Vitamin D
Positively associated with telomere length due to its anti-inflammatory role.23

Manganese
Required cofactor in Mn superoxide dismutase, a deficiency in which decreases telomerase activity.24

Vitamin E Enhances DNA repair as well as removal of damaged DNA; Shown in vitro to restore telomere length on human cells.21,22

Vitamin C
Protects DNA from oxidation. In vitro studies show it slows down age-related telomere shortening in human skin cells.19,20

Glutathione
Interference of glutathione dependent antioxidant defenses accelerates telomere erosion.17,18

Calcium
Required cofactor to prevent DNA replication errors.25

Folate
Influences telomere length via DNA methylation.1,2,3

B3 Extends lifespan of human cells in vitro; Slows telomere attrition rate by reducing reactive oxygen species in mitochondria.4,5

B2, B6 and B12
Crucial for proper DNA methylation.6,7

Cysteine
Stem cell treatment with N-acetyl cysteine corrects DNA damage in telomeres.8

Zinc
Important cofactor for DNA repair enzymes; key role in regulating inflammation.9

Copper
Key cofactor in the potent antioxidant superoxide dismutase that is known to protect telomeres.11

Magnesium
Induced deficiency shortened telomeres in rat livers; Regulates chromosome separation in cell replication.12

Selenium
In vitro supplementation extended telomere length in liver cells; selenoproteins protect DNA.13,14,15,16

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25 For additional references, go to http://www.spectracell.com/online-library-telomere-abstracts/