SpectraCell Laboratories
Science + Health + Solutions

TELOMERES 101

Why should I care about telomeres, if I feel just fine?

Telomeres are a general indicator of cellular wear and tear. They shorten over time. When a cell's telomere decreases to a certain length, the cell becomes senescent, no longer able to grow or divide. Shortened telomeres are associated with many of the diseases of aging and inflammation, such as heart attacks and strokes. The cumulative effect of your lifestyle choices combined with factors beyond your control (gender, age, family history) are reflected in telomeres.

What is a SpectraCell Telomere Score?

At SpectraCell, we give you a telomere score which correlates to telomere length. With it, you can easily compare your cellular aging to (1) a population of similarly aged (chronologically speaking) people and more importantly, (2) your own score over time.

How do I improve my Telomere Score?

Obvious lifestyle choices that are healthy – such as not smoking, drinking alcohol in moderation, eating whole unprocessed nutrient dense foods, maintaining a healthy weight, keeping inflammation at bay – will undoubtedly help maintain telomere health. But if you want to take your cellular health to the next level, dig deeper...one way to do this is to determine the micronutrient deficiencies connected to YOUR OWN PERSONAL CHEMISTRY.

How do micronutrients affect telomeres?

Profoundly. Micronutrients protect telomeres from damage. Conversely, deficiencies in key nutrients will leave telomeres exposed and quicken their rate of attrition. Since micronutrients work in a delicate balance, arbitrarily taking supplements is not the answer, because too much of one nutrient can induce a deficiency of another. The key is targeted supplementation, which is only effective when you know exactly which nutrients you are deficient in.

What makes telomeres longer?

An enzyme called telomerase, when activated, will actually add DNA to the ends of chromosomes, essentially regenerating telomeres and serving as a cellular "fountain of youth". However, as with most biological systems, balance is key. When cells are "old" and dysfunctional, a healthy system will not allow the old cells to continue multiplying. This is the body's way of making sure rogue or mutated cells do not flourish unchecked (think tumors or cancers), in a sort of biological system of checks and balances. So, as with most systems of the body, telomerase can be healthy or unhealthy, depending on the cell on which it is acting. Protecting your cells = protecting your telomeres.

Can I actually lengthen the telomeres I have?

The incredibly vast amount of research unequivocally suggests that a person can slow the rate of telomere attrition, but people often ask if they can actually lengthen their telomeres (versus simply slowing the rate at which they get shorter). Fortunately, some research suggests the answer is yes.

How often should I measure my telomeres?

Once per year is recommended. Comparing your telomere score annually will allow you to get a clear sense of how the balance of your cells' wear and tear (vs. repair) is going. If your telomere score decreases year over year faster than an average rate, you can make necessary adjustments to your health, or implement more advanced technology to assess cellular health. If your telomere score shows modest improvement year over year, you can rest assured that you're doing something right.

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