



FOR IMMEDIATE RELEASE

TELOYEARS: 2016 TELOMERE SCIENCE YEAR IN REVIEW

MENLO PARK, CA – December 28, 2016. The maker of **TELOYEARS**—the simple genetic test that lets you discover your cellular age based on your telomere length—knows it’s that time of the year when we look back over the past 12 months and make New Year’s resolutions about self-improvement and healthy living. Its review of noteworthy scientific studies published in 2016 finds the role of **TELOMERES**, the dynamic, protective caps at the ends our DNA strands that tend to shorten and fray with age, at the top of the list.

To those who are deciding whether to measure their own telomere length as a worthwhile way to help set a baseline for improving their lifestyle in the New Year, TeloYears offers the following round-up of the latest clinical studies published by highly renowned and trusted organizations who already know that it is. These publications from credible institutions not only add to the scientific basis for measuring telomere length, but also provide interesting evidence on the interplay between telomere length and one’s genetics, lifestyle, environment, stress and wellness.

1. **US Department of Veterans Affairs:** “Hostility and telomere shortening among U.S. military veterans: Results from the National Health and Resilience in Veterans Study.” *Psychoneuroendocrinology* (2016). Data from 468 U.S. military veterans who participated in the study showed that hostility, particularly difficulties controlling anger, is associated with telomere shortening. <https://www.ncbi.nlm.nih.gov/m/pubmed/27689898/#fft>
2. **Harvard University, National Cancer Institute:** “Coffee Consumption Is Positively Associated with Longer Leukocyte Telomere Length in the Nurses’ Health Study.” *The Journal of Nutrition* (2016). Coffee is an important source of antioxidants, and consumption of this beverage is associated with many health benefits and a lower mortality risk. Among 4,780 female nurses, higher total coffee consumption (more than 2 cups per day) was significantly associated with longer telomeres ($p = 0.02$). <http://jn.nutrition.org/content/146/7/1373>
3. **University of California, San Francisco:** “Change in Leukocyte Telomere Length Predicts Mortality in Patients with Stable Coronary Heart Disease from the Heart and Soul Study.” *PLoSone* (2016). Mortality occurred in 39% (79/203) of patients who experienced telomere shortening, 22% (45/203) of patients whose telomere length was maintained, and 12% (25/202) of patients who experienced telomere lengthening ($p < 0.001$). In patients with coronary heart disease, an increase in leukocyte telomere length over 5

years is associated with decreased mortality. Total study subjects = 1,024.
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0160748>

4. **Emory University** et al: “Telomere Shortening, Regenerative Capacity, and Cardiovascular Outcomes.” *Circulation Research* (2016). Short Leukocyte Telomere Length (LTL) and low Bone Marrow-derived Circulating Progenitor Cells (CD34+ PC) predicted adverse cardiovascular outcomes (death, myocardial infarction, coronary revascularization or cerebrovascular events) independently of each other. Patients who had both short LTL (<Q1) and low CD34+ cell count (<Q1) had the greatest risk of adverse outcomes (HR=3.5, 95% CI, 1.7-7.1). Total study subjects = 566.
<https://www.ncbi.nlm.nih.gov/pubmed/27956416>
5. **University of Paris, FR** et al: “Telomere Shortening in Middle-Aged Men with Sleep-disordered Breathing.” *Annals of the American Thoracic Society* (2016) 161. The mean telomere length ratio was 0.70 ± 0.37 in the participants without sleep apnea, compared with 0.61 ± 0.22 and 0.53 ± 0.16 in those with mild to moderate and severe sleep apnea, respectively (P = 0.01). Intermittent hypoxemia due to obstructive sleep apnea syndrome is a major contributor to telomere shortening in middle-aged men. Oxidative stress may explain this finding. Total study subjects = 161
<https://www.ncbi.nlm.nih.gov/pubmed/27163410>
6. **University of Arizona and Vanderbilt University:** “Dimensions of religious involvement and leukocyte telomere length.” *Social Science & Medicine* (2016). Study used cross-sectional data from a large probability sample of 1252 black and white adults, aged 22 to 69 in Tennessee. Religiosity (religious attendance, prayer frequency, and religious identity) was positively associated with leukocyte telomere length.
<http://www.sciencedirect.com/science/article/pii/S0277953616302064>

“Some of America’s most trusted institutions already know that telomere length is a worthwhile metric. It is a recognized biomarker of aging well. But if you don’t measure it, you can’t control it. TeloYears exists to bring powerful and personalized self-knowledge that can serve as inspiration for lifestyle improvement and the motivation to make a positive change,” said Douglas Harrington, MD, Medical & Laboratory Director at Telomere Diagnostics.

About TeloYears

TeloYears is a simple genetic test that reveals the cellular age encoded in a person’s DNA to help them know how well they are aging. One’s age in TeloYears can be a simple yet comprehensive indicator of overall cellular wellness as it is based on measuring the length of one’s telomeres, the dynamic, protective caps on DNA that tend to shorten and fray with age. Years of scientific data support the link between telomeres and the aging process, and many credible institutions have published clinical studies on the role of telomere length in numerous age-related diseases. Since telomere length changes over time unlike most other parts of DNA, TeloYears can be

actionable through retesting after modifications in lifestyle, environment and stress.

About Telomere Diagnostics

TeloYears is provided by Telomere Diagnostics, Inc., a privately held molecular testing company founded in 2010 by four scientists, including the winner of the Nobel Prize in Medicine in 2009 for pioneering work in telomere biology. Its lab in Silicon Valley, California, is regulated under the Clinical Laboratory Improvement Amendments of 1988 (CLIA) as qualified to perform high-complexity clinical testing. The company measures parts of chromosomes called telomeres, the protective caps on the ends of DNA strands that shorten with age, using its proprietary quantitative polymerase chain reaction (qPCR) assay, the world's leading method of measuring Average Telomere Length (ATL). Beyond TeloYears, the company is actively developing other potential uses of ATL to address unmet clinical needs in cardiovascular disease, oncology and reproductive health.

To learn more about the TeloYears genetic test, please visit <https://www.teloyears.com>

The TeloYears test is not intended for screening, diagnosing, treating or preventing diseases or medical conditions. The test is available for individuals between the ages of 20 to 80 within the United States, except for the state of New York.

The information provided by the TeloYears test should not be used to replace medically appropriate screening tests recommended based upon actual age or other risk factors, nor should the information be used to make decisions about diagnosis or treatment of diseases or medical conditions. The Telomere Diagnostics lab is regulated under the Clinical Laboratory Improvement Amendments of 1988 (CLIA) as qualified to perform high complexity clinical testing. The performance characteristics of this test were determined by Telomere Diagnostics. It has not been cleared or approved by the U.S. Food and Drug Administration.

Test reports are kept absolutely private according to our Privacy Policy and are available only in a fashion that maintains compliance with the HIPAA security rule, which regulates privacy and security of health information.

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