
Lifestyle Changes Boost Enzyme Regulating Cell Aging

Adjustments to diet, exercise increased telomerase levels 29%, cut 'bad' cholesterol

TUESDAY, Sept. 16 (HealthDay News) -- Major lifestyle changes can help improve levels of an enzyme called telomerase that controls cell aging, say California researchers.

Telomerase repairs and lengthens telomeres, which are DNA-protein complexes at the end of chromosomes that directly affect how quickly cells age. As telomeres become shorter and their structural integrity weakens, cells age and die more quickly, according to background information in a University of California, Irvine, new release. Shortening of telomeres is emerging as a marker of disease risk and premature death in many types of cancer, including prostate, lung, breast and colorectal cancers.

In this study, Dr. Dean Ornish, a professor of medicine at the Preventive Medicine Research Institute in Sausalito, Calif., and his colleagues at the University of California, San Francisco, asked 30 men diagnosed with low-risk prostate cancer to make significant lifestyle changes.

The changes included eating a diet with only 10 percent of calories from fat, low in refined sugars, and rich in whole foods, fruit and vegetables. They supplemented their diet with vitamins and fish oil and did moderate aerobic exercise, stress management, relaxation techniques, and breathing exercises.

The men's telomerase levels were measured at the start of the study and again at three months. At that time, the researchers found a 29 percent increase in telomerase levels and a decrease in "bad" (LDL) cholesterol.

The findings were published online and will appear in the November print issue of *The Lancet Oncology*.

"To our knowledge, we have reported here the first longitudinal study showing that comprehensive lifestyle changes -- or any intervention -- are significantly associated with increases in cellular telomerase activity levels and telomere maintenance capacity in immune system cells," the study authors wrote.

"The implications of this study are not limited to men with prostate cancer. Comprehensive lifestyle changes may cause improvements in telomerase and telomeres that may be beneficial to the general population as well," Ornish said in the news release.

More information

The American Academy of Family Physicians has more about how common behaviors affect your health.

-- Robert Preidt

SOURCE: *The Lancet Oncology*, news release, Sept. 15, 2008



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