



EPISODE 934

7 Things That Slow Down Your Aging Process

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SHAWN STEVENSON: Did you know that it's possible to slow down how fast you are aging? In fact, the top longevity experts in the world have shared with me how we all can slow down, how quickly we age. Today, you're going to discover seven of the most well-documented ways to slow down your aging process. Most of them are absolutely free or cost pennies a day. So let's kick things off with number one, vitamin D supplementation. A brand new study conducted by researchers at Harvard and published in the American Journal of Clinical Nutrition found that taking just one capsule of Vitamin D three each day, which would cost around 40 cents a day, can significantly slow down your aging at a cellular level.

Compared with taking a placebo study, participants who took 2000 international units or IUs of vitamin D three daily significantly reduced telomere shortening over the course of the four year study. This one simple action prevented the equivalent of about three years of aging. I can't stress how powerful this information is. Now, if you're wondering what the heck are telomeres. Telomeres are one of the most well established markers of phenotypic aging or biological aging. Essentially are telomeres are protective caps at the end of our chromosomes that shorten with each cell division that we have, and their length is associated with our biological age.

Shorter telomeres can indicate accelerated aging and are linked to several age related chronic diseases. Again, just 2000 IUs of vitamin D three each day was found to be protective of our telomeres. Now, here's the real kicker. Approximately 60% of the American population is low in vitamin D, and in some demographics, like in African-Americans, it can be up to 80% of the population is low in vitamin D. There's a tremendous upside here, tremendous opportunity for us to address this key deficiency that is also deeply linked to how quickly we are aging. This simple tip can be a game changer for us as a society, and to top it all off. Vitamin D is incredibly impactful on so many other issues related to our health.

It's been found in numerous studies. I'm talking hundreds of studies to be protective and preventative against several chronic diseases and including cancer and depression, and has been found to be remarkably effective at reducing our risk of infectious diseases as well. So getting some D in your life to reduce your biological aging is just the tip of all the benefits

that you can get. There's so much upside here, but there are a couple of caveats and tips that you need to be aware of. Tip number one is to make sure that it's vitamin D three. This is what's affirmed in these clinical studies. When I was a university student, we were not taught about the difference between. All these various forms of different vitamins and minerals.

There are several forms of vitamin D. There are several forms of vitamin C. There's several forms of magnesium B12. The list goes on and on. It is D three that is the most protective and usable by our cells to run these processes and to get these benefits that we're looking for. So you are looking for vitamin D three. Tip number two is to make sure that you're taking your vitamin D three along with vitamin K two to make sure that you are utilizing proper absorption and utilization of that D three in your body. Tip number three is to do your best to get some natural Vitamin D production as well. By getting adequate time in the sun, not only will that sun exposure help your body to produce more vitamin D.

It will also help you with tip number two on our list to slow down your biological aging process, which number two on our list is to make sure to get adequate sleep. The science on high quality sleep, being able to slow down your aging process is thick. Thicker than a milkshake that brings all the boys to the yard. Let's kick this understanding of the science off with this recently published huge analysis that included over 300,000 study participants. And the study was titled, association Between Sleep Traits and Biological Aging Risk, and this was published in the Journal Sleep. After reviewing a massive amount of data, the scientists concluded that "improving sleep can slow biological aging".

And their data highlights the importance of optimizing sleep as an intervention to mitigate aging's adverse effects. Now, biological aging from lack of sleep has many factors, but is there any data demonstrating that lack of sleep can impact our telomeres in a negative way? And I'm glad you asked. Another study published in the Journal of Sleep Research was appropriately titled Sleep is Associated with Telomere Shortening. The eight year study revealed that individuals with insufficient sleep time, poor sleep efficiency, meaning their sleep cycles are disrupted and sleep apnea had greater loss and damage to their telomeres.

SHAWN STEVENSON: And now I'm going to share with you one of the most important. And action oriented studies to help us to utilize sleep to slow down a rate of aging. And this was another new study published in the Journal, sleep Health. And it revealed that having a consistent sleep schedule slows down aging at a cellular level. The study titled Day-to-Day Deviations in Sleep Parameters and Biological Aging found that individuals who had the biggest differences in their bedtime and sleep duration, during weekdays versus the weekends, had the highest biological age. In this three year analysis, people who had frequent changes in their sleep schedule, IE what time they go to bed and what time they wake up.

We're found to have a biological age, nearly nine months older than people who had consistent sleep schedules. We call this phenomenon of changing our sleep schedules just because it's the weekend versus the weekday. We call this social jet lag, and this is a phenomenon that happens in our modern society because we have this structured work week or school week, all right? And everybody's working for the weekend. Everybody's working for the weekend. All right? That's what we could party, all right? Friday night, just got paid Friday night. So many classic vibes about getting to the weekend so that we can live our lives. And so the rules are off. I don't gotta get up and go to work in the morning.

I'm gonna stay up late. Nobody can stop me and I'm gonna sleep in and. It's a wonderful vibe. It's a freedom and you absolutely have the freedom to do that. But is this going to aid you biologically? I'm just here to tell you the truth. Now, of course we can quote get away with some of this when we're younger, but little do we know we're accelerating our aging process when we're doing that as well. And let me be clear, this is not an all or nothing scenario because there are obviously gonna be times it's totally fine. You got an event, you've got friends in town, you got, you just wanna do something that's awesome, do that. There's a joy of living clause to this because taking away that joy can be detrimental to our aging process as well.

And so we wanna keep this in context, but if we are consistently having variations in what time we're going to bed and what time we're waking up, it is proven to accelerate our aging process. And so what does this look like structurally? Well, the scientists suggest that all of

this is largely due to the impact that frequent deviations to our sleep schedule have on our circadian clocks. Our circadian clocks determine when various hormones are produced, how our bodies process stress, how our bodies process our food, manage our blood sugar, and so much more. Our bodies are always looking for a consistent rhythm and with inconsistent sleep schedules, our internal body clock is out of sync and negatively impacting the core mechanisms that govern our biological aging.

These circadian clocks that exist within the trillions and trillions of cells within our bodies are themselves functional genes and proteins that control the production function, metabolism, elimination, and so many other things of the other genes and proteins in our bodies. These are master regulators. Our bodies are always looking to fall into rhythm, to know when to do what it does, and whether that's, again, digesting our food, producing certain hormones and neurotransmitters producing ample levels of cortisol, downregulating cortisol, when to produce melatonin. Our cardiovascular function is controlled by these circadian clocks, our cognition, our reaction time, our muscle function. The list goes on and on and on.

These are master regulators of our biology, and we've got to honor the circadian clocks. The researcher stated, "in this study, we found that day-to-day deviations and sleep parameters are independently associated with biological aging. In the US general population." They go on to say that, "since day-to-day deviation in sleep schedule is a modifiable behavioral factor. Our findings suggests that intervention aiming at increasing regularity in sleep patterns may be a novel approach for extending a healthy lifespan." How can we utilize this invaluable data to slow down our rate of aging? Well, tip number one here is to prioritize having a consistent sleep schedule to the best of your ability.

Alright, I know that life be life and things happen. We've got a lot going on in our lives, but to make this a priority because it matters, your body is always looking to syn up to the 24 hour solar day and to align itself with all of life, with all of nature. We evolved having this relationship, but us modern humans, we can manufacture a daytime whenever we want, essentially with artificial light. And we can haphazardly throw off our sleep times, our sleep schedules, really at will. And so again, prioritize having a consistent sleep schedule. You pick what that is for you, right? This can be 11:00 PM to 7:00 AM This could be 10:00 PM to 5:00

AM. Whatever that looks like for you to get the optimal amount of sleep for you, and please know that that can change as well, depending on the season, depending on what's going on in your life, what you're doing while you're up and moving around.

Your sleep requirement can change from time to time. So give yourself some grace with having this, but do your best to find a sleep schedule that works for you. And have that consistently, regardless of what day it is. Just to throw that off on a whim is just, a lot of times it's just not worth it. But again, if there's a special event, you know, there's a late game that you're out at, maybe it's a big fight going on. We just had the Big Crawford Canelo, all right, the Undercards be under carding. Alright, there's so many. Undercards comes on at 6:00 PM they're fighting at at 10:00 PM All right, and that's on West Coast time. On the East Coast. That's one o'clock in the morning. It's crazy. All right, just to see some people get hit in the face.

All right. But again, these are those special events. We can do these things. But do your best. Get back on your sleep schedule as soon as possible, and don't throw it off on a whim. Ideally, you wanna stay within about a 30 minute variation, 30 minutes before or after your preset sleep times that you schedule for yourself. You have a little bit of flexibility in there. We don't want to be too neurotic, but we do want to prioritize this. So that's tip number one. Tip number two, to tie back to the first one of our list of seven science back ways to slow down our aging process is getting our vitamin D optimized. And one of those tips within that was to get adequate sun exposure.

So sun exposure is one of the most affirmed in several peer reviewed studies to help to sync up that circadian clock in getting some sun exposure, especially in the early part of the day, helps to set the circadian rhythm. And one fascinating study that was published in innovations in Clinical neuroscience found that getting adequate sun exposure in the morning helps to reduce our cortisol levels in the evening. Again, our bodies are always seeking to sync up with all of nature, with all of life. So get some sun exposure. If you can't even, you know, during the winter, if you can open up your shades, let some sunlight get into the room. It's not the same as getting that raw, you know, sun to skin contact. You know, that unprotected, you know it's not the same.

SHAWN STEVENSON: All right, to make the little vitamin D babies, wait, wait a minute. That's wind a little far, but it's not the same. But we get a lot of the benefits just by picking up those bio photons from the sun. There's nothing else like it in the universe. We got some devices we could try to mimic, but there's nothing like that. Real vitamin D, that real sun exposure. So at least get into the room even on an overcast day. The illumination, these bio photons from the sun are making their way through and can help to sync up that circadian clock. And tip number three, we've done a lot on sleep wellness, sleep hygiene over the years here in the Model Health Show.

And we'll make sure to put an episode or two for you to be able to go back to if you really wanna master your sleep quality. But one other tip is to prioritize creating a sleep sanctuary for yourself. We wanna create an environment to the best of our ability that supports high quality sleep. And based on the data, that environment is going to be somewhere that is largely tech free. It's gonna be dark so we can produce adequate melatonin and it's gonna be an environment that. Is a little cooler in the evening as well. And of course you could have your comfy comforter, that's what they're called comforters. But having a cooler environment is shown to support us going through our sleep cycles efficiently as well.

And just whatever creates a vibe for you that just feels good for relaxation and supports good sleep. Now, that was number two on our incredible list. And keep in mind that what you're learning today is so valuable because today we are able to accurately measure how old we are biologically versus chronologically. You see, your calendar age can be correlated with your biological age, but it does not determine or cause your biological age. The latest research has proven that humans can age at drastically different rates from one another. The average person has been found to have a standard deviation of being up to five years older or up to five years younger than what it says on their birth certificate, again, biologically versus their chronological age.

Even more fascinating, there are outliers on both sides of the equation. Scientists have now affirmed that there are people who are 10 to 20 years older or younger biologically than they are chronologically when you analyze their biology and their function. Now, I personally just got to do this testing myself, and it was surprisingly simple. They were able to analyze over

100 of my most pertinent biomarkers. When it comes to biological aging. They analyze various hormones like thyroid hormones, stress hormones, sex hormones, and more. Immune system parameters. Metabolic health markers like insulin, leptin, hemoglobin A1C, and more vital nutrient markers, advanced cardiovascular markers, performance markers of my major vital organs and so much more.

And with all of this incredible data, they were able to provide me with the most accurate assessment of my biological age. And when I got my results back, I was pleasantly surprised and happy and affirmed to see that I'm over seven years younger biologically than I am chronologically. Now, of course, you might be like, why was I surprised? I live what I believe to be a healthy lifestyle. But the thing is you never really know until you check. Because one of the things that was actually discovered in this analysis is that I was deficient in one of the most powerful nutrients that controls or influences all these other factors that have to do with my immune system, cardiovascular health, and just overall biological aging.

I had no idea that I was lower than I should be, and by addressing this one key biomarker, the researchers were affirming that I can be potentially three to five years younger over time, over a few months of getting this deficiency addressed. Now some people have slower methylation receptor site stuff might be going on. Just genetic variations in how certain nutrients are being absorbed and utilized by our bodies. And so this is why testing like this is so valuable. Now, if you're wondering how to find out what your biological age is for the first time, this incredible testing is available to the public. And the same thing has been seen with nearly everyone.

When they find out where they can improve, they improve. And after getting testing and utilizing this resource, 81% of people were able to reduce their hemoglobin A1C by an average of point 44 percentage points. 79% of people significantly reduce their fasting insulin. And 84% of people reduced their triglycerides by greater than 150. And these are just some of the incredible results. People are learning how to get biologically younger and slow down their aging process with this personalized information. And I'm so grateful that we can now get this testing from a company that we can trust. I got my analysis done with the amazing team at Levels.

SHAWN STEVENSON: I've been utilizing continuous glucose monitors from levels and support from their phenomenal team for years, but now the Levels team is giving us access to the very best comprehensive lab testing in the world. Now when you purchase an annual Levels membership, you'll receive a free 28 marker cardiometabolic test every year and full access to the Levels app. The app offers personalized feedback, food and habit tracking recipes, educational content, along with the ability to track trends, set goals, and measure progress across key health markers. It's really in a league of its own, and here's the most amazing thing. You can also upgrade your membership and purchase the expanded panel, and that's the one that I got done with over 100 biomarkers and the most accurate assessment of your biological age.

Again, you had a free 28 Cardiometabolic test done included with your Levels membership, but you can purchase this upgrade as well. It's gonna give you more insights into your nutrient levels, stress hormones. Again, these chronological aging markers and more the levels team is absolutely amazing, and right now when you purchase their annual membership, you'll get an additional two months for free when you use this exclusive link levels.link/model, go to levels.link/model. Right now you're gonna get two months free and you're also gonna receive a free 28 marker cardiometabolic blood test each year. Full access to the Levels app and so much more when you utilize this very special opportunity. That's [Levels.link/model](https://levels.link/model). L-E-V-E-L-L-I-N-K/M-O-D-E-L. Take advantage.

And remember, your chronological age is not changeable, but your biological age is. And the only way to know where you stand from your hormones, to your metabolic health markers, to your cellular nutrient levels and more is to actually test and see. It's never been more important for us to take ownership of our health and to truly be empowered. So keep learning, keep testing, and most importantly, keep applying. You know, again, knowledge is not power. It's potential power. Taking this data and doing something with it is where all the real magic resides. And that leads us to number three on this incredible list of seven science backed things that can slow down our aging process.

And number three is to improve our microbial diversity. A fascinating study published just last year in the journal Aging and Disease, found that targeting the gut microbiome can

potentially slow down the aging process. The researchers detailed how our microbiome impacts several hallmarks of aging, like skin aging, vascular aging, immunosenescence, muscle loss, and much more. The scientists revealed that there are specific characteristics of our microbiome that are linked to a longer life and a slower biological aging process. One of the most important and beneficial characteristics noted was having a higher level of species diversity in our microbiome. They also noted that we can have a slower aging microbes and our slower aging microbes were found to have quote, balanced composition with dominant ratios of largely beneficial bacteria and a lower ratios of potentially harmful bacteria.

Additionally, the researchers found that the microbiome makeup of centenarians people who lived to be 100 years or older, their microbiome makeup was more similar to young people who are decades younger than them, than to the general elderly population. Essentially, their gut microbiome makeup was more youthful. Again, why is the health of our microbiome so impactful when it comes to our rate of aging? Well, the researcher stated, " age-related changes in the gut microbiota not only impact gut health. But also extend to other physiological systems, including the brain, bones, muscles, immune system, and vasculature."

The bottom line is our microbiome is one of the most powerful controllers of the other organs and systems and our bodies. It's all connected. This meta-analysis also documented that there are specific bacteria that are closely linked to protection from specific diseases as well as bacteria related to higher risk of chronic diseases. And as their data indicates, the most important hallmark of a healthy microbiome that slows the aging process is diversity and dominant ratios of largely beneficial bacteria and lower ratios of potentially harmful bacteria. Notice I did not say that there are no harm harmful bacteria. Because everything has its role.

It's just about things being in balance. There are potentially harmful bacteria that have very important and valuable benefits to human health, but if populations of that bacteria become too high or things are out of balance that can't keep those bacteria in check, that's when we can manifest certain symptoms. And so having this black or white, good or bad has led us into this age of rampant antibiotic use and this mission to destroy bacteria. Now, this is thankfully changing, but we've gotta be more proactive than ever because it is our bacteria that have a

huge impact on our rate of aging. So what do we do to promote this diversity of our gut bacteria that is indicated in this phenomenal study?

Well, the answer resides in another recent study published in the International Journal of Obesity, and it revealed that a higher diversity of gut bacteria is directly correlated with less weight gain and improved energy metabolism, independent of calorie intake and other factors, and the key driver of your microbiome diversity. It is diversity in your food. Every food that we eat is feeding different microbes and potentially starving other microbes, and it's looking at food through a new lens and understanding that when you're eating a food, you're not just eating food, you're eating information, you're eating data, you're eating that food's microbiome as well.

All of our foods have an array of different nutrients that come along with them, of course, and they're gonna be feeding as prebiotics, our bacteria, our gut bacteria, right? We consider these to be friendly flora, or sometimes they're referred to as probiotics, and our gut bacteria then make postbiotics in us for us, making valuable nutrients based on this incredible chain of events. And so when we're eating a food, we're also eating that food's microbiome. When you're eating a blueberry, you're eating that blueberries, microbiome, the bacteria profile that comes along with that blueberry plus what it's feeding that's already there within us, and getting those benefits that chain.

When you're eating an avocado, you're eating that avocado's microbiome. So more diversity in our foods, least to more diversity in our gut bacteria. Also, it's remembering that we are a part of nature and life on this planet has seasons. Right now, those seasonal changes can be minimal or they can be very extreme based on where you are on the planet. But there are seasonal changes and nature tends to present foods at different times of the year. Whereas today, of course, we could eat practically whatever we want whenever we want. Time of year doesn't matter. But if we can return to our roots just a little bit more, this doesn't mean you can't eat your favorite foods when you want to and eat them frequently, but do your best to eat more seasonal foods because one of the most surprising things seen regarding diversity in the microbiome is that your gut bacteria can actually change drastically based on what time of year it is.

SHAWN STEVENSON: Stanford University researchers revealed that healthy hunter gatherer tribes have been found to have a microbiome shift that is in sync with seasonal changes made to their diet. The researchers concluded that gut microbes and digestion is cyclical and in sync with a precise bio rhythm of nature in a natural human setting. With that being said, another tip here to support our microbiome diversity and to support our metabolism is to purposefully eat more seasonal foods. And a great way that we can do this is if you're unfamiliar with what's seasonal in your area, there's a great guide online, totally free. We can look up your area and see what's in season, and the website is [seasonal food guide.org](http://seasonalfoodguide.org).

I've used it many, many times over the years and it's gotten me to also experiment and try foods that sometimes I didn't even ever think about. Sometimes I didn't even know what those foods were. This is where I found out about Cherry Moya, for example, and just trying these new incredible foods and also were getting those new inputs that sometimes can activate really incredible benefits when it comes to our metabolic health and our rate of aging. And one more study that I wanna share on the same topic was published just this past summer and it was titled Association of a Dietary Index for Gut Microbiota with Phenotypic Age Acceleration. And it highlighted more of these specific diversity supportive foods can be. The study found that people who eat a wider variety of gut friendly plant foods like.

Broccoli, avocado, chickpeas, coffee cranberries, green tea, and fermented foods. This was really a hallmark of having a more diverse gut bacteria profile. So our action steps here are to, number one, be intentional about adding in a proactive diversity of different food inputs. Tip number two is to proactively eat more foods that are in season. And tip number three, we're going to get a super input of beneficial bacteria support when we're eating fermented foods. So be proactive about adding in about five to seven servings of fermented foods each week. Alright, so those are our tips, and that was number three on our list. We're gonna move to number four on our list of seven science backed things that we could do to slow down our aging process.

And number four is meditation. Researchers at the University of California San Francisco have uncovered that meditation can have a major impact on your lifespan. The study titled Can Meditation Slow Rate of Cellular Aging, found that meditation can protect and even extend

the length of our telomeres. And one of the authors of the study, Dr. Alyssa Epel, was right here on the Model Health Show, and she shared with me that stress and inflammation are two of the most notable forces that cause and even accelerate our cellular aging. And this is where meditation appears to have some remarkable benefits in slowing down the aging process.

Numerous studies demonstrate that meditation can protect the body against the pro aging effects of excess inflammation. Not only that, a recent report published in *Frontiers in Immunology*, found that meditation can actually downregulate genes associated with inflammation. As for dealing with stress, Dr. Epel and her team detailed how meditation is effective for reducing daily cortisol levels, decreasing blood pressure, improving heart rate variability, and most importantly, meditation appears to help people better associate with and process stress by making positive changes to the brain and nervous system.

Now, what about the impact that meditation can have on telomere length? While one of Dr. Apple's co-authors on the study, Dr. Elizabeth Blackburn actually won the Nobel Prize for her discovery of telomeres, an enzyme that has the ability to potentially add length back on to our telomeres and numerous studies now affirm how meditation can protect our telomeres in a variety of ways. A study published just last year titled *The Effect of Meditation on Telomeres and stem Cell* detailed The Potential Benefits Meditation has on increasing telomeres activity and reducing oxidative stress that can damage telomeres. While another study published in the *Journal Cancer*, looked at real world applications of this. The study monitored the telomere length of 88 distressed breast cancer survivors who were randomly selected to participate in either mindfulness meditation, supportive group therapy, or no additional interventions.

After a three month study period, it was found that cancer survivors who implemented either meditation or the expressive therapy had no additional loss in their telomere length. While the telomeres of cancer survivors who did not participate in either of these groups, their telomeres got shorter. So what is our action step here to utilize this powerful inner technology that we all have? Well, it's never been easier, yet less utilized, yet more valuable than it's ever been to practice meditation. There are so many different forms of meditation,

and there isn't a cookie cutter way to go about this. But the key is for us to experiment, to find what feels good for us, what works for us. There are mindfulness meditation practices.

There are meditation practices that focus on utilizing various forms of breathing. There are meditation practices that utilize a mantra. There are moving meditation practices. There are seated closed eye meditation practices, meditation practices where you're lying down, where you are moving through space. There are meditation practices where you're visualizing what's going on within your body. There's so many different forms of meditation, but the key is, again, a practice. It is more valuable, and here's tip number one. It's more valuable to practice meditation consistently, even if it's five minutes a day, than to randomly have a hour long meditation session once a week or once a month.

Not to say that those things are not valuable, but it is laying down that neuro association, laying down that wiring by doing it consistently. Quantity and quality both matter here, but again, even if it's five minutes a day. Make this a mandate. It is so valuable today, more than ever. And one of the greatest benefits that I found with the meditation practice is extending that space between stimulus and response. Extending that space between what's going on out here in the external world and my response to it so that I can show up better and make choices where I am responding rather than reacting. It's one of the greatest gifts that I found, and again, it's really helped me to healthfully approach stress to better associate with stressors and to metabolize these stressors and help to get them outta my system to let things go.

And so make it a mandate to maybe download a meditation app, maybe a guided meditation. It's gonna be great for you. Maybe going to a structured meditation class. You could do some online training. There's so many different. Forms of meditation. We've done several episodes about meditation here on the Model Health Show. We put a couple of them for you here in the show notes. But again, this inner technology can slow our rate of aging. It's immensely valuable. So find something that works for you, that feels good for you and make it a practice. And tip number two, to utilize within that is to ideally find a consistent part of your day where you are adding in your practice.

SHAWN STEVENSON: So again, we're looking for those rhythms. Your body's always looking to sync things up. So maybe that's five minutes in the morning that you're doing 5, 10, 20 minutes, whatever it looks like for you. Maybe it's in the afternoon, maybe it's around lunchtime, you know, maybe it's in the evening to wind down. But try to find a consistent spot if you're going to take that minimum effective dose approach, right? Find that consistent spot. But also, here's the thing, it's very similar to going for a walk like. There is very rarely a bad time to go for a walk, alright? Unless you're on the streets of GTA. Alright, grand Theft Auto out here.

You might not want to go for a walk at just any old time, alright? But if we're not in that scenario, going for a walk is great for us, you know, so often in the day. And the same thing holds true with meditation, but ideally, find a consistent spot for it. All right, moving on to number five on our list of seven things that slow down our aging process. Number five is building muscle. A remarkable study titled Resistance Exercise reverses aging in human skeletal muscle. Was published in the Journal plus one. The researchers recruited 25 healthy elderly people with an average age of 68 years in 26 young adults with an average age of 24 years and collected their genetic data.

They also took muscle biopsies from most of the participants as well, which is really cool. The elderly participants were put onto a structured full body strength training program for 26 weeks. The researchers had them do just two strength training sessions each week and progressively increase the amount of weight they lifted as they got stronger. At the end of the study, the authors identified 596 genes that were differentially expressed between the two age groups. After compiling all of the data at the end of the 26 week strength training program, listen to this. The researchers found that 179 genes associated with age and exercise showed a remarkable reversal in their expression profile.

This means that resistance training not only can slow down the aging process, but also reverse the aging process at the genetic level in some instances. The genetic expression of the elderly individuals became similar to those of the younger group, and the researchers also noted that mitochondrial dysfunction began to reverse after six months of resistance training. This is crazy. This is so powerful. And this is something that we can do no matter

where we are in our life. Now the question is, how is resistance training able to do this? How is building muscle able to do this? Well, muscle is incredibly protective for our metabolic health. It's our body's primary site for glucose disposal and clearing glucose from our bloodstream.

It's going into our muscles if we got it. And it's a direct defense against insulin resistance, which is strongly considered an accelerated aging condition. Muscle protects us against accelerated aging. Also, muscle, and this is one of the maybe captain obvious things, but kind of not, muscle is immensely valuable in functionality as we are aging. Muscle is incredibly important for our ability to move, to move with grace, and to move safely and to also maintain a level of power in our movement. Also, muscle is a reservoir. It is like a storage unit for what are considered to be anti-aging hormones. When we have muscle, it becomes a reservoir to maintain these hormones and to release them as needed.

And lastly, the last one I'll share, there's so many other things about this, but it's the impact of the myokines and these powerful signaling molecules are released when we are contracting our muscles, when we're contracting our muscles. With purpose, we can really have an uptick in the myokines that we are releasing, hitting the scientific sphere with more and more evidence affirming how these myokines are impacting our brain health, our cardiovascular system, our immune system, the health of our bones. The list goes on and on. Everywhere that they're looking, they're finding that myokines from our muscle utilization is deeply impacting, essentially every aspect of our biology. And so what do we need to do here? We need to move some weights. We gotta move some weights. Be proactive at strength training.

The researchers found it was two sessions a week, two full body sessions a week. We know that it works. You just gotta work it. All right? Shout out to Missy, I guess. But the key here is being consistent. There's so many ways a slice and dice of strength training program, this can be body parts splits. This can be full body training. This can be superset training. We've talked about so much of this and more here on the Model Health show, but you need to be about that life. We've gotta get stronger. We gotta build some muscle and love yourself as well. If you don't like going to the gym and you'd rather do some stuff on your own, if you don't like lifting weights, you'd rather do body weight exercises.

SHAWN STEVENSON: You can get a lot of bang for your buck there as well. Now, there can be an argument for efficiency and effectiveness. The bottom line for us is again, just proactively working our muscles by utilizing resistance, and our body can be used in a myriad of ways to provide resistance. So do what feels good for you, or at least something that you can find some value and enjoyment in that enjoyment factor really does help with consistency and being able to utilize this for a lifetime.

And the last tip here is to make sure that we are utilizing all of our muscles. The days of skip and leg day are over. All right? That was an era, okay? That was an extinction level event that has happened. Okay? The reverse Tyrannosaurus Wreckx folks, they're done. Okay? So the reverse means like, 'cause the Tyra Assor, you know, they got the little arms, but they would have the little legs, the, the human version of it with the flip, nevermind. Bottom line, train your whole body. There's so much value, especially in those major movers with our leg muscles. We got studies specifically fighting that working your legs can produce more beneficial hormone change than just about anything else that you do. So work all your muscles, show all your muscles some love, and again.

We are covering seven science backed ways to slow down your aging process. We're moving on to number six on this list. Number six on this list, and this one is incredible way do you hear this study. Number six on this list is to drink tea. A study published in the peer-reviewed journal The Lancet last year. This is a new study, found that people who regularly drink tea age slower than people who do not using clinical biomarkers to determine biological age and following thousands of participants for up to four and a half years. The researchers found that one, transitioning from not drinking tea to being a tea drinker was associated with a decrease in biological aging.

Number two, even stronger associations were found for people who are consistent tea drinkers. And number three, the research suggests that drinking around three cups of tea per day has the most anti-aging benefits. Now, as you might know, there are a wide variety of teas that have been utilized for thousands and thousands of years by humans from green tea to ROAS tea to more herbal teas like ginger tea. There's so many different types of teas that we can utilize, but there are certain teas that are well established to help us to slow the aging

process. And speaking of one of the most validated teas for this purpose, a study published in the journal Clinical Interventions and Aging took 59 overweight or mildly obese subjects to see if the traditional tea called Pu erh makes a notable difference on weight loss.

The randomized double-blind placebo controlled trial had participants receive either a placebo or Pu erh for a 20 week study period. There were no other interventions noted. Here's what happened. The researcher stated, "consumption of pu erh was associated with statistically significant weight loss when compared to placebo. Fat loss was seen for arms, legs, and the hip and belly region." The participants who received pur air lost more overall body fat, and we're talking about slowing our rate of aging. They maintained their muscle mass. So many haphazard weight loss attempts and programs, people are losing a lot of their muscle.

We wanna protect our muscle with vigilance, with passion because we know how important this is for slowing down our rate of aging. So pu erh is actually the tea that I drink most often, but teas listen, especially today, you wanna make sure that you know where you're getting your teas from. There are a lot of sketchy things in the tea industry, unfortunately, let alone the whole microplastic issues. Toxicants, the only pu erh that I drink is triple toxin screened for purity and made through a patented cold extraction technology that makes it as effective as what is noted in these studies. It's wild harvested, so it's truly the best pu erh on earth, and it's from the incredible folks at Pique Life.

Head over to piquelife.com/model and you're going to get up to 20% off plus some limited time free bonuses, like an electric frother to mix your favorite beverages, and you get to try peak tea's risk free with their 30 day money back guarantee. You'll either love it or you'll get a full refund. So again, check them out, take advantage. Go to piquelife.com/model. That's P-I-Q-U-E-L-I-F e.com/model. Become a tea drinker and if you already are a tea drinker, let's up our cups. Alright, be more consistent in our tea consumption. I'm a big fan of drinking a variety of different teas, but Pu erh is definitely my favorite. So that was number six on our list of seven science back ways to slow down your rate of aging.

SHAWN STEVENSON: Now we're at number seven, and number seven is especially powerful and I'm so grateful to be able to share this with you. I've got a little something special that comes along with this one. Number seven is to having a youthful mindset. For over 40 years, Dr. Ellen Langer has been conducting experiments to study how our thoughts and our beliefs affect our biology. Dr. Langer is a world renowned professor of psychology at Harvard University, and she shared with me here on the Model Health Show that our minds have an instantaneous impact on what all of the cells in our bodies are doing. In fact, one of her earliest studies revealed that our thoughts about ourselves and our environment can slow our rate of aging and even make us biologically younger. I'll let her describe the study for you right here.

DR. ELLEN LANGER: Okay, so this was the first test of the mind body unity. Remember, we take the mind and body, we put them back together in our minds. Then wherever you're putting the mind, you're necessarily putting the body. So he took old men. This is back in, I think we read this in 1979, so quite a while ago. And, what we were gonna do was to have them live as if they were their 20 year old younger selves. Okay. And, they lived in a retreat that was retrofitted to 20 years. It wasn't quite Hollywood. I didn't have the budget for that, but anything that was a marker of it being today was removed, replaced with books, magazines, and posters, everything from the past. And to talk about past events as if they were just unfolding.

So as well as we could, we went back in time for them as a result of this. It was remarkable. As a result, the hearing improved. When have you ever heard an 80 year old's hearing improve without medical intervention or even with medical intervention? Their vision improved their memory, their strength, and they look noticeably younger by the end. If you believe that there's nothing you can do to help yourself, then you're not going to do anything. Yeah. And if you believe that you're dying, the system starts to turn itself off. And that we can exert enough control just by assuming that we are going to be better. You organize yourself differently. You know, you, you're more mindful, and I've got four or five investigations showing that when people are more mindful, they live longer.

SHAWN STEVENSON: Again, the results of Dr. Langer's experiments are astounding participants simply by changing the way they think. And associated with the world around them led to improvements in vision, flexibility and dexterity, improvements in iq, improvements in overall cognition, improvements in their gait, improvements in hearing, and even their faces appeared to be visibly younger and they utilize a really high quality study to be able to tell this. After just one week of thinking younger, Dr. Langer shared with me that thinking younger led to changes in their brain and neurochemistry that changed the behavior of all of their cells. Our thoughts literally change the chemistry in our bodies instantaneously, our thoughts, thinking of things that are stressful, that are riddled with anxiety and disempowerment.

These thoughts alter instantaneously the chemistry in our bodies. That's why we feel the way that we feel. We have a powerful pharmacy that is built in, and it is the most powerful pharmacy because it makes these compounds specifically for you, built for your receptor sites to change how you feel. And so the same thing holds true with thoughts of empowerment, with love, with gratitude, with joy, with peace, we can choose our thoughts. We have agency regardless of what's going on in the world. We have the ability. That's what makes us so special. We have the ability to change. Our perception to change our thinking regardless of our circumstances. Now, it might not be easy, but we have the power to do it. It might not be easy, but we can train ourselves to do it.

This truly is our most powerful place of focus because it is our thoughts and our beliefs that control our behavior. We talked about a lot of behavior changes here in this powerful masterclass, but it's all rooted in how we think and what we believe. If we change our minds, we change our bodies. If we change our minds, we change our world. Some of the tips here, if we're wondering like, how do I change my mindset? Immersion is such a powerful tool, listening to things that help us to change our thinking. Watching certain things, listening to powerful podcasts like this can help us to retrain the way that we think and how we interact and perceive the world around us and our place in it.

So immersion is a very, very powerful tool, and it's never been easier to utilize technology to get us connected to those messages that make us feel empowered and think the way that we

want to think. Another tip and tool here is to utilize a visualization, especially if we're talking about these seven things that are proven to slow down the aging process. We can use visualization to see ourselves doing the things that we associate it with youth, with vitality. We can see ourselves do it, and our brain and nervous system are responding accordingly. We are changing our biochemistry and it is so powerful. We got tons of studies on visualization as well.

We'll put a recent episode with Maya Riachoora that was powerful. She's the mindset trainer at Nike, and this is something that we have this, again, internal technology to be able to change our biology. So having a practice is the ki though, a practice of visualization. Tip number three is to stop blaming things haphazardly on age. I see this all the time. It is so crazy to me. But of course I get it. I understand it. Kids get hurt. If a kid is playing a sport, you know they're playing their favorite sport and they get injured, we'll just say they get an injury to their shoulder, right? They get a shoulder injury, you just chalk it up to getting an injury and they set out to heal from it, and they get back to doing what they love once you reach a certain age.

Many people haphazardly start blaming it on age is the reason they're getting hurt. I've seen this firsthand where a parent in the household, in this particular family that I love, the parent got an injury and blamed it on age and one of their kids got an injury and didn't, they didn't think nothing of it. They didn't relate it to age at all. Okay. Equally severe injury. But for the parent, instead of it just being like, I just got injured doing something I enjoy doing, let me do some rehab and get back to doing that thing, we sometimes will use that as a bookend that this thing is no longer for me. And so now of course things can change.

Obviously when you are changing biologically, we can slow this process down. Alright. LeBron ain't jumping like he did. He's still jumping. No, he's still jumping out the gym. But he, he, he's not dunking on, you know, seven people. You know, the team only has five people. He call over two off the bench. Come, I need seven people to dunk on. Now he's dunking on just like one, one and a half. All right? So things do change, but we've gotta stop haphazardly blaming things on age. Last tip here is to do youthful things. See the world through a more playful

lens. That's what kids do. That is the most youthful cheat code ever. Kids see the world through the lens of play.

Alright, so see more opportunity. You know, it's, it's not uncommon to see me. If you see me out walking, I might be walking on a curve, like, like it's a tightrope. All right? I'm just out here and I'm, and I'm like, of course, some people might be looking like, what is this guy doing? But I see the world through the lens of play and opportunity. Alright. And you know, especially again, having kids, like it's really easy for us to like do silly playful things when we're just out and about living life. And so never lose that. We've gotta reframe those messages that many of us get in our culture. I know that I grew up with these messages of, stop playing, don't play with me.

You play too much. You know? And these are things that I would say, of course, but this is programming you that play is bad, you know? And there's some kind of context where play is okay, you know, when again, we gotta reframe and take back our connection and our ability to play. And a great example of this is my mother-in-law. And if she's with us, she's playing all right. Whether it's going to the miniature golf where she's low key, good at it, which she don't, she don't ever play golf, but she just, it's the meditation, I guess like she's the only one that got a hole in one. The last time we all went out for the miniature golf, it was crazy, uh, whether it's working out, lifting weights, hiking.

We went to Mexico. She did the zip line with us. I know. She was like, what are you, she's from, she's from Kenya, and I know she's listening right now. She's like, you people, what are you doing? You know? She's just like, what are y'all? You get to just get on this thing and just, just go all over this forest. She did it all right. She zipped it up, zipped it, got hooked up, did the zip lining, and most recently we went to an arcade together. It was, it was random. All right. I spotted the arcade, but we were just, we all were having dinner and I spot an arcade. I was like we gonna go in there and it was like a you, you pay one fee and you could play everything unlimited.

So we went into the arcade. She's coming along. I know all the, all the noises, whatever. Definitely was like something she was not used to. I'm not even used to that no more. But she

got up in there, she was playing the air hockey, playing a little video games. She did arcade punching game as well. You got that kind of glorified modified speed bag that you punch. She did all the things 'cause she's with us. She's playing, she's having a good time. She is invested in her youthfulness and she's such a inspiration for me and for so many. And so there's this powerful quote, and I love this quote so much. We don't stop playing because we get old. We get old because we stop playing.

So, retain, cultivate, practice, having a youthful mindset play. Have fun. I appreciate you so much. If you got a lot of value outta this, please share this out with people that you care about. YouTube, leave a comment below and let me know what your favorite one of these seven powerful science back ways to slow down your aging process is, and make sure that you are subscribed because we've got some incredible masterclasses coming your way very, very soon. I appreciate you so much for tuning in. Again, share this out with somebody they care about. This information is priceless. It's invaluable. We've got so much data on this. And this is something for us to take control of, to be proactive about and to be empowered. We got some incredible masterclasses and world-class guests coming your way very, very soon.

So make sure to stay tuned. Take care, have an amazing day, and I'll talk with you soon. And for more after the show, make sure to head over to the model health show.com. That's where you can find all of the show notes. You can find transcriptions videos for each episode. And if you've got a comment, you can leave me a comment there as well. And please make sure to head over to iTunes and leave us a rating to let everybody know that the show is awesome and I appreciate that so much and take care. I promise, to keep giving you more powerful and powering great content to help you transform your life. Thanks for tuning in.