



News and information for participants in the VITamin D and Omega-3 Trial (VITAL)

Recent findings from VITAL

Although VITAL was designed to test whether vitamin D and omega-3 fatty acid supplements reduce the risk of total cancer and cardiovascular disease, VITAL researchers are examining the effect of these supplements on a variety of other outcomes. Recently published results are summarized here.

Advanced cancer. As reported in previous newsletters, the results of VITAL and other vitamin D trials, considered in aggregate, indicate that vitamin D supplementation does not lower the risk of developing cancer but does appear to reduce the risk of cancer-related death. In agreement with these findings, laboratory data suggest that vitamin D decreases tumor invasiveness and the likelihood of metastasis, and

observational studies of cancer patients show that higher vitamin D blood levels at diagnosis are associated with longer survival. Moreover, some (though not all) observational studies of initially healthy individuals find that higher vitamin D blood levels measured months or years prior to a cancer diagnosis predict a reduced risk of cancer death. Now, in a new analysis, VITAL researchers, led by Dr. Paulette Chandler, report that vitamin D supplementation reduced the risk of advanced—metastatic or fatal—cancer by a significant 17% during the pill-taking phase of the study. Upon closer examination, the protective effect of vitamin D was most pronounced among



those with a healthy body weight (body mass index [BMI] below 25; a BMI calculator is available at www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/english_bmi_calculator/bmi_calculator.html). Individuals with a healthy body weight assigned to supplemental vitamin D experienced a 38% reduction in risk of advanced cancer, whereas those with overweight (BMI 25-29.9) or obesity (BMI 30 or greater) did not derive a significant treatment benefit. “The reasons for this difference are unclear but may be due to reduced bioactivity of vitamin D in individuals with excess body weight,” noted VITAL Principal Investigator Dr. JoAnn Manson. The results were published online in *JAMA Network Open* on November 18, 2020.

Heart failure. Heart failure, which affects 6.2 million U.S. adults, is a progressive condition in which the heart does not pump enough blood to meet the body’s oxygen needs. VITAL researchers partnered with Harvard colleague Dr. Luc Djoussé to examine whether supplemental vitamin D and omega-3 fatty acids protect against being hospitalized for heart failure. The findings for omega-3 fatty acids, though not for vitamin D, suggest benefit. Although the omega-3 fatty acid intervention did not reduce the risk of a first hospitalization for heart failure, it did reduce the risk of subsequent hospitalizations for this condition by a significant 14% during the pill-taking phase of the study. This encouraging finding is supported by animal experiments and small, short-term clinical trials in patients with heart

From the VITAL Study Directors

Thank you for your dedication to VITAL. Please know that we are thinking about you and hope that you are doing well despite the continuing COVID-19 pandemic.

We are excited to announce that we have received funding from the National Institutes of Health for continued follow-up of the VITAL study population, which means that we will continue to send you annual health questionnaires for several more years. (You will **not** be asked to restart study pills.) You will receive your next follow-up health questionnaire in mid- to late January 2021. This questionnaire will be similar to those that you have completed in prior years. Even if there are no changes in your health since the previous questionnaire, your response is still very important. The information that you provide

will allow us to build upon the wealth of data already collected to examine the longer-term effects of vitamin D and omega-3 fatty acid supplements and to explore other health-related topics. If you have questions about—or wish to be excluded from—this continuation of the VITAL study, please contact us at the address or phone number in the box on page 2.

Thank you again for being part of the VITAL community!

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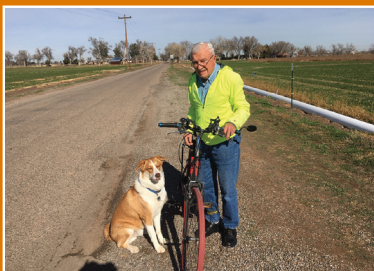
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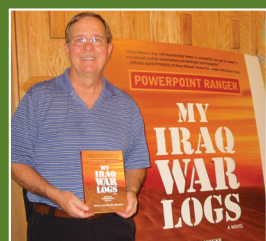
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VITAL on the Go

Conrad W., of Oregon, writes, “I continue to do well at 86 years old. I live in the Deschutes National Forest ... in a small forest community of about 200 people. Kayaking still works for me and my wife.”



John S., of New Mexico, writes, “Every day my dog, Buddy, and I go for a bike ride in the country. He runs two miles while I pedal. On cool days he runs 14 or 15 miles per hour, which means hard pedaling.”



Captain **Kelly G.**, U.S. Army (Retired), of Arizona, is the author of *PowerPoint Ranger: My Iraq War Logs*, a novel based on his Army experience. Visit powerpoint-ranger.com for more details.

Roland Y., of Pennsylvania, writes, “Before I retired, I was a professor of educational psychology and academic administrator. I have a deep respect for competently conducted research studies that ask good questions. Since I asked people to participate in my studies, I feel obliged to volunteer for studies when asked. VITAL was asking important questions.” He adds, “The ... photo is from Temple 3 of 88 temples on my pilgrimage in Shikoku, Japan in March and April 2019. The entire walk was about 800 miles in 48 days.”



**VITamin D and
Omega-3 Trial
(VITAL Study)**

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We'd like to hear from you!

Please share your thoughts about participating in VITAL and contributing to scientific knowledge about the role of vitamin D and omega-3 fatty acid supplementation in human health. We also welcome your photos and stories. We will feature a sampling of responses in future newsletters. Please write to us at vitalstudy@partners.org or the postal address in the box to the left.

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failure that suggest that omega-3 fatty acids favorably affect heart function and structure. VITAL is the first large omega-3 fatty acid trial in a general or ‘usual-risk’ population. “Additional research in such populations is needed to confirm VITAL’s promising findings for omega-3s and heart failure,” said Dr. Djoussé. *Reference:* Djoussé L, et al. *Circulation* 2020 Mar 3; 141:784-786.

Other outcomes. In VITAL, neither vitamin D nor omega-3 fatty acids reduced chronic knee pain, nor did these supplements improve kidney function in participants with diabetes. Additionally, no benefits or risks were found for vitamin D in relation to depression, falls, or colorectal polyps. *References:* Please see the VITAL publications list at www.vitalstudy.org.

VITAL COVID-19 surveys

During the spring and summer of this year, we sent a series of online surveys about COVID-19 to VITAL participants who had previously provided their e-mail addresses to us. These surveys asked participants whether they had been tested for coronavirus infection, had been diagnosed with COVID-19, and/or had experienced symptoms that may or may not have been related to COVID-19. These surveys also asked about the impact of the pandemic on participants’ physical and emotional well-being. Thank you to all who participated! Please note that similar questions will be included on the next annual questionnaire, to be sent to all VITAL participants in January 2021. Even if there are no changes in your health since the spring/summer COVID-19 surveys, your response is still critical. The information that you provide will allow for a detailed assessment of risk factors for, and the impact of, COVID-19 in a diverse national sample of midlife and older adults.