Calcium and Vitamin D Improve Cholesterol in Postmenopausal Women

*Study ties effect to raising vitamin D levels*

CLEVELAND, Ohio (March 5, 2014)—Calcium and vitamin D supplements after menopause can improve women’s cholesterol profiles. And much of that effect is tied to raising vitamin D levels, finds a new study from the Women’s Health Initiative (WHI) just published online in *Menopause*, the journal of The North American Menopause Society (NAMS).

Whether calcium or vitamin D can indeed improve cholesterol levels has been debated. And studies of women taking the combination could not separate the effects of calcium from those of vitamin D on cholesterol. But this study, led by NAMS Board of Trustees member Peter F. Schnatz, DO, NCMP, is helping to settle those questions because it looked both at how a calcium and vitamin D supplement changed cholesterol levels and how it affected blood levels of vitamin D in postmenopausal women.

Daily, the women in the WHI CaD trial took either a supplement containing 1,000 mg of calcium and 400 IU of vitamin D₃ or a placebo. This analysis looked at the relationship between taking supplements and levels of vitamin D and cholesterol in some 600 of the women who had both their cholesterol levels and their vitamin D levels measured.

The women who took the supplement were more than twice as likely to have vitamin D levels of at least 30 ng/mL (normal according to the Institute of Medicine) as were the women who took the placebo. Supplement users also had low-density lipoprotein (LDL—the “bad” cholesterol) levels that were between 4 and 5 points lower. The investigators discovered, in addition, that among supplement users, those with higher blood levels of vitamin D had higher levels of high-density lipoprotein (HDL—the “good” cholesterol) and lower levels of triglycerides (although for triglycerides to be lower, blood levels of vitamin D had to reach a threshold of about 15 ng/mL).

Taking the calcium and vitamin D supplements was especially helpful in raising vitamin D levels in women who were older, women who had a low intake, and women who had levels first measured in the winter—what you might expect. But lifestyle also made a difference. The supplements also did more to raise vitamin D levels in women who did not smoke and who drank less alcohol.

Whether these positive effects of supplemental calcium and vitamin D on cholesterol will translate into benefits such as lower rates of cardiovascular disease for women after menopause remains to be seen, but
these results, said the authors, are a good reminder that women at higher risk for vitamin D deficiency should consider taking calcium and vitamin D.

“The results of this study should inspire even more women to be conscientious about their calcium and vitamin D intake—a simple and safe way to improve health. One action can lead to multiple benefits!” says NAMS Executive Director Margery Gass, MD.

The study, “Calcium/vitamin D supplementation, serum 25-hydroxyvitamin D concentrations, and cholesterol profiles in the Women’s Health Initiative calcium/vitamin D randomized trial,” will be published in the August 2014 print edition of Menopause.

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Founded in 1989, The North American Menopause Society (NAMS) is North America’s leading nonprofit organization dedicated to promoting the health and quality of life of all women during midlife and beyond through an understanding of menopause and healthy aging. Its multidisciplinary membership of 2,000 leaders in the field—including clinical and basic science experts from medicine, nursing, sociology, psychology, nutrition, anthropology, epidemiology, pharmacy, and education—makes NAMS uniquely qualified to serve as the definitive resource for health professionals and the public for accurate, unbiased information about menopause and healthy aging. To learn more about NAMS, visit www.menopause.org.