Vitamin D May Slow Aging, Increase Life Span

High levels of vitamin D may slow aging and increase life span by preventing the age-related decline in telomere length, according to a recent report.* Telomeres are repetitive DNA sequences at the ends of chromosomes that shorten with aging, cell division, and inflammation. When telomeres become too short, the cell can no longer divide, and it becomes senescent or dies. For this reason, scientists seeking to extend life span have long been interested in methods to prevent telomere shortening.

Scientists at King's College, London studied more than 2,000 women, examining their serum levels of vitamin D and assessing leukocyte telomere length. Women with the highest levels of vitamin D had the longest telomeres, even after adjusting for age differences. Women with the lowest levels of vitamin D had the highest levels of C-reactive protein, a marker for chronic inflammation. Compared with women who had the lowest vitamin D levels, those with the highest levels had telomeres whose length correlated to roughly five additional years of life.

Increasing vitamin D levels through appropriate supplementation may therefore have important benefits for slowing aging and prolonging life.

“Our findings suggest that higher vitamin D concentrations, which are easily modifiable through nutritional supplementation, are associated with longer [leukocyte telomere length], which underscores the potentially beneficial effects of [vitamin D] on aging and age-related diseases,” the investigators concluded.

—Dale Kiefer

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