preliminary

research shows that American ginseng can have estrogenic effects...and might stimulate breast cancer cell growth in a test tube. But this isn't the whole story. Other preliminary evidence suggests that American ginseng REDUCES breast cancer cell growth. In China, women consuming ginseng of any type seem to have a lower overall risk of breast cancer-related mortality. The manufacturer of *Cold-fX* also says that the estrogenic "ginsenosides" contained in American ginseng are removed during manufacturing. And they claim that studies suggest it actually ramps up the immune system. At this point, there's no solid evidence that *Cold-fX* increases or decreases the risk of cancer in humans. Until more is known, advise patients with breast cancer or a high-risk of breast cancer to avoid ginseng products...including *Cold-fX*. Explain that the modest potential benefits of these products don't outweigh the unknown risks. Emphasize that hand washing is the most effective protection against catching the common cold.

“I think it’s at least plausible that this decreased muscle function might be casually related to the increased risk of dysphagia observed with advancing age,” Dr. Binkley suggested. But no research has been conducted on vitamin D status and the risk of dysphagia of aging, he said.

- **Pulmonary function.** Both the forced expiratory volume in the first second after taking a deep breath and forced vital capacity are known to decline with aging; poor results on such tests are associated with substantial morbidity and mortality. In a study of people in the National Health and Nutrition Examination Survey III (NHANES III) who were aged 60 years or older, both of those measures of lung function were significantly higher among people in the highest quintile of serum 25 (OH)D concentration than in individuals in the lowest quintile of the vitamin. Biologically plausible ways in which vitamin D might protect against a decline in pulmonary function include the possibility of a decline in respiratory muscle function with inadequate levels of vitamin D, lung tissue remodeling, or a reduction in airway inflammation.
- **Age-related macular degeneration.** In a yet-to-be published study involving 7,752 people who participated in NHANES III, the risk of developing age-related macular degeneration decline steadily from the lowest to the highest quintiles of serum 25 (OH)D concentration.
- **Dementia/cognitive decline.** In a small case-control study, deficient and extremely low levels of vitamin D were found in significantly more ambulatory women with Alzheimer’s disease than in control women of the same age without Alzheimer’s or fractures. A poster that was presented at the conference showed that higher scores on the Mini-Mental State Examination in 32 patients in a memory clinic were significantly and positively correlated with higher vitamin D concentrations. In the observational study, 25 (OH)D levels below 30 ng/mL-the generally recommended cutoff for vitamin D sufficiency-were detected in 25 patients.

NutritionUpdate

There are still misconceptions about grapefruit juice interactions. We’ve known for years that grapefruit inhibits CYP3A4 and P-glycoprotein in the gut and that this increases levels of some calcium channel blockers (felodipine, etc), statins (lovastatin, simvastatin), anti-arrhythmics (amiodarone), and others. But misunderstandings still cloud the best way to handle this. Separating grapefruit from the interacting drug by a couple of hours does NOT seem to help. It takes up to 3 days for CYP3A4 enzymes to recover after drinking grapefruit juice. Eating a grapefruit instead of drinking the juice will NOT avoid the interaction. Despite rumors to the contrary, the interacting substances are also in the fruit itself. Predicting how much grapefruit is too much is tough. Just 8 oz of juice or one grapefruit may affect drug levels. But whether this increase will matter depends on the patient, the drug and the disease. Adjusting the drug dose to minimize the interaction is not smart. It’s too hard to guess the extent of the interaction. Instead, patients should be advised to avoid grapefruit, or try an alternative drug that doesn’t interact.



Stopping Statins Linked to Heart Attack

Look at statin compliance in nearly 60,000 Dutch patients with new statin prescriptions found that over half the patients stopped taking statins within the first 2 years. Compared to quitters, patients who continued statins were 30% less likely to be hospitalized for a heart attack. The statin dose was related to heart attack risk, too. About 25% of persistent users were on “suboptimal” doses. Statin therapy did not reduce the risk of heart attack as much in this group compared with patients taking higher doses.

Patients should follow recommendations for regular cholesterol tests, know their cholesterol goals, and make sure their statin dose is optimal. They should recognize that the major protective effect occurs after 2 years of treatment and the full benefit occurs after 5 years.

