

How to Upgrade to a
Smarter
Brain and a
Stronger
Heart



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Every effort has been made to make this report as complete and accurate as possible. The purpose of this report is to educate. The author and the publisher shall have neither liability nor responsibility to any person or entity with respect to any loss, damage, or injury caused or alleged to be caused directly or indirectly by the information contained in this report. The information presented herein is in no way intended as a substitute for medical counseling or medical attention.

Uniquely Qualified to Keep You Healthier For Life



Dr. 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 monthly e-Newsletter, *Health Confidential*, and 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 2006, Dr. Sears shocked the fitness world by revealing the dangers of aerobics, "cardio" and long-distance running in his book, *PACE: The 12-Minute 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.

Upgrade to a Smarter Brain

“It was akin to a Ponce de León effect...”

Referring to the Spanish explorer who sought the mythical Fountain of Youth, Dr. Ronald DePinho revealed the details of his groundbreaking experiment in the Harvard Gazette.¹

“When we flipped the telomerase switch on and looked a month later, the brains had largely returned to normal.”

As a professor of genetics from Harvard Medical School and the director of applied cancer science at the Boston-based Dana-Farber Cancer Institute, Dr. Ronald DePinho was thrust into the limelight when the near-miraculous results of his therapy gave new life to the aging brains of the animals in his lab.

Restoring an old, shrunken brain to normal size would have been headline news all on its own. But there was more to the story.

Dr. DePinho’s team of researchers discovered these rejuvenated brains gave birth to new nerve cells, developed new layers of the protective myelin sheath that surrounds nerve cells, and awakened slumbering brain stem cells so they could produce new neurons.

In other words, Dr. DePinho’s therapy transformed faulty, aging brains into youthful, high-performing brains you might expect to find in a teenager.

What caused this remarkable reversal of aging?

Telomerase.

It’s the enzyme that helps you rebuild the biological clocks at the end of your DNA called *telomeres*. Research into telomeres and how telomerase works is so revolutionary, it won the Nobel Prize for medicine in 2009.

Today, I’m going to show you how to tap the remarkable power of your telomeres and the age-reversing enzyme that helps maintain them.

That means you can use this very-same technology to restore and revive your own brain.

In this special report I’ll show you how.

Regenerate Your Brain Cells with This Revolutionary Technology

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

Telomeres are the “time keepers” attached to every strand of your DNA. Each time your cells divide, your telomeres get shorter. When your telomeres run down, cell division stops and your life ends.

By slowing down the loss of your telomeres, you not only extend your brainpower, you stay younger longer.

That’s what I do for my patients. And it’s important you know how this works.

As the telomere gets shorter, your body produces cells that are older, weaker and more decrepit.

This speeding up of telomere loss actually causes your body to transcribe an older, more dysfunctional part of your genome. That means your body becomes weaker, more frail and open to all the pitfalls of aging.

It's programmed old age for your brain... complete with all the telltale problems like memory loss, dementia and Alzheimer's.

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

But when you switch on telomerase and make telomeres longer, like Dr. DePinho did, you ***regenerate your brain cells...*** regardless of how old you are.

Just have a look at these study results.

Aging, Shrunken Brains Return to Normal Size

When Dr. DePinho turned on the enzyme telomerase, the aging brains in the old mice returned to normal size.²

Check out these pictures.

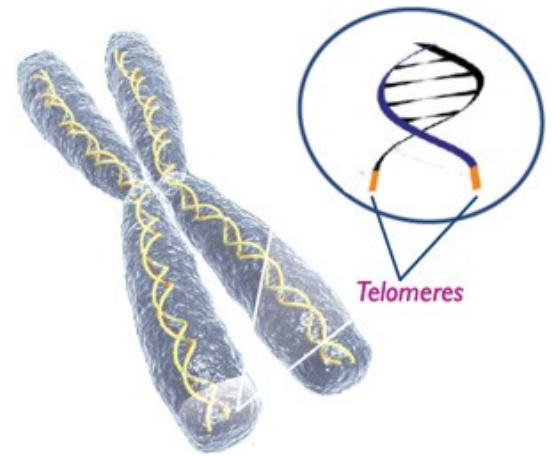
The brain on the left is taken from the group of old mice.

The "brain shrinkage," which happens naturally as you get older is clear to see. The brain on the left is clearly smaller, more narrow and weighs less.

The brain on the right is from the same group of old mice... ***but this one was revived and restored by Dr. DePinho's telomerase therapy.*** You can see how the brain on the right looks fuller and more robust. It weighs more, too.



The smaller, "shrunken" brain on the left shows the loss of size that comes with age... the brain on the right was restored to normal size by "switching on" telomerase.



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.

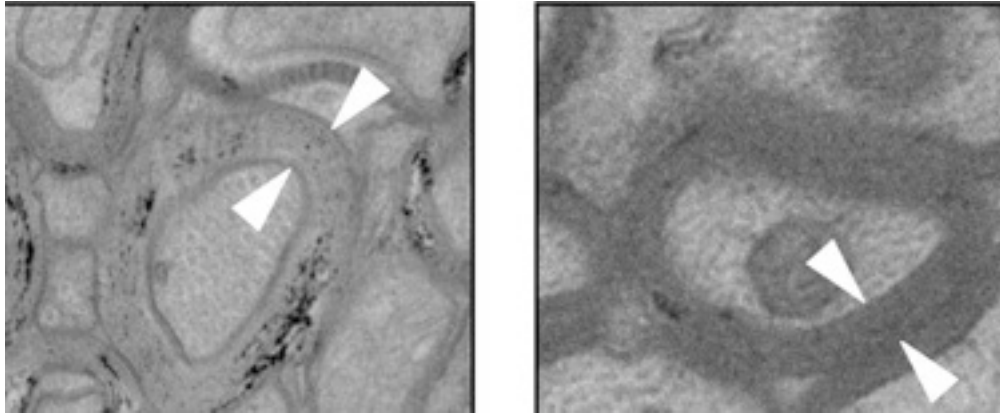
Here's something else... the aging brains that Dr. DePinho restored had a new, heavier layer of a very important covering known as the "myelin sheath." This insulating, protective cover surrounds the nerve cells in your brain and helps shuttle the electrical impulses your brain cells use to communicate with each other.

You may have heard of the myelin sheath. Not only does it get thinner and more vulnerable as you age, it's also the target of the amyloid-beta plaques that build up in Alzheimer's patients.

But miraculously, the myelin sheaths in the mice

revived by Dr. DePinho, grew a new, heavier layer of this critical insulation.

Here are the pictures.



The picture on the left shows a thin, narrow band where the myelin sheath has deteriorated with age. The photo on the right shows how the same myelin sheath has been restored to its full, youthful size.

In the picture on the left, you can see a very thin layer of grey that surrounds the nerve cell. This is the narrow myelin sheath in a nerve cell of one of the old mice.

By contrast, you can see the thicker, heavier myelin sheath in the photo on the right. This shows you how the protective covering was fully restored after the telomeres in these rejuvenated mice became longer.

Dr. DePinho noticed other changes, too.

To test whether their newly-restored brains gave the mice new functional ability, researchers set up a maze to see if the mice would avoid a certain area when they detected the scent of a predator or a foul smell.

Remarkably, these mice regained their sense of smell.

When these mice were still “old,” their olfactory nerve cells had atrophied and they had lost their survival skills. But once Dr. DePinho restored their brain function, their nerve centers regenerated and they were able to negotiate the maze with ease.

Even their memories and overall awareness improved.

Now keep in mind, NEVER in the course of human history has anyone accomplished something even close to this. Previously, only in science fiction novels could you hope to resurrect dead brain cells. In the real world, it was pure fantasy.

Today, this “miraculous” event is not only doable, it’s something you can actively pursue yourself. Given the right nutrients, you can start the process of regenerating your aging brain.

For the first time, you have the potential to avoid the painful and debilitating loss of cognitive function by restoring the youthful characteristics of your own brain.

And that’s good news, because you need to do *something*...

Shorter Telomeres are the Real Culprit Behind “Senior Moments”

When your telomeres shorten, it causes the next generation of cells to be weaker, more vulnerable and more decrepit. And these older brain cells make you a prime candidate for all of those “senior moments” that come from memory loss, lack of concentration and muddled focus.

And that’s not all...

Studies published in respected journals like *Annals of Neurology* and *Neurobiology of Aging* show shorter telomeres are connected to some of the scariest age-related brain concerns like stroke, dementia and Alzheimer’s.^{3 4 5}

But this decline in your ability to think, plan, strategize and remember, is NOT unavoidable. What doctors simply call “part of the aging process,” is really caused by shortening telomeres.

And as you’ll see, telomeres can be influenced. You can slow their loss, and even lengthen them. Later in this report I’ll show you how.

First, I want you to show you how this loss of brain power comes in three primary forms.

The 3 Enemies Zapping Your Brain Power

As you age, your brain comes up against 3 major problems... *all of which, are caused by shrinking telomeres.*

- Your brain shrinks, impairing neurons and dulling connections between neurons.
- Levels of neurotransmitters decline, slowing, marring and reducing messages.
- Brain circulation decreases, and oxygen delivery drops.

It’s true... just like the old mice in Dr. DePinho’s experiment, ***your brain shrinks as you grow older.*** What’s more, research has shown that the problem is worse in men.

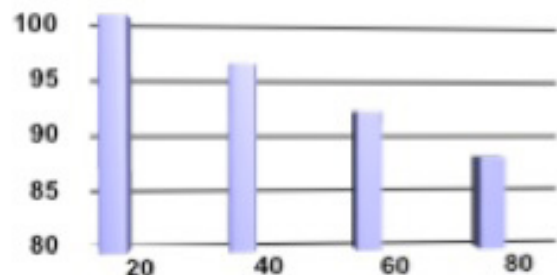
The shrinking starts in adulthood. Researchers believe that the average brain shrinks 2% per decade. ***This means that at 80, your brain will be 12% smaller than at 20.***⁶

Another side effect of aging is the reduction of neurotransmitters in the brain.

The two main neurotransmitters that decrease are acetylcholine and dopamine. These two chemicals are crucial for neuron communication. A lack of these chemicals causes messages to travel slowly, to break, or to stop traveling all together.

The brain also loses some blood circulation as it ages. Blood brings nourishment to cells, and keeps the cells functioning. Without good circulation, your brain works less effectively.

Your Brain Shrinks with Age



By the time you’re 80, you’ve lost almost 15% of your total brain volume!

But here's the good news: You can reverse the loss... and in many cases you can restore youthful brain function.

Here's the first step.

Nourish Your Aging Brain with a Limitless Number of New Brain Cells

Decades ago, we were taught that your brain has a "set" number of brain cells. Remember hearing that once your brain cells died, that was it? It made it sound like your brain was in a constant state of degeneration.

And that's true in part.

But here's the difference: Today, we know that you CAN grow new brain cells... AND new neural networks that ramp up your brain power no matter how old you are.

When you activate the enzyme telomerase, and add length to your shortening telomeres, it kicks your brain into a growth cycle that creates new brain cells through a process called *neurogenesis*.

You see, your brain already has a population of neural stem cells. These "progenitor cells" can differentiate into brain neurons. In turn, these new brain cells create new networks by using *neurites*, the "branches" that stretch out and connect with other brain cells.

But these stem cells need to be "activated."

And there's a simple amino acid that's not only a proven telomerase activator, it stimulates the process of neurogenesis by building new neural networks in your brain.

Here's how it works.

Sharpen Your Mental Edge with This Overlooked Brain Booster

One of the most effective nutrients for rebuilding your telomeres and boosting your brain power is ALC.

Studies suggest that ALC *activates the human telomerase gene* through a chain reaction that starts with the increase of Nerve Growth Factor.⁷

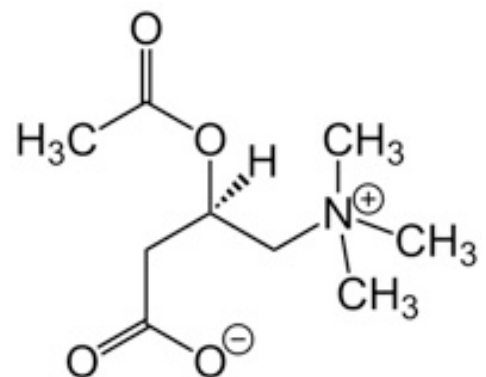
In just a moment, I'll explain why Nerve Growth Factor is so important and how it can help create a younger, faster, more responsive brain.

First, I want to show you why this particular amino acid is critical for keeping your mental edge.

ALC 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 ALC to melt fat away. That's because ALC 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



The chemical structure of acetyl-L-carnitine: Taken daily, ALC can rebuild and regrow your aging brain.

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.⁸

ALC stands for *acetyl-L-carnitine*.

You won't hear about this high-octane IQ fuel from most doctors. But it's the key to brainpower.

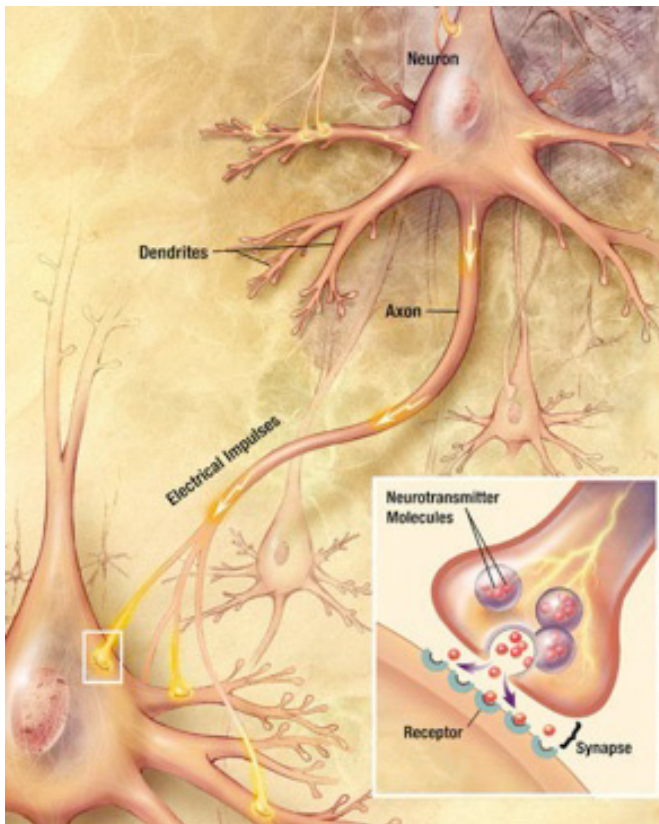
Studies show ALC keeps the mind from slowing down as time goes by. In fact it shores up your ability to recall words and names, follow what others are saying, and think and reason clearly. You'll never have to worry about those “senior moments.”

That's because ALC ramps up production of a brain chemical called acetylcholine. This is a neurotransmitter that helps your brain relay signals between the neurons responsible for cognitive thought, focus, and memory.

Your brain needs more and more acetylcholine as it ages, but can't make more of it on its own. ALC makes up the difference, keeping those neurons firing literally at the speed of light.

As I mentioned, poor blood circulation is another reason your thinking can get fuzzy with time. Your brain cells aren't getting enough oxygen. Clinical evidence has shown that ALC keeps your brain's cellular engines powered up in spite of decreased blood flow.⁹

It's also a potent antioxidant. You've heard about free radicals. They cause damage by latching on to healthy cells, disrupting their natural functioning, changing their DNA, and even killing them.



Your brain and nervous system are made up of nerve cells. The dendrites and axons are both forms of neurites, the “branches” that connect to other nerve cells. ALC works by regrowing nerve cells and forming new neural networks.

It's a little-known fact, but free radical damage lies behind a lot of the gradual loss of brainpower that comes with aging. High-energy cells throw off a lot of free radicals. Because they use so much energy, your brain cells are particularly vulnerable.

ALC puts the brakes on free radical activity. It boosts production of adenosine triphosphate (ATP), the basic fuel every cell in your body needs to make and transport energy.¹⁰

Higher levels of ATP boost your metabolism at the cellular level and can help you to lose weight. It also literally reverses the age-related cell damage that can lead to brain fog.

It even works in people who've already shown signs of senility or Alzheimer's.

The science proves it. Researchers recently looked at the effects of ALC in people with mild cognitive impairment and even early-stage Alzheimer's disease. With as little as 1.5 to 3 grams per day, they showed significantly improved brain function across the board after three months.¹¹

As if that weren't enough, ALC boasts a long list of health benefits that go far beyond the brain. It's been shown to ramp up male performance and slow nerve damage in diabetics.^{12 13}

There's even evidence that ALC can re-grow nerve cells.¹⁴

That's because ALC helps slow the loss, and restore the function of **Nerve Growth Factor (NGF)**... a powerful protein that controls the growth and maintenance of your brain's neurons.

As your telomeres get shorter, there's a decline both in the production of NGF and the number of NGF receptors you have in your brain cells. And this decline leads to a drop in brain performance and opens you up to memory loss and dementia.

That's why those studies I mentioned earlier found a connection between short telomeres and memory problems, dementia, stroke and Alzheimer's.

Even more impressive, ALC boosts neurite growth an incredible **100 TIMES MORE** than NGF alone.¹⁵ As we discussed, neurites are those "branches" that extend from the middle of the neuron and connect with other brain cells to form networks.

These neural networks are the key to a fast brain and alert mental state. The more networks you have and the faster these electrical impulses fire between cells, the clearer you can think and the better you remember.

I recommend at least 1,000 milligrams per day. And if you're feeling like you have memory concerns, or worse, you can safely take 3,000 mg a day.

Think of it this way: When your telomeres get shorter, it cuts off production of NGF and your overall brain power starts to tank.

ALC switches on telomerase, which rebuilds your telomeres... which in turn, reactivates NGF and a host of other performance-enhancing nutrients and enzymes, which fire up abilities you enjoyed when you were younger... but thought were gone forever.

So remember...

All of these brain-boosting changes are triggered by ALC's ability to influence your telomeres.

The telomere is at the heart of your brain's power and ability to function. At the end of the day, your telomeres have absolute control over how healthy your brain cells are, and how well they function.

Telomerase activators, like ALC, rebuild your telomeres and protect them from the accelerated loss that makes you grow old before your time.

By activating telomerase, you have the opportunity to produce younger cells... *even as you get older.*

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Upgrade to a Stronger Heart

When your heart weakens, it's painfully obvious.

It may be one of the most noticeable changes associated with aging.

Your body only has one way to get oxygen to your 75 trillion cells, and that's through a fist-sized, muscular pump called your heart. And when your heart loses its pumping power, you lose power to EVERY cell in your body.

When that happens, every cell, organ and tissue in your body loses energy. Your performance drops system wide... *and you see that in every move you make.*

Your capacity to work, play, perform and achieve goes into a tailspin. Even your ability to get out of bed is jeopardized. All because your heart can no longer get enough oxygen to your cells.

While this may sound like a typical side effect of aging, it's not inevitable. In fact, new studies tell us your heart has a single "master mechanism" that decides how much energy your heart can hold onto as it gets older.

The "Cellular Secret" that Energizes Your Heart Muscle

This "mechanism," called the *telomere* (tee-lo-mere), is embedded in the core of every one of your cells, but "burns down" and gets shorter with age. And the shorter it gets, the weaker your cells become.

Here's the good news: Telomeres come equipped with an enzyme designed to rebuild it. This enzyme is usually "switched off," but a series of discoveries has shown us how to switch it back on.

In this special report, I'll show you how to activate this enzyme and how you can easily revive your heart's energy, vitality and pumping power. Just by doing this one thing, you can restore your heart to a level of power and performance you enjoyed when you were in your 30s and 40s.

And you can keep this performance boost for life.

Reignite Your Heart's Power with This Nobel Prize-Winning Technology

Located in every chromosome, telomeres are the "time keepers" attached to every strand of your DNA. Each time your cells divide, your telomeres get shorter. When your telomeres run down, cell division stops and your life ends.

By slowing down the loss of your telomeres, you not only extend your heart's power, you stay younger longer.

That's what I do for my patients. And that's what I'm going to show you today.

As the telomere gets shorter, your body produces cells that are older, weaker and more decrepit.

This speeding up of telomere loss actually causes your body to transcribe an older, more dysfunctional part of your genome. That means your body becomes weaker, more frail and open to all the pitfalls of aging.

It's "programmed old age" for your heart... complete with congestive heart failure, heart attack and

hardening of the arteries.

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

This discovery was so groundbreaking, it won the Nobel Prize in Medicine in 2009.

And there’s clear evidence that shorter telomeres weaken your heart and increase your risk of heart disease.

Just have a look at these study results.

Short Telomeres Set You Up for Heart Attack, Heart Failure, Clogged Arteries and Early Death

When researchers investigated the first long-term connection between telomeres and heart health over the span of two decades, the results were clear and conclusive.¹

Published in the journal *Arteriosclerosis, Thrombosis and Vascular Biology*, the team of doctors at a research hospital in Denmark ***followed almost 20,000 people for 19 years.***

The people with short telomeres had a...

- 50% increased risk of heart attack
- 25% increased risk of early death

Another study, published in the same journal, found an alarming increase in heart attack risk... this time, ***people with short telomeres had an increased risk between 280% and 320%!²***

These newly-reported results confirm what we now consider a FACT: *Shorter telomeres make you a target for heart disease.*

Aside from heart attack, your risk of atherosclerosis or hardening of the arteries goes up to.

In a study published in the prestigious journal *Lancet*, researchers found an association between short telomeres and atherosclerosis.³ The people with short telomeres had accelerated aging of their blood vessels and had ***a build up of plaque that correlated to someone 8.6 years older.***

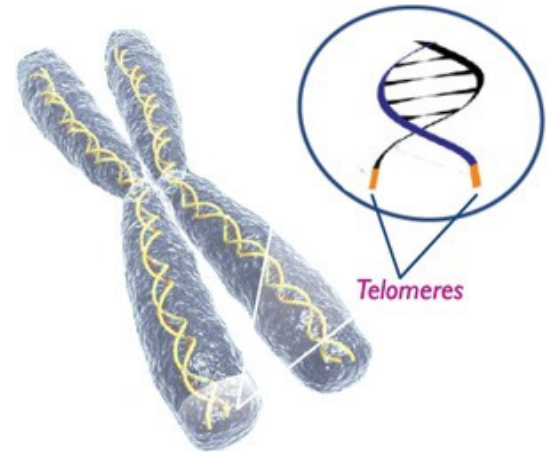
This increased risk extends into the very fiber of your heart muscle.

In a study published in the *Journal of the American College of Cardiology*, researchers discovered that ***people with heart failure had telomeres that were 40% shorter than normal.***⁴

Heart failure is now characterized by both telomere erosion and the death of cardiac “myocytes.” These are the muscle cells in your heart and are responsible for generating the electrical impulses that control your heart rate, among other things.

But there is good news.

At the beginning of this report, I mentioned the telomere comes equipped with an enzyme designed to



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.

rebuild it.

That enzyme, called telomerase, can extend the length of your telomeres. And when you switch on telomerase and make telomeres longer, you *regenerate your heart's cells*... regardless of how old you are.

The Newly-Discovered Power of the Famous "Red Wine" Nutrient

By now I'm sure you've heard of *resveratrol*.

Resveratrol is a nutrient found in red wine, and has been the focus of national media, being featured on 60 Minutes, Oprah and the Dr. Oz show. Known as a "longevity nutrient," resveratrol has multiple heart benefits and is able to normalize your blood pressure and cholesterol levels.

But recently, researchers discovered something new about resveratrol... it has the power to switch on the gene that produces telomerase, the enzyme that rebuilds your telomeres.

Published in the English version of the *Chinese Medical Journal*, researchers found resveratrol, "*significantly increased telomerase activity*."⁵

And that's great news... it means you have a simple and reliable way of rebuilding your telomeres and keeping your heart young and vital. And when we're talking about telomerase, it's important to remember that adding length to your telomeres means you can actually *make your heart younger*.

That's the key to understanding this newest breakthrough... You see, the length of your telomere dictates the kind of cell your body produces.

Longer telomeres produce younger-acting cells.

That's what gives you the experience a full "restoration." Your body is literally creating a younger, more powerful heart... even though you're technically getting older with each passing day.

We've known for years that resveratrol can "turn on" genes that promote health and longevity, and "turn off" genes that cause cancer and heart disease. But this new study, throws the door wide open. For the first time, we have reliable evidence that a simple, easy-to-take nutrient can re-energize your tired heart.

Let me show you how this genetic switch works...

Resveratrol Switches On Your "Anti-Aging Gene"

Your body has a gene that can increase lifespan dramatically... *one study saw an increase by as much as 100%*.⁶

All living things carry it, including humans. Even more exciting is the discovery that natural substances found in certain foods have the power to activate this gene.

We first discovered evidence of this "longevity gene" about twenty years ago. If you starve mice, giving them a nutritionally balanced diet with very few calories, their lifespan increases dramatically.

Later studies revealed that this strange effect wasn't limited to mice: calorie-restricted diets produced similar results in many life forms, from single celled organisms to plants and mammals.⁷

Very recently, we found the explanation for this mysterious phenomenon. They isolated a family of genes

called *sirtuins* (“silent information regulator proteins”). Sirtuins kick in under conditions of severe stress, bringing about a miraculous transformation.

They transmit signals to every cell in your body that literally cancel out the effects of aging. The processes that lead to cell death slow to a crawl, buying your body more time.

The discovery of sirtuins pointed to another amazing fact. Most folks think of genetics as written in stone. You have the genes you inherited, and that’s it. What sirtuins show is that certain genes can be awakened and called upon to change your body in the course of a single lifetime.

When Resveratrol Rebuilds Your Telomeres Your Heart Springs Back to Life

When resveratrol acts on your telomeres, two things happen: First, resveratrol protects your telomeres from becoming shorter. That immediately slows the aging of your heart. Second, resveratrol activates the telomerase enzyme, and gradually starts to rebuild your telomeres. ***That enables your heart to produce younger cells.***

And that produces some remarkable benefits:

One way resveratrol protects your heart is by preventing blood clots, a major cause of heart attack, particularly in older folks. In one study, researchers gave healthy male subjects a blood-clotting factor along with high doses of resveratrol.

They found that resveratrol ***prevented their blood platelets from sticking together.***⁸ Not only does this help your heart, it also prevents strokes, another effect of clotting.

Another way it powers your heart involves miraculous capability called “angiogenesis,” a fancy term for blood vessel growth. Resveratrol acts a bit like bypass surgery by creating new blood vessels to deliver more oxygen to your heart when it’s not getting enough.

Resveratrol also acts as a potent antioxidant, binding with “free radicals,” the molecules that cause cell damage and lead to death over time.

Oxidative stress is the cause of many diseases and aging itself. And many scientists report that resveratrol slows down the oxidation of dangerous low-density lipoprotein (LDL) and scavenges very harmful hydroxyl radicals.

Resveratrol also helps to protect your levels of glutathione, which is your body’s “master antioxidant” and detoxifier.

Finally trans-resveratrol drives down levels of bad fats called ***triglycerides.***

These are the fatty acids that clog your arteries. Scientists have been able to lower triglyceride levels as much as 15 percent in pre-menopausal women using concentrated grape powder.⁹

As powerful as resveratrol is, your telomeres are VERY sensitive to oxidative stress. And that’s why I recommend the most powerful antioxidants to my patients. If you were sitting in my consulting room, I’d tell you same thing.

To maintain what I like to call your “hundred-year heart,” there are a few other nutrients you should consider.

Is Your Heart “Starving” for these 4 Must-Have Nutrients?

In medical school, physicians receive very little training in nutrition. Traditional medical education focuses on disease rather than health. As a result, most doctors remain woefully unable to advise you about nutrition and nutritional supplements to help you heal your heart and avoid cardiovascular disease.

Yet good nutrition is essential for a healthy heart. Your heart never gets to rest. Until the moment of your death, your heart steadily and tirelessly keeps the rhythm of your life. Your heart can only perform this staggering feat if it has an adequate supply of nutrients.

To keep your heart pumping strong, feed it the nutrients it needs.

Research conducted at my *Wellness Research Foundation* along with the experience with thousands of patients shows that most heart disease sufferers are deficient in one or more of five key nutrients: CoQ10, L-carnitine, L-arginine, Vitamin E, and Vitamin C.

We’ve talked about CoQ10, and why resveratrol is now an essential for heart health. Now let’s take a look at the four nutrients I consider the most overlooked.

Rejuvenate Your Heart with these 4 “Super-Nutrients”

While a good multivitamin forms a foundation toward a well-nourished heart, you can further protect your heart with a few additional key nutrients: L-carnitine, L-arginine, tocopherols and tocotrienols (vitamin E), and antioxidant doses of vitamin C.

L-Carnitine: Your Fat-Burning Furnace

L-carnitine plays an essential role in the healthy functioning of the body. Every form of life, from the simplest single-cell organism to the unfathomably complex human body, depends on carnitine for energy production within the cells.

Carnitine shuttles fat (or long-chain fatty acids, to be more precise) into the energy centers or mitochondria of the cells, where the fat can be burned to produce energy.

Without enough carnitine, the cell’s furnace cannot work at peak efficiency and its energy-production system slows down or stalls. When the body has sufficient carnitine reserves, the cells can burn more fat and generate more energy.

In addition to generating energy, fat burning creates even more health benefits. For example, carnitine-enhanced fat burning prevents the accumulation of excess fat in the heart, liver, and muscles.

If allowed to build up, this fat contributes to a number of different health problems, such as heart disease, diabetes, and high triglyceride levels. Carnitine is present in greatest concentrations in the heart, brain, muscles, and testicles, all of which require lots of energy.

Carnitine is often referred to as “the energy vitamin,” but it is not really a vitamin at all. A vitamin is a substance that cannot be produced by the body and must be obtained through food. Because the body can synthesize carnitine from the amino acids lysine and methionine, carnitine is not a true vitamin.

Other people classify carnitine as an amino acid, but it isn’t a true amino acid, either. While carnitine has a chemical structure similar to many amino acids, technically it is a nitrogen-containing, short-chain carboxylic

acid. In simple terms, carnitine is a water-soluble, vitamin-like compound similar to the B-complex groups of vitamins.

More than 20 placebo-controlled studies support L-carnitine's role in protecting your heart.¹⁰ ***Carnitine reduces arterial plaque, lowers LDL cholesterol, and increases HDL levels.*** These benefits appear in healthy subjects as well as in patients with heart disease.

You obtain carnitine from red meat and dairy. In fact, when scientists first isolated it from the muscle tissue of several animals, they named it carnitine, using the Latin root *carn*, meaning flesh or meat. Unless you eat a diet high in red meat and dairy, it can be difficult to obtain optimal amounts of carnitine from dietary sources alone.

Take 500 milligrams of L-carnitine as a supplement every day. It is important that you choose the naturally occurring L-carnitine and not the synthetic D, L-carnitine. The D-form interferes with the natural action of the L-carnitine.

Build a Better Heart with L-Arginine

L-arginine, a naturally occurring amino acid, is the precursor to nitric oxide. L-arginine improves blood flow because in the bloodstream it breaks down into nitric oxide, which helps dilate the blood vessels in the lining of the heart.

Without nitric oxide, your blood vessels narrow. Arterial plaque makes these vessels rigid and restricts blood flow. Recent studies show that arginine supplementation effectively increases the elasticity of blood vessels, ***providing a much safer alternative to prescription drugs.***¹¹

L-arginine also assists in muscle building, and remember, your heart is a muscle. One double-blind study measured the change in muscle strength and lean muscle mass in men taking L-arginine.

Men in the study took either L-arginine or a placebo while participating in a strength-training program. Those taking the L-arginine showed a significantly greater increase in muscle strength and lean muscle mass after only five weeks.¹²

Supplements containing L-arginine have been used by athletes for more than 20 years but have become more popular in recent years. Why? Because of the popularity and expense of the prescription drug Viagra. ***Viagra, like, arginine improves blood flow by increasing nitric oxide.***

Good food sources of L-arginine include red meat, fish, chicken, beans, chocolate, raisins, nuts, sesame seeds, and sunflower seeds. You can also now find it in supplement form in most nutrition stores.

Take 500 milligrams of L-arginine daily with food to support muscle growth and heart health. Like carnitine, buy only the L-form of this amino acid.

2 Forms of Vitamin E Lengthen Your Telomeres

You may already know that vitamin E helps protect your heart.

A number of studies show a link between vitamin E and lowered risk of heart disease. Two landmark studies in *The England Journal of Medicine* report heart protection from Vitamin E alone. One eight-year study tracked more than 87,000 registered female nurses.¹³

A related study followed nearly 40,000 male health care workers.¹⁴ People who took daily vitamin E supplements (100 IU or more) for a minimum of two years had about a **40 percent (41 percent in women, 37 percent in men) lower risk of heart disease.**

They also had a **29 percent lower risk of stroke**, and a **13 percent reduction in overall death rates.**

This conclusion continues to be supported by the bulk of the evidence but some studies find conflicting results because the supplemental form of vitamin E is a **partial solution.** New evidence shows that a more natural group of vitamin E-like compounds are more effective.

In nature, vitamin E exists as a mixture of **four types of tocopherols** and **four types of tocotrienols.** So there are eight forms of Vitamin E in total.

The vitamin E you find on the drug store shelves contains a single type of tocopherol known as *alpha-tocopherol*. Taking too much of one tocopherol can block the absorption of the other tocopherols. For this reason, take a blend of both tocopherols and tocotrienols, which is much closer to the way these nutrients exist in nature.

Tocopherols and tocotrienols have many proven health benefits. Tocopherols and tocotrienols fight the free radicals in your body that cause diseases of inflammation (such as rheumatoid arthritis). They also lower your risk of heart disease by increasing your blood circulation. They also lower your risk of cancers of the prostate, colon, and breast.

Many patients have been able to give up their blood-thinning drugs after they begin tocopherol supplementation. There is evidence that a daily supplement of mixed tocopherols increases the elasticity of the arteries.¹⁵ These nutrients also lower risk of heart disease by increasing blood circulation and decreasing the stickiness of platelets in your blood.¹⁶

Today, we know that two forms of vitamin E can activate telomerase and lengthen your telomeres.

The most well-known form of vitamin E, alpha tocopherol ***protects against telomere shortening by activating and restoring telomerase.***¹⁷

That may explain why vitamin E can help prevent heart disease... but there's more:

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.¹⁸

You find tocopherols and tocotrienols in “fatty foods,” including meat, fish, nuts, oils, dark-green leafy vegetables, seeds, and avocados. However, it is virtually impossible to consume enough of these nutrients in a typical diet. For example, you would have to eat two pounds of sunflower seeds every day to consume all of the tocopherols and tocotrienols you need.

Take 400 IU of vitamin E (mixed tocopherols) with at least 5 mg (20mg is optimal) of mixed tocotrienols daily. Vitamin E and the other tocopherols are oil soluble. Like the old form of CoQ10, your body can only absorb these nutrients when you eat enough fat. Take them with a teaspoon of almond butter or other natural fat or oil like cod liver oil.

Take Vitamin C for Longer Telomeres

Vitamin C earned a reputation as a preventative for colds since its discovery more than 70 years ago. And vitamin C has a lot more to offer! It is essential for many of the body's life-sustaining functions. For example, vitamin C:

- Fights free radicals.
- Helps form collagen and elastin, (supportive proteins in the tissues, especially your blood vessel walls).
- Sustains your immune system.
- Aids in the production of amino acids that regulate the nervous system.
- Helps break down histamines which are the inflammatory element of allergic reactions, among many additional functions.

The Noble Prize winning scientist Linus Pauling was the first to claim that vitamin C could extend your life. Dr. Pauling took between 12,000 and 18,000 mg of vitamin C every day for 40 years.

Pauling's theory was dismissed until the 1980's when scientists discovered that antioxidants could protect cells from oxidative damage. The free radical theory of aging became popular. Vitamin C was found to be among the nutrients that protect cells from free radicals.

But oxidative damage to cells can be repaired. ***It is the oxidative damage to telomeres that is not repaired.*** This results in further shortening of telomeres. This very specific effect of free radical damage helps drive the aging process.

In 1998 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 loss of telomeres up to 62%.***¹⁹

When it comes to cardiovascular disease, studies find a link between low levels of vitamin C and risk of stroke. A 10-year study of more than 2,400 middle-aged men established a relationship between vitamin C intake and reduced risk of stroke.²⁰

Men with the lowest vitamin C levels had an ***increased risk of having a stroke 2.4 times greater*** than men who had higher vitamin C levels. The researchers found that taking vitamin C had more impact on the risk of stroke than being overweight or having high blood pressure.

In addition, researchers at the University of California analyzed the vitamin C intakes and death rates of more than 11,000 men and women.²¹ The study showed a dramatic decline in death from heart disease among the men with the highest vitamin C intake, especially among those who took a vitamin C supplement.

Merely obtaining the recommended daily allowance for vitamin C through food did not seem to offer any protection against heart disease.

Keep in mind, the human body cannot synthesize or produce vitamin C. We can only get this nutrient from our diet -- or from supplements.

Unfortunately, one-fourth of all Americans do not get even the minimum amount of vitamin C (60 milligrams) that cells need to perform basic biological functions. Foods like oranges, strawberries, broccoli, and bell peppers contain substantial amounts of vitamin C. But still, it is difficult to consume therapeutic amounts of

vitamin C from diet alone.

Some drugs, including aspirin, alcohol, analgesics, anti-depressants, anti-coagulants, oral contraceptives, and steroids, reduce the levels of vitamin C in the body. Diabetic and sulfa drugs may not be as effective when taken with large doses of vitamin C. Large doses of vitamin C may cause false negative readings when testing for blood in the stool.

Take at least 500 milligrams of vitamin C twice a day with food. At higher doses for shorter periods, vitamin C provides some protection against viruses. If you have a viral illness (such as a cold), take 1,000 milligrams every couple of hours with a full glass of water.

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