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IN THE  
NEWS**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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**Reference**

\* Richards JB, Valdes AM, Gardner JP, et al. Higher serum vitamin D concentrations are associated with longer leukocyte telomere length in women. *Am J Clin Nutr.* 2007 Nov;86(5):1420-5.

**CoQ10/Statin Combination Improves Atherosclerosis Treatment**

Russian researchers investigated the effects of combining the statin drug, simvastatin (Zocor®) with supplemental coenzyme Q10 for the treatment of coronary atherosclerosis.\*

Forty-four patients with coronary atherosclerosis were prescribed daily doses of 90 mg CoQ10 plus 10 mg simvastatin for three months. More than half of the patients had already undergone coronary bypass surgery, while others had undergone coronary angioplasty to improve blood flow to the heart. Other patients' atherosclerosis was diagnosed with coronary angiography.

Beneficial high-density lipoprotein (HDL) increased by 23%, while the “index of atherogenicity” decreased by 27%. CoQ10 treatment reportedly reduced the tendency of platelets to aggregate, while reducing peroxidation of lipids by 30%. Lipid peroxidation is believed to play an important role in the development of atherosclerosis. This effect demonstrated a “potentially independent role of coenzyme Q10 in positive modification of oxidative stress,” investigators concluded.

—Dale Kiefer

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## Reference

\* Chapidze G E , Kapanadze SD, Dolidze NK, Latsabidze NE, Bakhutashvili ZV. Combination treatment with coenzyme Q10 and simvastatin in patients with coronary atherosclerosis. *Kardiologia*. 2006;46(8):11-3.

## Green Tea May Prevent Advanced Prostate Cancer



The incidence of prostate cancer is much lower in Asia than in the West, and a new Japanese study links higher consumption of green tea with a lower incidence of advanced prostate cancer.\* Nearly 50,000 men were followed for more than a decade, and information regarding their green tea-drinking habits was compared with the incidence of prostate cancer.

Although localized, or non-disseminated prostate cancer, was not statistically related to green tea consumption, tea consumption was associated with a decrease in the risk of advanced prostate cancer, in a dose-dependent fashion. Advanced prostate cancer refers to cancer that has spread beyond the confines of the gland, a step that often leads to spread of the disease to lymph nodes and other organs. Men with the highest intake of green tea—five or more cups per day—enjoyed the greatest risk reduction, compared with men who drank one cup per day or less.

—Dale Kiefer

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## Reference

\* Kurahashi N, Sasazuki S, Iwasaki M, et al. Green Tea Consumption and Prostate Cancer Risk in Japanese Men: A Prospective Study. *Am J Epidemiol*. 2007 Sep 29; [Epub ahead of print].

## High C-Reactive Protein Levels Associated with Macular Degeneration

High blood levels of C-reactive protein (CRP), a marker of inflammation, are associated with an increased risk of developing macular degeneration, a common cause of vision loss, according to researchers in the Netherlands.\*

Investigators measured CRP blood levels in approximately 5,000 participants of the Rotterdam Study. Those with higher levels of CRP were more likely to develop macular degeneration during nearly eight years of follow-up, and the authors believe that lowering CRP levels could potentially decrease the risk.

“Evidence is accumulating that inflammatory and immune-associated pathways have a role in other degenerative diseases associated with advancing age, such as atherosclerosis and Alzheimer’s disease,” the authors wrote. “Smoking and high body mass index increase C-reactive protein levels. Moderate alcohol intake, diets with a low glycemic index and statin and multivitamin use reduce C-reactive protein levels.”

—Marc Ellman, MD

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## Reference

\* Boekhoorn SS, Vingerling JR, Witteman JC, Hofman A, de Jong PT. C-reactive protein level and risk of aging macula disorder: The Rotterdam Study. *Arch Ophthalmol*. 2007 Oct;125(10):1396-401.

## Mild Hypothyroidism May Double Risk of Heart Failure



For the first time, scientists have detected a link between subclinical hypothyroidism and a two-fold increase in the risk of developing heart failure.\* The results of the new study were presented in New York recently, at the annual meeting of the American Thyroid Association. The study involved more than 3,000 individuals 65 years of age or older.

Compared with people who had normal thyroid-stimulating hormone (TSH) levels, people with mildly low levels of the hormone (detectable only with a blood test) were twice as likely to develop congestive heart failure. This condition results when the heart is incapable of

supplying adequate blood to the organs. It is characterized by fatigue, ankle swelling, and shortness of breath, and may eventually result in death.

Previous studies have shown that an overactive thyroid (hyperthyroidism), and clinically detectable (producing signs and symptoms) hypothyroidism, can both cause heart problems. This is the first study, however, to find a negative effect on heart function when the thyroid was only mildly underactive.

—Dale Kiefer

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#### Reference

\* Available at: [http://www.thyroid.org/professionals/publications/news/07\\_10\\_04\\_bauer.html](http://www.thyroid.org/professionals/publications/news/07_10_04_bauer.html). Accessed November 8, 2007.

### **Aggressive Dogs May Be Deficient in Omega-3**

Deficiencies in the essential fats eicosa-pentaenoic acid (EPA), and especially, docosahexaenoic acid (DHA), which is a crucial component of brain cell membranes, are associated with aggressive behaviors and impulse-control problems in numerous human populations.<sup>1-3</sup> Now, researchers in Italy report, pet owners would do well to consider adding these omega-3 fatty acids to the diets of aggressive dogs, as well.<sup>4</sup>

Given that aggressive behavior is one of the top problems associated with dog ownership, investigators examined omega-3 status in aggressive but otherwise healthy adult dogs. Trouble-free control dogs were also examined. Compared with docile dogs, aggressive canines had a lower concentration of DHA in their blood, and a higher ratio of omega-6:omega-3 fatty acids. The scientists concluded, "Our results suggest that low omega-3 fatty acids may adversely impact behaviour in dogs, resulting in greater propensity to aggression."<sup>4</sup>

—Dale Kiefer

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#### Reference

1. Hibbeln JR, Ferguson TA, Blasbalg TL. Omega-3 fatty acid deficiencies in neurodevelopment, aggression and autonomic dysregulation: opportunities for intervention. *Int Rev Psychiatry*. 2006 Apr;18(2):107-18.
2. Garland MR, Hallahan B. Essential fatty acids and their role in conditions characterised by impulsivity. *Int Rev Psychiatry*. 2006 Apr;18(2):99-105.
3. Hamazaki T, Sawazaki S, Itomura M, et al. The effect of docosahexaenoic acid on aggression in young adults. A placebo-controlled double-blind study. *J Clin Invest*. 1996 Feb 15;97(4):1129-33.
4. Re S, Zanoletti M, Emanuele E. Aggressive dogs are characterized by low omega-3 polyunsaturated fatty acid status. *Vet Res Commun*. 2007 Sep 19; [Epub ahead of print].

### **Quercetin Lowers Blood Pressure in Clinical Trial**

Quercetin helps reduce blood pressure in hypertensive adults, according to a clinical trial published in the *Journal of Nutrition*.\*

Investigators enrolled 19 men and women with pre-hypertension and 22 with stage I (or mild) hypertension in a randomized, double-blind, placebo-controlled, crossover trial. Supplementation with 730 mg of quercetin for 28 days produced statistically significant reductions in blood pressure in those with stage I hypertension. Systolic pressure dropped by an average of 7 mm Hg, while diastolic pressure fell by an average of 5 mm Hg.

"Our study is, to our knowledge, the first to show that quercetin reduces blood pressure in stage I hypertensive individuals," the scientists wrote. "Our data indicate that potential exists for this polyphenolic compound to be used as adjunct therapy in

diet/lifestyle interventions to help control blood pressure in hypertensive individuals.”

—Dayna Dye

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#### Reference

\* Edwards RL, Lyon T, Litwin SE, Rabovsky A, Symons JD, Jalili T. Quercetin reduces blood pressure in hypertensive subjects. J Nutr. 2007 Nov;137(11):2405-11.

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