# Telomere DNA Protection



Science fiction has now become scientific reality. Advancements in genetics and molecular biology have uncovered how cells reproduce as well as how they can live and function beyond their typical lifespan. The secret is telomeres, the special DNA that caps the end of every chromosome in the cell nucleus, working to protect them during cell division and replication.\*

E merging science suggests shortened telomeres may be associated with negative aspects of aging, such as cessation of cell growth and diminished cellular function. This new science also suggests that maintaining long telomeres may encourage healthier aging. At Source Naturals<sup>®</sup>, we have researched the top ingredients that preliminary research suggests protect telomeres and lengthen cell life, making them available for your benefit today in our advanced Telomeron<sup>™</sup> formula. Telomeron features the best researched ingredients, including purslane, vitamin D, resveratrol, and astragulus, and provides them in the potencies used in the research. Our nutrients support both telomere length and telomerase, an enzyme in the body that helps maintain telomere length. Lastly, we include antioxidants that initial research suggests may support telomere length, while also providing important cellular health and helping maintain healthy levels of inflammation.<sup>1</sup> You may not be able to stop the march of time, but you can slow time's effect on your body and mind with Telomeron.\*

<sup>†</sup>Chosen by the New Hope 360 editors as the Most Innovative New Supplement



<sup>1</sup>Not all inflammation is associated with disease states. Inflammation is also the body's healthy immune response to life's normal stressors such as strenuous exercise, a high-fat/high-glycemic meal, or a stressful event in your life. Maintaining inflammation balance is important for optimal health.

#### Strategies for Wellness™



#### **How Telomeres Work**

Our bodies have the amazing ability to replace hundreds of thousands of worn-out or defunct cells everyday through the process of cell division and replication. The pieces of DNA at the end of each chromosome, called telomeres, protect the cells during this process. Each time a cell replicates, the telomere shortens. Eventually the telomeres become too short, the cells become senescent, (inactive) and soon die.\*

#### **Telomeres and Healthy Aging**

As we age, cellular functioning diminishes and our body's repair processes slow down. Because shorter telomeres are associated with the inactive (senescent) cells that accompany aging, scientists have long theorized that maintaining long telomeres may delay some aspects of aging.\*

Emerging science now suggests that this may be the case. Preliminary

studies indicate that longer telomeres may have a positive effect on how we age. Long telomeres require the activity of an enzyme called telomerase. One well-designed study showed that putting telomerase into cells in culture actually caused the cells to live longer. Another important study demonstrated that compounds isolated from astragulus root slowed the shortening of telomeres in cultured cells. Further studies have identified a number of individual ingredients that support healthy telomere length and the important telomere enzyme, telomerase.\*

#### Research-Backed Ingredients for Healthy Telomeres

Other products on the market contain only small amounts of ingredients or ingredients that are not backed by research. At Source Naturals, we analyze peer-reviewed studies on effectiveness in depth to identify the best ingredients that preliminary research suggests protect the telomeres and lengthen cell life. Our Telomeron formula provides key ingredients in doses used in scientific research. We've further enhanced our formula with antioxidants that the latest research suggests may support long telomeres, while also providing health cellular and healthy inflammation response<sup>1</sup> benefits.\*

Purslane, vitamin D-3, and resveratrol are among the top ingredients researched for telomere health and activity. Telomeron provides them in the researched doses of 100mg, 2000 IU, and 100mg respectively. Early stage research suggests that extracts of the succulent plant purslane may support healthy telomere length and telomerase activity. Vitamin D-3 was shown to support healthy telomerase activity in white blood cells in one human study. Additional preliminary research suggests that resveratrol supports both healthy telomere length and telomerase activity. A well-researched antioxidant that supports maintenance of healthy inflammation levels<sup>1</sup>, resveratrol also offers cellular aging benefits. (Scientists believe resveratrol simulates the healthy aging benefits of caloric restriction by activating the SIRT family of genes.)\*

#### Additional Antioxidant Protection and Support for Maintaining Healthy Inflammation Levels<sup>1</sup> Antioxidants have long been considered vitally important to healthy aging. Antioxidants protect cells and their DNA from the free radical damage that may diminish cellular function and negatively impact how we age.\*

Some scientists now believe that selective antioxidants may also play



a role in maintaining healthy telomeres. Our advanced Telomeron formula includes eight antioxidants that research suggests may also support telomeres, while providing important cellular health benefits.\*

The antioxidant NAC supports the production of glutathione, an important compound used by the liver to carry out its normal detoxification processes. Preliminary research suggests NAC may also help support healthy telomerase enzyme activity. A palm-derived mixture of alpha, beta, gamma and delta tocotrienols and alphatocopherol members of the vitamin E antioxidant family may also be telomere supportive based on preliminary cell culture research. Our formula also includes grape seed extract, tested to contain strong antioxidants called anthocyanins, and L-carnosine, which mav function as a cellular antioxidant.\*

Scientists have also identified that maintaining healthy levels of inflammation is one of the keys to lifelong health. Not all inflammation is associated with disease states. Inflammation is also the body's healthy immune response to life's normal stressors such as strenuous exercise, a high-fat/high-glycemic meal, or a stressful event in your life. Maintaining inflammation balance is important for optimal health. Source Naturals Telomeron formula provides research-backed support for maintaining healthy levels of inflammation with resveratrol, green tea extract, and turmeric.\*

## What You Can Do to Age Healthfully

Biologists and nutritional scientists are researching the deep and subtle mechanism of human life and cellular biology and how nutrition can impact it. Our mission at Source Naturals is to research the emerging science and develop nutritional products that can provide you with the benefits of that science now. The research into telomeres is promising and exciting. Science appears to be getting closer to unlocking the secret to sustaining youthful metabolism. The future of healthy aging has arrived. The intelligent approach is to take advantage of these advances for a fulfilled and healthy life.\*

### **Further Reading:**

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\*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.