

Effectiveness of vitamin D, fish oil to be studied

July 2 2009, By Suzanne Bohan

Two dietary supplements -- vitamin D and fish oil -- will soon undergo a five-year test of their effectiveness in lowering the rates of several major diseases. Since nearly all African-Americans are deficient in vitamin D, the federal study will also assess whether supplements narrow the gap between disease rates in blacks and other racial groups.

African-Americans die at significantly higher rates from common diseases than white Americans with the same condition. The death rate for heart disease in African-Americans is one-third higher than for white Americans, for example, while blacks' death rate for stroke is 50 percent greater and diabetes deaths twice as high.

"These low-cost supplements have the potential of tremendously reducing the burden of chronic disease," said Dr. JoAnn Manson, chief of preventive medicine at Brigham and Women's Hospital in Boston, who is one of the leaders of the trial. The \$20 million study is funded by the National Institutes of Health.

"We're excited about the potential of vitamin D to reduce this health gap," Manson added. "But it is important to get answers from clinical trials before recommending megadoses of this supplement."

Three out of four American adolescents and adults are deficient in vitamin D, and the statistics worsen for those with darker skin that blocks the UVB rays that create vitamin D. According to a study in the March 23 issue of [Archives of Internal Medicine](#), 90 percent of Mexican-

Americans and 97 percent of African-Americans are deficient in vitamin D.

Moreover, because many people stay inside much of the day and wear sunscreen when they do go out, vitamin D deficiency is increasing. From 1994 to 2004, the number of Americans with optimal blood levels of vitamin D, defined by experts as 30 nanograms per milliliter, decreased from 45 percent to 23 percent. Although sunscreen use has reduced skin cancer incidence, sunscreens with a sun protection factor of 15 reduce vitamin D synthesis by 99 percent.

Researchers this fall will start recruiting 20,000 adults from every U.S. state, and participants don't need to travel. The study, which begins in January 2010, will be the largest yet directly assessing the health effects of these supplements. Researchers will be enrolling women 65 or older and men 60 or older who have never had a heart attack, stroke or a major cancer. One-quarter of the participants will be black, one of the first federal health studies to specifically target a racial group.

Blood levels of vitamin D will be measured, and then participants will be randomly assigned to take vitamin D, [fish oil](#), both nutrients or dummy pills. At the end of the trial, blood levels will again be measured, along with the incidence of diseases during the study period. Researchers will also study whether the supplements aid in preventing memory loss, depression, diabetes, osteoporosis and other conditions.

The fish oil dose will be about one gram, or as much as 10 times the average American's intake. In a departure from current federal recommendations, the participants will also take 2,000 international units of vitamin D. The federal government advises 200 to 600 international units per day, depending on age and other factors. Those guidelines, however, are criticized by many health experts as too low, as they were generated years ago when more people were getting adequate vitamin D

from sunshine, and they were developed primarily to improve bone health.

But to many researchers' astonishment in recent years, they've discovered that most cells and tissue have receptors for vitamin D, where the nutrient plays a key role in gene expression, among other vital functions. Vitamin D deficiency is now thought to trigger or worsen numerous disorders, from cardiovascular disease and diabetes to multiple sclerosis and cancers of the breast, prostate and colon.

"The most important thing is they're going to have a large number of participants," Dr. David Feldman, a professor of medicine with Stanford University, said of the new study. Feldman has studied the nutrient for more than two decades, and is currently running a clinical trial on breast cancer and [vitamin D](#).

"But one has to be careful not to claim too much benefit, and be disappointed when it doesn't live up to all its hype," he said.

"It is important to be cautiously optimistic," Manson said, citing disappointments with other supplement studies, such as those with vitamin E, vitamin C and beta-carotene.

"Let's not jump on the bandwagon to take mega-doses of these supplements before clinical trials help to clarify their role."

ON THE WEB

For more information on the study, visit www.vitalstudy.org .

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