

DR. SEARS'

TELOMERE SECRETS

Volume 1:

Activate the Enzyme That
Rebuilds Your Telomeres



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Uniquely Qualified to Keep You Healthier For Life



Al Sears, M.D. currently owns and operates a successful integrative medicine and anti-aging clinic in Royal Palm Beach, Florida, with over 25,000 patients. His cutting-edge therapies and reputation for solving some of the most difficult-to-diagnose cases attract patients from around the world.

As a graduate of the University of South Florida College of Medicine, Dr. Sears scored in the 99th percentile on his MCAT and graduated with honors in Internal Medicine, Neurology, Psychiatry, and Physical Medicine.

After entering private practice, Dr. Sears was one of the first to be board-certified in anti-aging medicine. As a pioneer in this new field of medicine, he is an avid researcher, published author, and enthusiastic lecturer. He is the first doctor licensed in the U.S. to administer TA-65, the most important breakthrough in anti-aging medicine today.

Dr. Sears is board-certified as a clinical nutrition specialist and a member of the American College of Sports Medicine (ACSM), the American College for the Advancement in Medicine (ACAM), the American Medical Association (AMA), the Southern Medical Association (SMA), the American Academy of Anti-Aging Medicine (A4M), and the Herb Research Foundation, (HRF). Dr. Sears is also an ACE-certified fitness trainer.

Dr. Sears currently writes and publishes the daily email broadcast, *Doctor's House Call*, and contributes to a host of other publications in the field. He has appeared on over 50 national radio programs, *ABC News*, *CNN*, and *ESPN*.

Since 1999, Dr. Sears has published 14 books and over 100 reports on health and wellness with a readership of millions spread over 163 countries.

In his first book, *The T-Factor, King of Hormones*, Dr. Sears perfected the use of natural and bio-identical testosterone boosters to help men restore the drive, ambition, muscle strength, vitality and sexual performance of their youth.

Dr. Sears followed up with *12 Secrets to Virility*, a full-blown strategy for male performance that includes his own patient-tested protocols for successfully dealing with men's health concerns like fighting excess estrogen, protecting the prostate, eliminating fat gain and keeping a sharp mind and memory.

In 2004, Dr. Sears was one of the first to fight against the conventional belief that cholesterol causes heart disease, proving that cholesterol is not the cause, but the part of the body that heart disease acts upon. In *The Doctor's Heart Cure*, Dr. Sears offers an easy-to-follow solution that effectively eliminates your risk of heart disease, high blood pressure and stroke.

In 2009, Dr. Sears shocked the fitness world by revealing the dangers of aerobics, "cardio" and long-distance running in his book, *PACE: The 12-Minute Fitness Revolution*. Expanding on the fitness principles in *The Doctor's Heart Cure*, he developed a fast, simple solution to restore muscle strength, guard against heart attack and burn excess fat. Today, PACE is practiced by thousands of people worldwide.

In 2010, Dr. Sears made history by bringing telomere biology to the general public. As the first U.S. doctor

licensed to administer a groundbreaking DNA therapy that activates the gene that regulates telomerase, his breakthrough book ***Reset Your Biological Clock*** shows how anyone can preserve the energy of youth by controlling the length of your telomere, the true marker of aging.

An avid lecturer, Dr. Sears regularly speaks at conferences sponsored by the American Academy of Anti-Aging Medicine (A4M), the American College for the Advancement of Medicine (ACAM), the Age Management Medicine Group (AMMG), and the Society for Anti-Aging, Aesthetic and Regenerative Medicine Malaysia (SAAARMM).

As the founder and director of Wellness Research Foundation, a non-profit research organization, Dr. Sears has made it his life's work to bring his patients the latest breakthroughs in natural therapies. As part of his ongoing research, Dr. Sears travels the world in search of herbs, novel cures and traditional remedies. Meeting with doctors and healers, Dr. Sears has brought back and revitalized much of the traditional knowledge considered endangered in today's modern world.

- During an expedition to the Peruvian Andes, Dr. Sears brought back a nutrient-dense oil made from the Sacha Inchi nut, containing the highest plant source of heart and brain boosting omega-3 fatty acids.
- In India, Dr. Sears studied at the oldest existing school of Ayurvedic medicine, the ancient Indian healing tradition, and was tutored by Ayurvedic doctors on the use of potent Indian herbs used to treat heart disease, cancer and Alzheimer's disease.
- While trekking through the Amazon rainforest in Brazil, Dr. Sears lived among the native Ashaninka Indians, incorporating their ancient knowledge of healing herbs into his own nutritional supplement formulas.
- In Jamaica, Dr. Sears met with the last living healer from the ancient and forgotten lineage known as the Maroons. Coming from West Africa 500 years ago, their knowledge was on the brink of extinction until Dr. Sears published a book showcasing their unique herbs and healing formulas.
- On the island of Bali, Dr. Sears had a meeting with the most famous of the ancient healers known as "Balians," – Ketut Leyir – and also met two of the country's foremost herbalists. Dr. Sears is publishing a book showing how to use Balinese herbs and make unique healing mixtures for the skin and body.

With a life-long interest in botany, herbology, physiology and anthropology, Dr. Sears has a unique capacity to investigate the evidence behind the stories and claims of traditional medicine from native cultures around the world.

By exposing the flaws of mainstream medicine and pioneering new solutions through innovative approaches to exercise, nutrition and aging, Dr. Sears continues to empower the lives of his patients and readers through his books, newsletters and regular media appearances.

Dr. Sears' Telomere Secrets:

Volume 1: Activate the Enzyme That Rebuilds Your Telomeres

I remember writing the word “telomere” on a piece of scratch paper. Underneath, I added, “*This will change the world as we know it.*”

That was back in 1990, just moments after I finished reading an article in the journal *Nature* about a new technology that promised to turn everything we know about aging and disease on its ear.

Today, I want to show you how I'm discovering the revolution is in full swing all around me.

I no longer guess at how and why we age. I know EXACTLY how the mechanism of aging works... and how to influence it so that we maintain the power, strength and enthusiasm of youth for longer than anyone imagined possible.

Finding this “cellular control switch” inside our cells and understanding how I can influence it to extend our “health span” is the greatest discovery of our time.

I now have a true “age-reversing therapy,” and with it, the ability to slow the loss of our physical and mental powers. In many cases, I can EXTEND the time we have on this earth to feel young and vibrant.

In this special report, I'll show you what this discovery really means, the story behind the researchers who won the Nobel Prize for its discovery and how YOU can use a handful of simple nutrients to set this “control switch” to “perpetual youth.”

I'll also show you the science behind the magic and why researchers from the University of California at San Francisco to Harvard University all agree that this breakthrough will change life as we know it... *forever.*

I Now Understand the True Mechanism of Aging

Over the past century, dozens of ideas, theories and hypotheses have made their way through the halls of universities and laboratories around the world.

But as captivating as these ideas may have been at the time, I now know that all the factors I used to think of as “causes” of aging are merely the “consequences” of aging.

Most of the so-called “causes” come from *internal* sources. In other words, the hormones, cells and sources of energy inside our bodies start to decline over time and cause the loss of energy, vitality and immunity we associate with aging.

There's “menopause” the hormonal changes that usher women into middle age, “adropause” or the loss of male sex hormones like testosterone in men that cause a loss of sex drive, ambition and muscular physique.

There's “somatopause” the loss of growth hormone that immediately saps your physical performance and adds pounds of fat around your middle, there's “thyropause” the loss of thyroid hormones that throw off your metabolism and energy... and dozens of other “pauses” that rob you of your youth.

There were also the ideas that focused on *external* causes of aging such as poor diet, stress, lack of exercise or physical challenges, predation, contamination of our air, water and food supply, as well as the new modern threat, the

toxic “chemical body burden” that accumulates in your blood from the time we’re in the womb.

But ALL these influences, whether internal or external all point to ONE FINAL PATHWAY that determines how and why you age, and that’s the ***shortening of the telomere.***

To better understand what this means... let’s take a look at what the “telomere,” or your “cellular control switch” really is.

Your Telomeres Tell Your Cells How Old They Are

Deep within your DNA, located in the nucleus of each cell, are the building blocks or “blueprint” of every cell in your body.

At the end of each strand of DNA is a little bit of genetic material called the *telomere* (tee-lo-mere).

The telomere is the part of your chromosome that controls aging. And every time your cells divide, your telomeres get shorter. And when your telomeres finally run out, cell division stops and life comes to an end.

But there’s more to it than that. As you age and your telomeres get shorter, your body produces cells that are older, weaker, and more decrepit.

It’s programmed old age... complete with all the telltale problems that come with it.

In fact, the shorter your telomeres, the “older” your body is, regardless of your actual age. In this way, your telomeres “tell” or instruct your cells how to behave based on how old they are.

But when you slow the countdown, you may be able to extend your lifespan, and feel younger longer.

First, there’s something even more remarkable about the telomere you need to know.

The Telomere is the “Director” of Your Life Movie

Because telomere biology is an emerging science, there are researchers who suggest the telomere is merely an “end point” that signals the end of life when the telomere burns down to the end and cell division stops.

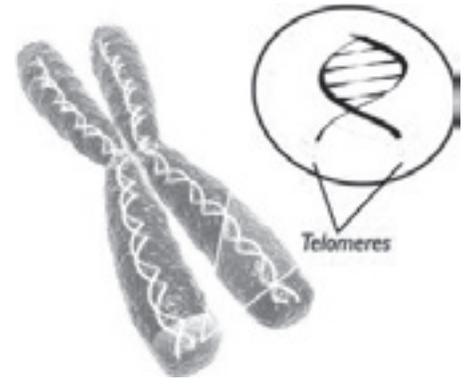
I believe the telomere has a more powerful, more commanding role in how we live day-to-day and year-to-year.

Playing the role “control switch” in your cells, the telomere serves as the “director” of the unfolding drama we call life. This control switch determines how old your cells act, what they’re capable of, and what their true potential is at EVERY moment of your life.

Like a movie director, the telomere tells the cell what to look like, how to move and what to say. It literally gives your cells a complete set of instructions, like a script or screenplay, based on what act and scene of your “life movie” you’re currently acting in.

And those instructions can change quickly if there’s a rapid loss of the telomere.

But today we know we can influence the director of this movie.



The telomeres are the “protective tips” or “caps” at the ends of each strand of DNA. As a whole, your DNA contains the blueprint or program for EVERY cell in your body.

There are newly discovered telomerase activators you can take RIGHT NOW that don't cost more than a few hundred dollars a month... and that's if you take the best 9 or 10 that we know of.

What's more, you can get started without going through a lot of blood work or physical exams.

Below is a list of the best nutrients that are clinically proven to activate telomerase, your "fountain of youth" enzyme.

Use These Newly Discovered Telomerase Activators To Activate Your "Fountain of Youth" Enzyme

There are a lot of new terms that may take some getting used to, but here's a quick recap of what you need to know:

- **Telomere:** These are the "caps" at the end of each chromosome. Your chromosomes are the blueprints of life and are packed together in the nucleus, or center, of every one of your cells.

Every time your cells divide, the telomere gets a little bit shorter. When the telomere runs out, cell division stops and life comes to an end.

I like to think of the telomere as your *cellular control switch*, because the length of your telomeres determines which part of your genome you express. By keeping longer telomeres, your control switch is set in the "younger" part of your genome, which means your body will create younger-looking and younger-acting cells.

- **Telomerase:** This is the enzyme that "rebuilds" your telomeres. In our cells, this enzyme is "turned off." That means there's usually no way to stop the loss of your telomeres, or to rebuild them.

The telomerase enzyme was first discovered by Dr. Elizabeth Blackburn in 1984. Today, we are finding new ways to "turn on" this *fountain of youth enzyme* to prevent the shortening of the telomere and in many cases, lengthen it.

- **TA-65:** This was the first compound ever discovered that "flips the switch." This molecule "turns on" your telomerase so you can extend the life of your telomeres and therefore your cells.

And here's the REALLY good news...

- **Newly Discovered Telomerase Activators:** There are a handful of nutrients that are proven to not only prevent the loss of the telomere, but to *activate telomerase and rebuild the telomere*.

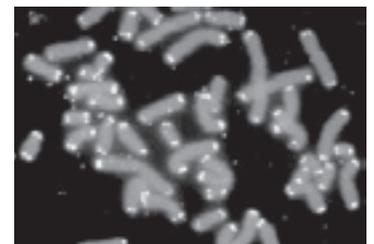
Here are the best of these newly discovered activators:

Resveratrol:

It's probably no surprise this popular anti-aging nutrient can, according to new studies, "*significantly increase telomerase activity*." By helping to "turn on" genes that promote longevity, and "turn off" genes that promote disease, this new research confirms resveratrol's role as a leading telomerase activator.¹

By influencing the way genes are expressed, resveratrol has the ability to activate anti-aging genes called *sirtuins*.

Sirtuins transmit signals to every cell in your body that literally cancel out the



This photo from NASA shows human chromosomes (in grey), capped by the telomeres, seen as the white dots at the ends.

effects of aging. They bring the processes that lead cell death to a crawl, buying your body more time to repair the DNA damage that brings life to an end.

Resveratrol is in the skin of grapes. It protects the grape from threats such as cold weather, UV radiation and microbes. The amount of resveratrol in wine differs. White wine is not made with the skins like red is – so white wine has little resveratrol. Red wines from colder regions have the most resveratrol.

Drinking one or two glasses of red wine is one way to benefit from resveratrol. To get the maximum amount choose wines from Burgundy and Argentina's Cafayate Valley. Most red wines from California and Australia will have lower amounts.

If you're not a fan of red wine, resveratrol is also in:

- Raisins
- Purple Grape Juice
- Peanuts
- Mulberries
- Eucalyptus Trees
- Japanese knot wood

The problem lies in getting sufficient amounts of resveratrol. You'd need to drink 1,000 to 3,000 glasses of wine to experience the life extending benefits of resveratrol.

Resveratrol supplements are a better option. They're inexpensive and completely safe. You can take it any time of day, with or without food. You can find them in health food stores or on line. ***I recommend taking around 10 mg to 20 mg per day for telomerase activation.***

Green Tea (EGCG):

The extract of green tea, EGCG, has a powerful protective effect on telomeres. In a study published in the *British Journal of Nutrition*, the telomeres of green tea drinkers were about 0.46 kilobases longer. This average difference in the telomere length corresponds to, ***“approximately a difference of five years of life.”***²

The active ingredient in green tea is EGCG, which can prevent and repair cell damage. As a scavenger of free radicals, EGCG combats the effects of pollution, sunlight and smoking, which helps skin from wrinkling and aging.

The best way to receive the benefits abundant in green tea – including the EGCG – is to start with whole tea leaves (sold in specialty tea stores) or with a tea bag.

Most of the bottled green tea drinks contain additives like aspartame that counteract brewed green tea's healing properties. I suggest you make your own to maximize the powerful, antioxidant-fighting benefits. You can also find EGCG supplements at your local health food store. ***I suggest taking 50 mg of EGCG daily.***

N-Acetyl-Cysteine (NAC):

This potent amino acid is a building block of your body's primary antioxidant called glutathione (GSH) and ***has the ability to prevent the death of cells by activating the human telomerase gene, your “fountain of youth gene.”***

Just one of the many examples of how NAC protects your cells from early death is in your inner ear. Our military

now treats soldiers with NAC during training to protect them from blast noise from gunfire and explosions.³

In fact, one study looked at military officers after shooting practice. The guns are incredibly loud. A roaring jet engine from a plane taking off a few feet above your head would be about 120 decibels. These officers were hearing gunfire that was up to 160 decibels.

After the noise exposure, one group took NAC and one got no treatment. The NAC group had much better hearing. Not only that, but the unprotected group had damage to the inner ear structure that's responsible for turning sound into nerve impulses so your brain can make sense of it. But the NAC group stayed completely normal and totally protected.⁴

To stimulate the activation of telomerase, I recommend a dose of 1,800 mg to 2,400 mg a day. NAC is available at your local nutrition and/or health food stores.

Alpha Tocopherol:

The most well-known form of vitamin E, alpha tocopherol ***protects against telomere shortening by activating and restoring telomerase.***⁵

That may explain why vitamin E can help prevent heart disease and even cancer. Research from Finland gave us with the first massive study proving that vitamin E prevents prostate cancer.

Researchers monitored over 29,000 men for up to 8 years. They took either vitamin E or a placebo daily. The men taking the vitamin E had a 32% lower rate of prostate cancer. Also, these men had a 41% fewer deaths from prostate cancer than those men not taking vitamin E.

The researchers believed that vitamin E prevented cancer in a several ways. By:

- Neutralizing free radicals in your body
- Protecting your cells from oxidation
- Aiding in cell membrane stability
- Stopping damaged cells from multiplying

Today we know vitamin E's primary protective mechanism comes from the telomere from being shortened, and by activating the enzyme that rebuilds your telomere, telomerase.

The very best forms of vitamin E come straight from mother nature. You can find vitamin E in a wide variety of foods. The best of these includes:

- Nuts
- Nut oils
- Seeds
- Apples
- Beef
- Seafood
- Avocados
- Spinach

Sadly, the vast majority of Americans don't consume nearly enough vitamin E. And, it would be very difficult to eat enough to get the amounts of vitamin E used in the studies. To get these amounts you'll need to take vitamin E in supplement form.

Fill your diet with foods rich in vitamin E. But in addition, *I also recommend 400 IU of vitamin E daily.*

Gamma Tocotrienol:

One of the four lesser-known forms of vitamin E, gamma tocotrienol can, “*modulate the length of the telomere possibly via telomerase.*” During one study, telomere lengths were **16% longer** than controls when exposed to gamma tocotrienol.⁶

Most people don't know this, but there are eight forms of vitamin E: four tocopherols and four tocotrienols. While they're all antioxidants, there are big differences.

Tocotrienols help:

- Reduce cholesterol oxidation
- Maintain healthy triglyceride levels
- Support normal blood pressure levels

Tocotrienols are hard to come by. You won't find them in most foods. In fact, it's almost impossible to get enough of them even if you do eat the few foods that contain them.

For instance, palm oil is rich in tocotrienols. But who consumes a lot of palm oil? Even if you did, you'd have to drink a cup a day to get enough of the recommended amount. Annatto is one of the richest sources of tocotrienols in the world, but is also hard to come by.

The problem with most vitamin E supplements is they contain none of the heart healthy tocotrienols and only ONE type of tocopherol. I recommend a supplement of “mixed tocotrienols,” as it is just about impossible to get gamma tocotrienol on its own. *Look for at least 20 mg of mixed tocotrienols per dose.*

L-Carnosine:

L-carnosine can help you live longer, and you can't get it from any other food source. Your body uses L-carnosine to repair tissues and clear away toxins. But here's something else it can do that even I didn't know until recently...

It helps preserve your telomeres. By doing this, it extends the life cycle of your cells.⁷

I first read about carnosine's anti-aging talents in a study done in Beijing. Researchers saw that cells grown with carnosine had healthier telomeres than cells grown without it. After a lot of digging and a little math, I discovered that the dose they used was extremely high. It would be about the same as taking 17.1 grams of carnosine.

I don't recommend that you take that much. You can get the benefits for your body at a lower dose.

Carnosine is stored in a few places in your body, and your muscles and brain get the most of it. But when it comes to your blood, carnosine doesn't stick around for very long. I recommend 1000 milligrams of carnosine every day to keep the levels in your blood high enough to make a difference.

Grass-fed, pasture-raised meat is the best way to get carnosine from food. A typical 3.5-ounce serving of beef has

about 124 to 220 milligrams of carnosine. When you eat red meat, carnosine can be detected in your blood for about five hours afterward. When you don't eat it, you won't have any carnosine in your blood at all.

Take carnosine as a supplement if you can't get enough by eating red meat, ***I recommend taking 500 milligrams twice a day instead of all at once.*** That way your body always has some on hand to use for protecting your telomeres, supporting your muscles, and encouraging tissue repair.

L-Arginine:

A popular amino acid for improving blood flow, ***l-arginine increases telomerase activity by stimulating the production of nitric oxide (NO)***, the molecule that relaxes your blood vessels.⁸

The real star here is nitric oxide (NO). And the first step to more NO is a simple amino acid called l-arginine. Your body uses this amino acid to trigger the release of NO.

Body builders have been using l-arginine for years. Taken before a workout, it gives them a “muscle pump” by getting more blood and oxygen to their muscles.

Sometimes referred to as the “miracle molecule,” NO is a gas produced by a single layer of cells that line your blood vessels. When NO is released, it causes your blood vessels to relax and expand, sending a rush of oxygen through your body.

This expansion of your blood vessels, and the increased flow of blood and oxygen that follows, is essential for life. *You couldn't live without it.*

And with new research showing NO increases telomerase activity, l-arginine is even more important. Fortunately, l-arginine is inexpensive and easy to find at just about any vitamin shop or health food store. ***I recommend 500 mg to 1,000 mg a day.***

Vitamin C:

We knew vitamin C prevented the loss of your telomeres, but ***we now have evidence that it increases telomerase activity in specific stem cells.***⁹

Your telomeres are very sensitive to oxidation. And as you know by now, the shorter your telomeres, the older your cells act and the more susceptible they are to becoming cancerous.

The new, exciting discovery about vitamin C is that it's very effective at slowing down this aging process.

A Japanese study tested vitamin C's effect on telomeres. It was found that raising the level of vitamin C in the cells could slow down the shortening of telomeres up to 62%.

Another study found that skin cells treated with vitamin C kept their young firm shape because it slowed shortening of the cell DNA's telomeres. The telomeres also suffered less damage in the presence of vitamin C.¹⁰

Vitamin C isn't just “good for you.” It protects your DNA. ***And according to this new research, you should take at least 540 mg per day.***

Vitamin D3:

Famous for its ability to increase immune function and prevent cancer, ***vitamin D also activates telomerase.*** One

very recent study showed vitamin D increased telomerase activity by 19.2%.¹¹

Vitamin D may be the single most important nutrient in your body.

Vitamin D helps:

- Boost your mood and mental performance
- Prevent prostate, breast, ovarian, and many other cancers
- Reduce your risk of skin cancer
- Prevent and treat bone diseases
- Prevent diabetes

Vitamin D is used by every cell and keeps them healthy and functioning at their best, and it's critical for your immune system. If you don't have enough, some cells may end up damaged and diseased. To prevent cancer, your levels of vitamin D must be much higher than the 400 IU our government recommends. **Based on this new data, I recommend taking at least 2,000 IU per day.**

You can also get vitamin D from Nature. The best sources include:

- Cod Liver Oil
- Herring
- Catfish
- Salmon, cooked
- Mackerel, cooked
- Sardines, canned in oil, drained
- Tuna, canned in oil

Milk Thistle (Silymarin extract):

This ancient, well-known herb is popular for detoxification but was recently discovered to activate telomerase. Researchers concluded, "*silymarin increased telomerase activity 3-fold.*"¹²

Milk thistle, also known as the plant *Silybum marianum*, is one of the best for clearing toxins from your blood and GI tract and helps restore liver function. Many ailments are related to toxin build-up. These toxins amass over time. This further interferes with the function of your liver.

I have been able to document its capacity to heal damaged livers by measuring serum liver enzymes. **I recommend 200 mg in capsule form twice a day.** There are no regular food sources for this herb. Look for dried extract with a minimum of 80% silymarin, the active ingredient for liver cleansing, and as we now know, *telomerase activation.*

Ginkgo Biloba:

Originally known as a brain booster because it helps open up blood vessels to enhance circulation and oxygen delivery, there's evidence that, "*ginkgo biloba extract significantly increased telomerase activity,*" and helps prevent the loss of the telomere in sensitive cells that line your blood vessels.¹³

While the research is unclear regarding how much ginkgo biloba effectively activates telomerase, I recommend keeping your daily dose between 40 mg and 80 mg and cycling every 4 to 6 weeks.

In other words, do not take ginkgo continuously for the rest of your life. It will lose its effectiveness. Take it for 4 to 6 weeks, then stop. Wait for 4 to 6 weeks, then start the cycle again.

Folic Acid:

This humble B vitamin is important for making the DNA found in your telomeres. A number of studies suggest folic acid *stimulates the activation of telomerase*.¹⁴

Folic acid is one of the B vitamins I prescribe to help stop the loss of your telomeres. And it's one of five nutrients used to get rid of excess homocysteine that builds up in your blood stream when you're antioxidant levels start to drop.

Homocysteine is a damaging amino acid that *triples the amount of telomere length lost during cell division*. Fortunately, there are supplements you can take to lower your homocysteine in a very short time. This is the formula I recommend to my patients:

- Vitamin B12 – 500 mcg
- Folic Acid – 800 mcg
- Vitamin B6 – 25 mg
- Riboflavin (B2) – 25 mg
- TMG (trimethylglycine) – 500 mg

But I want you to keep something in mind. *The new research showing folic acid activates telomerase used a dose of 2 mg to 5 mg daily.*

Acetyl L-Carnitine:

This simple amino acid boost your brain's level of Nerve Growth Factor by up to 100 times, which explains why this is a favorite brain booster.

But studies suggest that acetyl l-carnitine *activates the human telomerase gene* through a chain reaction that starts with the increase of Nerve Growth Factor.¹⁵

L-carnitine is the utility system for your vital organs. Your heart uses it in bulk to keep blood pumping. Your brain burns through it at lightning speed. Your liver and kidneys require it to work properly. Your sex organs thrive on it for optimum function.

Plus, 95 percent of all cells in your body rely on l-carnitine to melt fat away. That's because l-carnitine shuttles fat into your cells where it's used for energy, instead of being stored as fat.

The problem is your body can't make enough on its own. When scientists looked at levels of this vital nutrient in muscle tissue across a range of age groups, they found a "drastic reduction," in older folks.¹⁶

Why? Because these days, you can't get enough of it from Nature's richest source: red meat. (The word "carnitine" comes from "carnus," the Latin word for meat.)

Here are good sources of l-carnitine based on a single 3.5 oz serving:

- Beef Steak, 95 mg
- Ground Beef, 94 mg

- Pork, 27.7 mg
- Bacon, 23.3 mg

You can also supplement your diet with l-carnitine. While the research on how much you need to activate telomerase is still being determined, ***I recommend a daily amount of 1000 mg.***

I give my patients the liquid form of l-carnitine. It's the most absorbable. The powders tend to clump and the capsules may contain unwanted fillers and binders that may inhibit its absorption.

Also, many l-carnitine capsules use the synthetic “D form” of l-carnitine, which interferes with the natural action of l-carnitine. Make sure you choose a supplement that uses naturally occurring l-carnitine.

Plus, the liquid form is easy to use. The formula I give my patients requires just one tablespoon a day.

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