<a href="mailto:separaticles">< back to articles</a> KL 7/12/23

## Telomeres And Life Extension

Chromosome/DNA material

Disclaimer: This is not medical advice. Please consult your professional health care physician before implementing any of the following at your choice and decision.

Putting it in simple terms a DNA *Telomere* is something like a cap on the end of a shoelace, however its on the ends of all our chromosome material which in turn tells our cells how to divide in order to keep them alive and "anew". Telomeres protect the DNA material from damage but a telomere shortens by fraying each time a cell divides. When there is no more telomere to protect the DNA the cell can't function and dies.

Up until recently it has been thought that telomere shortening can't be prevented. New research has changed that opinion. Studies have shown that telomeres, even in 90 year old folks, *can* be repaired and actually lengthened by nutrient chemicals in certain foods plus regular exercise and stress reduction. This in turn can lead to a further life span for all body cells because the number of cell divisions are increased, which means that it is a major benefit to anti-aging and longevity for the person who has focused on rebuilding his/her telomeres. (source, source)

There are many long scientific articles that the reader can web search to obtain a detailed understanding of how this all works on a cellular level, but to cut right to the chase, here are some recognized elementary tips that we can implement immediately to lengthen our cell telomeres:

Specific foods that lengthen telomeres:

Spinach, broccoli, asparagus, Brussels sprouts; pinto, black, navy and kidney beans; flaxseed, Brazil nuts, organic grains; salmon, poultry; strawberries, cantaloupe, citrus fruits, potatoes, tomatoes, olive oil. (Harmful – refined and processed foods) (source)

## Exercise:

Regular program of aerobics (fast walking 1 mile 3x weekly or equivalent cardio exercise); stretching. Slow deep breathing relaxed in a chair 20 minutes daily; meditative stress relief.

Supplements that protect/repair telomeres:

Astragalus root, turmeric, cats claw, ashwagandha, vitamins D, C, E, selenium (source)

-- but a note about the herbs: They release telomerase an enzyme that lengthens telomers, but cancer cells use this enzyme as well to live. This is a situation where a little goes a long beneficial way but too much could be counterproductive. (Read <u>source</u>) An anti-cancer proper healthy diet (a separate topic) would be wise in addition if using a telomere lengthening program using the above herbs.

This is a start in seriously attacking the aging problem. The reader may wish to expand the above with a dedicated research effort into this amazing topic.

Good health, long telomeres, and long life!

**Brother Ken**