



Newsletter

Our focus this month is on supporting our telomeres. Telomeres are another "Hallmark of Aging". They are protective end caps on the ends of chromosomes and keep the chromosomes (which contain DNA and genetic material) from becoming frayed or tangled. Telomeres shorten with each cell division and help determine how fast your cells age and when they die. The shorter your telomeres, the higher your risk of having chronic diseases such as diabetes, cardiovascular disease, lung disease, and impaired immune function. You also have a higher risk of dying from cancer, cardiovascular disease, and all cause mortality.

Why do people age at different rates? A lot has to do with their telomere length, but the great news is, there is a lot we can do to help slow or even reverse our telomere shortening. By cultivating your telomeres you can optimize your chances of living a life not only longer but better!

So how do we do that?

Aging can be reverted by activating an enzyme called "telomerase". This enzyme (discovered by Elizabeth Blackburn for which she won the Nobel prize) actually replenishes or lengthens telomeres! Science has proven that each of the 4 Pillars of Health we support here at OPT2LIV (Breathe-Eat-Move-Sleep) are major lifestyle factors that will impact your telomeres as you age. Let's take a look at each of these and what the studies show regarding optimally supporting your telomere length and longevity.

Breathe~

As noted by Elizabeth Blackburn and Elissa Epel in their book *The Telomere Effect*, people who respond to stress by feeling overly threatened and overwhelmed have shorter telomeres than people who face stress with a rousing sense of challenge and optimism. This impact even begins in utero or in childhood. Telomeres on the parents' chromosomes in the egg and sperm are directly transmitted to the developing baby. Children exposed to several adverse life events have shorter telomeres.

Science links particular kinds of stress to shorter telomeres: caregiver, job burnout, traumas like abuse, rape, domestic violence, prolonged bullying. All of these create a stress response that shortens telomeres... and dose matters! Some studies show stress ages bodies up to 10 years faster.

Mind body techniques such as meditation, mindfulness, and yoga have been shown to increase telomerase and thus increase telomere length. Consistent breathing practices can help you manage stress and actually counteract these effects and lengthen your telomeres- so schedule a coaching session with Eric, take a yoga class or check out our breathing resources on the member page www.opt2liv.com/members .

Announcements

Dr. Amy's "OM" Seminar
Will Go Out
Pre-Recorded
Last Week In April

Dr. Amy's "OM" Newsletter

APRIL



Eat~

Metabolic health (or body composition) is very important to telomeres. Metabolic health is actually more important than weight or BMI. And belly fat especially shortens telomeres. Interestingly, depression shortens telomeres 3x more than being overweight. So addressing stress still is one of the most important things you can do for longevity.

Other nutrition advice to lengthen telomeres:

- A diet full of Whole Foods vs ultra processed foods
- Omega 3s such as in fish, seeds, nuts and seaweed/algae
- Higher dietary antioxidants (especially C and E)
- Vitamin D
- Green tea - 3 cups daily has been shown to add 5 yrs of life
- Coffee has also been shown to lengthen telomeres in studies

There are a few supplements that have proven benefit such as Vit D3, Omega 3s, C, E and Bs (they lower homocysteine which can also shorten telomeres). However, beware of telomerase activating supplements that can potentially cause uncontrolled cell growth and cancer. Getting these nutrients through food is always best. There are concerns that abnormally ultra long telomeres or abnormal growth caused by artificial means or a toxic environment can wreak havoc and increase risk of disease and cancer.

Move~

Exercise triggers a short-term increase in free radicals which in turn creates a healthy counter response where the body produces more antioxidants. These have a beneficial effect in the long run on our telomeres. Exercise also switches on autophagy (a process where our cells eat up damaged molecules), lowers release of cortisol, and increases insulin sensitivity. The most beneficial types of exercises for telomere length are aerobic and HIIT.

Sleep~

7-9 hours/night of quality sleep appears to be optimal. Some can get by with 6-6.5hr/night without having negative effects on telomeres, but that is a minority.

Other environmental factors can impact telomeres negatively. Chemicals can activate and lengthen telomeres too much like PCBs, benzene, arsenic, dioxins, particulate matter, where heavy metals, Ag chemicals, smoking and excess alcohol can shorten telomeres prematurely.

So focus this month on providing the right environment for your telomeres to thrive.

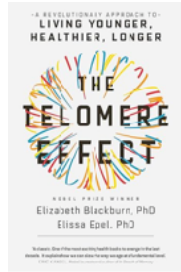
As noted in their book *The Telomere Effect* "Aging and death are immutable facts of life- but how we live until our last day is not. This is up to us."

Dr. Amy



Book of the Month

The Telomere Effect



Video of the Month

The Telomere Effect



Supplement Highlight

Barleans Omega-3

- Ultra-High Potency: 1,500mg of EPA/DHA per serving
- 3X the absorption of Omega-3s than with regular fish oil caps



Recipe of the Month

Chia Pudding

Chia seeds are high in antioxidants, fiber and have 28 grams omega 3s in every ounce. It makes a great breakfast or even a snack.

