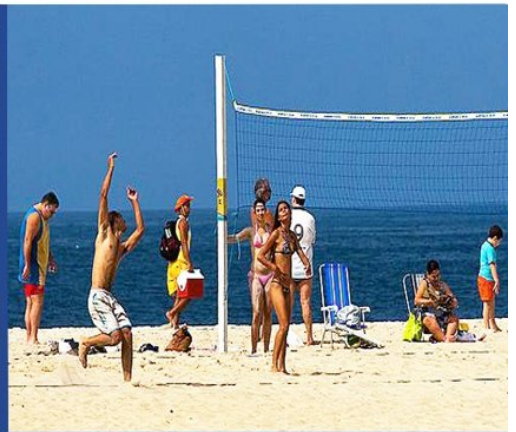


**2011**

# Breakthrough "Reverse" Aging Teleconference

**Can 100 Be The New 50?  
Get 7 Steps You Can Execute Today!**



# Table of Contents

<b>The Expert Panel</b>	<b>Page 3</b>
<b>Introduction</b>	<b>Page 5</b>
<b>Secret #1–Treat Your Telomeres Right</b>	<b>Page 8</b>
<b>Secret #2–Deflate Inflammation</b>	<b>Page 12</b>
<b>Secret #3 &amp; #4–Fight Oxidation &amp; Exercise Smart</b>	<b>Page 14</b>
<b>Secret #5 &amp; #6–Caloric Restriction &amp; LDL/HDL Levels</b>	<b>Page 20</b>
<b>Secret #7–Eat To Fit Your Genetic Code</b>	<b>Page 22</b>
<b>The Future Of Anti Aging With Aubrey De Gray</b>	<b>Page 26</b>
<b>Conclusion</b>	<b>Page 28</b>

## Your Host



### Greta Blackburn

**Ms. Blackburn has Co-Chaired the Manhattan Beach Project - Longevity Summit which featured leading researcher in fields ranging from stem cell technology to artificial general intelligence (AGI) and nanomedicine and beyond. She also co-authored the "Immortality Edge" the layman's definitive guide to Telomeres.**

## Your Panel Of Experts



### David Kekich

**David is the CEO and Founder of the "Maximum Life Foundation" a 501(c)(3) corporation dedicated to aging research and curing aging related diseases.. He is also a prolific writer, writing the Life Extension Express among other books.**



### Dr. Joseph Mercola

**A licensed osteopathic doctor, Dr. Joseph Mercola founded the most widely visited natural health website on the planet and also authored two *New York Times* Bestsellers, *The Great Bird Flu Hoax* and *The No Grain Diet*. He is a champion of all that is Natural Health and we are honored to have him on our broadcast.**



### Dr. Aubrey De Gray

**Dr. De Gray is an English author and theoretician in the field of gerontology, and the Chief Science Officer of the SENS Foundation. He is editor-in-chief of the academic journal *Rejuvenation Research*, author of *The Mitochondrial Free Radical Theory of Aging* (1999) and co-author of *Ending Aging*.**



## **Dr. Bill Andrews**

**Dr. Andrews, is former director of molecular biology at Geron Corporation. Andrews founded Sierra Sciences in 1999 in Reno, Nevada with the goal of preventing and/or reversing cellular senescence, and ultimately curing diseases associated with human aging, including the aging process itself.**



## **Robb Wolf**

**Mr. Wolf is an author and host of an internet podcast called The Paleolithic Solution, with Andy Deas. The podcast focuses mainly on Paleolithic nutrition, Paleolithic lifestyle and exercise. He is also a co-owner and coach at Norcal Strength and Conditioning in Chico, CA. He has an education and work background as a research biochemist and as an athlete.**

**Our CEO and Founder:**



## **Cliff Fontenot**

**"Lived a mostly private life until a cancer death struck one close to him, he then started looking into the numbers on cancer and how it could possibly be avoided. In the last 3 years he realized that aging and cancer had many similarities and he devoted almost all his time into the field of "anti-aging" . His talent for bringing the right people together, led to this breakthrough "Reverse" Aging Tele-Conference, and resulting in the formation of 100 the new 50 – Anti Aging Society, LLC with partners. This better serves his goal to live his passion for health and finally succeeding in achieving a longer cancer "free" life for all of us."**



## Introduction To The Tele-Conference



**Cliff Fontenot:** Hi this is Cliff Fontenot, Founder And CEO of the “100 The New 50” Anti Aging Society. Just wanted to take this opportunity to welcome you and let you know you are in for a real treat. I believe you are going to go away from this with a new understanding of what aging is and what aging isn't. With that, I'm going to turn it over to your host... Greta Blackburn... Greta would you take it away?



**Greta Blackburn:** Hey there! We've got all kinds of storms going on here on the East Coast, and craziness, but I wanna welcome you to the One Hundred the New Fifty Tele-Conference, that's the subtitle. You can call it New Aging. I'm Greta Blackburn, I'm co-author of a book that some of you have read called The Immortality Edge and I'm your moderator for tonight's event. Now, I've moderated scientific think tanks for the past years, but those events were for insiders, scientists, researchers. Tonight, we're bringing all the latest information to you. Baby boomers, and others, some of you are even anti-aging docs on this call and I know that. And we want to shorten the learning curve.

We're gonna provide you information from the perspective of the top experts. So this is all about shortening your learning curve, cutting to the chase. The first thing I want to do right at the top is I want to thank you all for taking the time for this tonight. You know, the good news is that by spending this hour or so with us, you're going to actually earn yourself more time. More vital, energetic years to spend with your family, your friends, loved ones, and more quality of life in terms of less aches, pains, and that creaky stuff that drives us all nuts as the years roll by. You're going to look better and feel better as the years go by, and probably even enjoy better sex. There, I said it.

More on that later, but now that I've got your total attention, have sent us questions and we've got them lined up on the docket in here and we're gonna get those locked and loaded and answered.

Now, first thing I'm going to recommend. You're going to want to write this stuff down and take notes, because we've got a dead run here here pretty shortly and you don't want to miss out on any of the information. Get a pen and paper, power up the iPad, because you don't want to forget even one of the seven secrets or steps to fighting growing old that we're going to outline tonight. So please write it down and it's also a great way to lock it into the old mental bank.

I'm gonna jump right in here. We've got some questions that I want to address right off the get-go before we introduce anybody else. From Consuelos in Seratoda Springs, Utah: “What would be the best routine or lifestyle to achieve success with anti-aging?” Well, funny, Consuelos, because that's what this whole hour's about. By joining us on this call, we consider Consuelos and all of you members of our club, the One Hundred Is The New Fifty Society, and we've got people on board tonight, I'm going to tell you, from at least 25 states and counting, including: Kansas, California, New York, Nevada, Indiana Ohio, Pennsylvania, New Jersey, New Georgia – a new state, I just invented it; and from countries ranging from

Canada, Spain, Mexico, New Zealand, India, Denmark, France, and even Romania.

Now the key, as you're going to learn tonight, to all of this anti-aging longevity stuff is first of all, knowing what's out there and what's available, and knowing what really works. You're probably here to get the bottom of it all and sort it out and simplify things, and we like to say, the time to get the map is before you enter the woods, so getting into this stuff a little bit ahead of time before it's a real necessity is a great idea. Vince in Minneapolis wants to know what are the most important foods and supplements we should consume daily. Guess what? That's gonna be a big part of the hour, so those are some quick questions, but first, who's joining me on this call?

Okay, I've got David Kekich, he founded the Maximum Life Foundation more than twelve years ago, you're gonna hear from, and I know some of you are big fans of his and that's why you're here tonight. Dr. Joe Mercola, the internet holistic doctor and superstar of alternative medicine; Aubrey De Grey, is even at his young age, a legendary member of the longevity movement and the founder of Sens, S-E-N-S, for those of you who don't know what that means, you will soon; and we've got Dr. Bill Andrews, and I know from the questions we've gotten so far, that some of you are here to hear what he has to say about telomere biology. He's a key figure in that world. Some of you saw that big press release a couple weeks ago saying, "Do you really want to know how long you'll live?" because there are tests that give you the length of your telomeres and you can extrapolate out pretty much how long you're expected to live. Our answer is yeah, you want to know, because guess what? There's stuff you can do to change that. Bill is the co-discoverer of the important H-TURT GENE. This is heavy scientific stuff, but within that, there's practical, useful stuff as well, and you're about to learn that.

Now the seven secrets or the seven steps you're about to learn can be started right now, tonight. I mean, that's what's so exciting for us about this and we're all on a mission and this isn't about some, you know, a year from now, two years from now, I can't figure it out. We're gonna give you some tips you can start doing tonight, tomorrow, to add life to your years and maybe even years to your life. These have all been proven to be effective, safe, and more than worth the time you're taking tonight. And by the way, thanks again for that time. Thanks so much. We're so sure that what we have to tell you will provide tremendous value to you, that we're also going to be giving away a free special gift if you stick with us to the end, so more about that later.

Here's what you're going to hear tonight, brief rundown. And again, pen and paper is handy. You'll learn about the exciting world of telomeres, however you want to pronounce it, and their importance to living a longer, more healthy life. Again, do you really want to know how long you're going to live given the length of your telomeres? Yeah, you probably do. We've got some great questions for Bill. Supplements, it's confusing. There's this for that and there's that for this, and it becomes a career trying to sort them out. You've got to be a PHD to know what to take. We're going to put to rest for once and for all why you need to take which supplement via the longevity, and we're going to talk about the ones that work best to slow aging. We're going to cover ground about exercise that saves you hours each week, rejuvenates your body, stimulates your own growth hormones, builds endurance, and keeps you lean and mean for decades to come, and there's so much more. So, don't forget we've got a special free gift for you, it's really a great offer. And if you give us your time tonight, we're going to give you this little gift, and we want you on for the entire call. And we also have a special offer

for all of you to help making this beyond easy and we're gonna explain that later.

But first, a little housekeeping. We do not offer medical advice, this is for informational purposes only. If you have a disease or condition or if you're going to start a new diet, exercise, or supplement program, please see your medical professional.

Now without further a due, I'd like to introduce you to my associate and my great friend, David Kekich. David's going to be on board with me for the entire call. Hey, David!



**David Kekich:** Hey! Hi, Greta, thank you for having me.



**Greta Blackburn:** David, first of all, first and foremost, I'm not going to get all gushy on you, but I just want to acknowledge you, David. You know, anybody who knows you, knows that your commitment to this movement, your commitment to, I'm going to call it Nuking Aging, is so extraordinary. It's so powerful, it's so contagious, and you're really an example to so many people. So, I just want to thank you number one, for being my friend and my associate and joining me on this call, and just for being who you are. You're just, you're a cool guy.



**David Kekich:** Thank you, Greta. You're making me blush, but thank you very much.



**Greta Blackburn:** Alright. Well, more importantly now, you're a friend or associate or both, to many of the key scientists and researchers in this field of longevity, and your relationships are another testimony to who you are as a real seeker of the truth, as well as to how outstanding you are as a human being, but from the all about us department, these relationships of yours have also yielded you the pole position to all things new, ground-breaking and cutting edge. And I might mention that your book, [Life Extension Express](#), it's really a manual on what's new, useful, latest, greatest. I know you edit it on a daily, if not minute by minute basis to keep it timely. Nobody does that.



**David Kekich:** Well, yeah. Thank you again, Greta. That's enough about me. I'm blushing too much already. But, no, thank you very much, and I do appreciate all that, and I really have to tell you how much I appreciate you and all of the things that you bring to the table. I could go on and on and on about your commitment to life extension in the community and your connections and so forth and so on, and we make a great team, we're both committed. Fortunately for us, we have a lot of people surrounding us who are so supportive and a lot of those people are going to be on the call, or at least some of them today. And in fact, every one of those is very supportive, we treasure their relationships, and there are so many more and hopefully there will be more of these Tele-Conferences bringing in other guests so you can get to know all the

people involved or most of the people involved in this great movement that's going to be extending our lives dramatically, our healthy lifespans.

But anyway, let's get on with one question before we start anything else. You answered some questions, Greta. I got a question from Vick Jasen prior to the call in London, Ontario, and Vick said, "With all the various bad products out there, how can you tell good science from sudo science, and quality products and services toward longevity? We have quacks and kooks mixed in with Nobel Laureates and respected scientists. Most are not academically equipped to assess legitimacy of claims, of outcome or effectiveness of a nutritional supplement, or an activity or process. How can you better equip the public to combat fraud and quackery in a market that will no doubt be very lucrative and attract all kinds of predatory participation." Well actually it is...



**Greta Blackburn:** What a killer question!



**David Kekich:** Yeah, it is a killer question, and it's very pertinent because some of these people will be coming. There have been snake oil salesmen, and people with exaggerated claims, and deceptive marketing on products that simply don't work, for a long long time. And it's very hard to sort it all out for yourself. One thing you want to do is whenever you see an outlandish claim or something that looks too good to be true, and most of them are, but not all of them are, and a lot of them, the ones that we looked at very closely, and the ones that we support and recommend, are all based on unbiased studies.

Look for a study that is not in-house, that's done by an independent third party, and sometimes that's hard to do because these companies have small budgets, but look for references and studies and data that you can actually believe. If you see something published by a supplement company with their own in-house study, it may be accurate, but it may not be, it may be exaggerated as well. One thing you really want to do is monitor your personal results.

If you're taking any supplements and you're expecting or hoping that they will do you some good, get your blood test monitored regularly and you should be seeing an anti-aging doctor to do this. You can actually see if things are happening in your blood chemistry. One really important thing is what I call "brand name-ism". Find somebody that you can trust in the industry.

Hopefully you can trust us, but we're not vitamin companies or supplement companies. We report them as we see them, and we try to be right with all judgment calls, but "brand name-ism", I mean I rely on people like Life Extension Foundation, over thirty years in the business. They really study everything very very closely, they look for independent studies, they're pharmaceutical grade. So if you can find people like that, Dr. Mercola is a good source. He's starting to bring in some good supplements. There are other people as well. That answers my question, long winded, thank you, but...



## Secret #1 – Treating Your Telomeres Right



**Greta Blackburn:** Dave, this is going to be exciting news for our listeners. I understand that we have Bill Andrews standing by right now, so, let's just intro him. And frankly, no discussion of fighting Father Time would be complete without a basic understanding of telomere biology, and we have the great honor and pleasure to have Bill Andrews, PHD, he's the co-discoverer of the H-TURT telomeres gene, his labs here of sciences in Reno is a virtual incubator of cutting edge research on so many fronts, and again if you go to [www.sierrasciences.com](http://www.sierrasciences.com), you can see what they're up to, and they, like so many of these research labs, are looking for funding, so if you've got a couple mil or even a couple hundred and you want to invest, please go and check them out. Bill is literally after this call racing to his high school reunion, which I think is fun given that we're talking about longevity. Anyway, Bill are you there?



**Dr. Bill Andrews:** Yes I am. Thank you For having me.



**Greta Blackburn:** It's our pleasure. You know what I want, Bill? Because we've got a couple questions. People went crazy sending in questions in advance and I want to cherry pick a couple of them, but could you just in really laments terms, and you're great at this, give just a short overview of of telomere biology, telomeres, and telomerase, what are the basics that people really should know?



**Dr. Bill Andrews:** Well, whenever our cells divide, the tips of our chromosomes get shorter. The tips of our chromosomes are called telomeres. Something else that causes them to get shorter is anything that's related to an unhealthy lifestyle; anything that causes oxidation stress, or inflammation. That also decreases telomeres. It's been shown over the last twenty years that there's a big correlation between the length of the tips of your chromosomes and your age, and in the late 1990's, we were able to show by raising human cells grown in a petri dish, that if we could lengthen the telomeres, the cells actually got younger. The experiment showed that aging wasn't the causing of short telomeres, short telomeres was the cause of aging. Simply by the fact that we were able to re-lengthen them, made human cells in a petri dish younger.

This was still just human cells grown in a petri dish, but boy, some great science that just came out last November, actually published in January 2011 from Doctor Rhonda Penelglad, at Harvard and by the way, Rhonda Penelglad is now the head of the MD Anderson. He showed that by using telomere lengthening technology, he was able to take old mice and make them young again. Now this isn't going to work on everybody's mice, so don't think you can do it with your pet mice. He had to engineer mice to actually age like humans do because mice don't normally age like humans do. So he had to engineer a new mouse that aged like humans with the telomeres shortening, and then re-lengthen them and show that those old

mice became young again. That's the best proof of concept that we've ever seen that says that lengthening the telomeres in humans will actually make humans younger. At the present moment, telomerase activation is at the point at where we can decrease the rate of shortening and maybe lengthen some of the telomeres, such as the shorter telomeres, which would possibly decrease the rate of aging and maybe reverse some of the more severe aging phenomena that we're seeing. Some of the telomerase activators that are on the market now, that I do believe that telomerase activation, i.e. turning on telomeres, is going to be the next big thing in medicine and supplements.



**Greta Blackburn:** And you should know, having co-discovered the H-TURT gene, which a lot of this is all about. Let me ask you something, because here's a good one. This is from Marilyn Fox in Ventura, California. Do the applications of what we know about telomere biology, is there any reason to believe it could help someone with Rheumatoid Arthritis?



**Dr. Bill Andrews:** I'm not a medical doctor, but I can tell you that from research that I've seen, there is correlations between telomere lengths and arthritis. Now surprisingly, ever since we first discovered human telomeres, the number of publications on telomeres and telomerase as they relate to aging has just skyrocketed. Thousands of publications every year from labs all over the world, and a lot of these labs, they are looking at particular diseases and it's just the meaning about every single disease that you can imagine, especially if it has anything to do with cell division and is shown to have a healing reconnection. And for instance, a lot of diseases like Arthritis, like Muscular Dystrophy, Alzheimer's, Cancer, Cardiovascular Disease, all these things have been shown to be more likely, you're more likely to get them if you have short telomeres, and if we can make those telomeres longer, we think that this will help cure some of these diseases and also help prevent these diseases. Yes, Arthritis is one of those diseases that's on the list, and both Osteoarthritis and Rheumatoid Arthritis.



**Greta Blackburn:** Great. So that should make Marilyn happy. Got a question from Lewis Nevania in Boston. The question is for Bill Andrews: "Hi Bill, are there any supplements that you recommend not taking because you've discovered that they actually reduce telomerase expression in your lab screens? Thanks very-" oh I love this. "Thanks much to everyone for this wonderful event." Thank you, Lewis. Now let's give him an answer.



**Dr. Bill Andrews:** There are none that I know of that aren't safe. Of course you don't want to take gasoline or something like that. There's been a few publications suggesting that there are supplements that can interfere with telomerase activity. We have checked every one of them in our labs here, and we have not been able to find that any of them have any significant effect on telomerase activity.



**Greta Blackburn:** Great. Bill, I want to remind people that they can go to [www.sierrasciences.com](http://www.sierrasciences.com) and I've been to your lab, it's impressive. I can't imagine that there's a much better facility anywhere in the country. You've really nailed it and it's state of the art and I know that you guys are on top of what's going on now and what's going to be coming down the pike. I want to thank you for joining us and don't think that I'm not going to be calling upon you again.

We're going to do another of these very soon and I want to get you on board and maybe allow a little more time so we can dig a little deeper. We're going to get a bit of questions after this, I'll hang onto those and get those to you. So hopefully you'll join us on that and good luck with everything you're doing and just thanks a bunch.



**Dr. Bill Andrews:** Well thank you very much and I'm really glad you're putting on this show with all the different things that humans can do right now to improve their lifespan.



**Greta Blackburn:** Yeah, great. And thanks so much and say hi to your dad, Ralph, who's in his eighties and running every day, and amazing. And you're both just, you know, you walk the walk and you talk the talk. I didn't mention to our viewers that you're an ultra runner and your idea of fun is hopping out on a Saturday and running a couple hundred miles, but we'll go into that in a further discussion. So good luck with everything and thanks.



**Dr. Bill Andrews:** Thank you.



**Greta Blackburn:** Bye-bye, Bill.



**Dr. Bill Andrews:** Bye.



**David Kekich:** And Greta, thank you for that great interview with Bill. That was tremendous. It was kind of the expert interviewing the expert because you've actually written a bible on the topic of telomeres, [The Immortality Edge](#).



**Greta Blackburn:** Well thank you for that, and you know what, it's the bible for boomers. How about that? The bible for boomers on that, and thank you. And we quote Bill in the book and we credit him, and all that. Thanks a bunch, David.

## Secret #2 – Deflating Inflammation



**Greta Blackburn:** Moving along, David tell us about secret two.



**David Kekich:** Secret two is be sure to fight inflammation. Let me give you some of the highlights on inflammation. Inflammation is a defensive reaction to assaults on your body and these could be anything like infections, or toxins, injuries. We've all seen and experienced swellings around cuts and sprains and mosquito bites, and this is your body's natural reaction coming to fix the damage, but sometimes it can do more harm than good by destroying your own tissues, right along with any invaders or any assaults. So that would be your chronic inflammation. The problem with that is, it's silent. We really don't know what's going on internally unless we're taking bio-markers, unless we're getting blood work done, and typically you can be highly inflamed and it'll manifest itself into all kinds of diseases. In fact, it's related to at least eighty chronic diseases, it could be conceived as the number one killer of all time, it's one of the huge contributors to aging, it damages your tissue, it ages your entire system.

And if you can reduce it, and you can – you can slash your chances of heart disease and cancer in half. I mean it's incredible what we would do for the health care expenses, but primarily how we could avert and avoid a lot of the suffering, actually most of the suffering that goes on in society right now in medicine. It contributes to Alzheimer's, and Arthritis and Diabetes, I mean, you name it, you're going to find chronic inflammation connected to it one way or another. Now fortunately, we have some really simple ways to control it. Unfortunately, some of these take a little bit of work, and this work is with exercise, that will reduce inflammation. Controlling your weight, that is one of the biggest contributors to inflammation, is being obese. Lowering your blood sugar level, hugely important for any number of reasons, especially lowering inflammation, and reducing stress and adopting a healthy diet. And of course, you're an expert on stress and meditation, Greta.

So, with a healthy diet, one of the things you really want to do is cut back on our grains and dairy and red meat and coffee and alcohol. The inflammation, like I say, it's really a killer. And now the passive ways you can use to control inflammation and I would never suggest that you get away from the active ways like diet and exercise, are taking certain supplements like fish or krill oil, glutathione, and vitamin D3 .



Now fish oil, for example, it keeps your red blood cells slippery, it keeps them elastic. Fish oil is very rich in Omega-3 fatty acids, and that's the good fat that you read so much about and hear so much about. That really lowers inflammation. It fights virtually every disease, it's tremendous for brain and heart function, your immune system, you name it. Fish oil is one of the most important things you could possibly be taking and they have all kinds of studies showing different effects of Omega-3 fatty acids, just by taking fish oil, nothing else. You can cut your mortality risk by thirty-two percent and your overall mortality by twenty-three percent. That's just one simple thing to add to your diet and that's fish oil.

Then you have a lot of drugs that people use to lower cholesterol, for example, and Crestor is one popular one that they use, and fish oil actually lowers your cholesterol slightly better than this drug but no side effects. And that's the key, natural, no side effects, much less expensive.

Then, there's my favorite, which you know, Greta, and that's glutathione. It's a huge reducer for chronic inflammation, and we had a small study taken where glutathione, the protected version of glutathione, reduced an inflammatory bio-marker called c-reactive protein, and more informally known as CRP. CRP is a powerful predictor of Cardiovascular Disease, and it's also a predictor for premature death, and glutathione's low levels are going to be one of the main predictors of premature death.

But in this small study, with people with elevated CRP, this particular glutathione reduced it by an average of forty-two percent in just two weeks. There's no drug that I ever heard of that even comes close to this, and this is totally natural.

Now, glutathione is the natural and the most powerful antioxidant that your cells naturally produce. As you age, you lose your glutathione levels, and it's related to almost every disease, almost every disease or condition you have is going to result in a lower glutathione level or vice versa. You're going to find those two going hand in hand. You can't take it orally and have it be bio-available, in other words, get into your cells. Your stomach acids, your enzymes chew it up, including your enzymes in your blood, by the way. Thousands of doctors give it by IV and they've got to give huge amounts of it to overcome this lack of bio-availability, but protected versions solves all those problems. So I definitely suggest you get on a good glutathione program.

And then you have the sunshine vitamin, we all know about, we've heard about all our lives, even when we were kids, and that's vitamin D3. What we haven't heard about is what's surfaced in the last several years, is that other than just being healthy for your teeth and bones, it's huge in modulating inflammation and supporting the immune system, and preventing Cancer. It goes on and on and on. Vitamin D deficiency is potentially devastating, I mean absolutely killer. What's really scary is we're almost all deficient in it, and they have lots and lots of studies about vitamin D3.

One at the University of California showed that it lowers your risk of developing Colo rectal Cancer by fifty percent, just vitamin D3. And they found people with the lowest blood levels of vitamin D were about two times more likely to die from any cause during this eight year study compared with the people with the highest level. So, if you can't get out in the sun, because that's your best source of vitamin D3, if you don't live in a tropical climate, and most of us don't, then get the vitamin D3 supplement. It's very inexpensive.

Get out in the sun when you can, and I just want to tell you about my particular c-reactive protein, my CRP. You want to keep your level, the average level that you're supposed to keep it under is 1.0. I say actually you should keep it below 0.55 if you can. Mine came in on my last test at 0.1. Now I don't say this to brag, but it's a testimonial as to what you can do through diet, through exercise, through meditation, through proper supplementation. Hardly anybody does, and the people that aren't doing it are dying left and right.



**Greta Blackburn:** I've got to tell you, Dave, listening to you talk about this stuff, is really through the confusion, I'm sure listeners agree. It's like buying supplements is kind of like going to the Cheesecake Factory and getting that menu. It's like, how in the heck do you order, you know? It's impossible. It'd be easier if you had less options and it's sort of narrowed down. You know, you go to Tasty Burger, and you've got a choice: a burger, or a burger and fries. Not that I'm saying that's what we all should be eating, but you simplified it for us in that way and I think that's great. I just want to keep us moving, so, take your daily inflammation fighting super supplements, other than the lifestyle stuff Dave talked about, we're going to recommend some stuff that will help supplement what you're doing lifestyle wise, so take your inflammation fighters, glutathione, D3, Omega-3 and that is your secret or step number two.

## **Secret #3 – Lowering Oxidation & Secret #4 – Exercising Right**



**Greta Blackburn:** Okay, now we're going to talk to Dr. Joseph Mercola about secrets number three and four because we're working our way down the checklist. And they are fighting oxidation and exercising smart. A couple things about him, because he doesn't really need an introduction. He virtually invented alternative holistic medicine as we know it right now, and at least you infer that by looking at his millions of followers on the web, and he's a champion of all things healthy, safe, and natural. He's an expert in so many fields, but tonight we want him to fill us in on three things. We want to talk about Astaxanthin, and let's talk about how you even pronounce that. Ubiquinol for fighting inflammation, and then we want a segway to high intensity interval training. Joe, are you there?



**Dr. Joseph Mercola:** I sure am.



**Greta Blackburn:** How are you tonight, Joe? Thanks for joining us.



**Dr. Joseph Mercola:** I'm doing outstanding, thank you.



**Greta Blackburn:** You always are. Astaxanthin, I need to say that slowly. And Ubiquinol for fighting inflammation. What do we need to know about that? Because this is one of our big secrets to stopping aging.



**Dr. Joseph Mercola:** Well, it's really just a quite profoundly affective antioxidant. I just recently learned about it within the last year or so. It was on Dr. Oz Show earlier this year and kinda let a lot of people know about it in that format, but essentially it is an antioxidant, a lipid soluble or [xx] soluble, and it's considerably stronger than the traditional antioxidants that we're familiar with.

It's like sixty-five times more potent than vitamin C in free radical scavaging, fifty-four times more powerful than beta-carotene.

It is a type of beta-carotene, it's probably the most potent carrot carotene source of antioxidants that we have, and it's fourteen times stronger than vitamin E. So it works in conjunction with our other antioxidants. Essentially, it's interesting in that it works on both sides of the lipid membrane, and rather than donate an electron, it sucks up these free radicals in a way that it doesn't cause a problem when it's exhausted. So it works in a different format, and ideally, you can get it from natural sources. It's originally derived from marine algae, and it's what makes white flamingos pink. So, you know, flamingos are born white and they don't turn pink until they start eating food that has Astaxanthin in it, and it's the same nutrient that causes salmon to give it that pinkish orange color. Now it's -



**Greta Blackburn:** Are we going to turn pink if we take it?



**Dr. Joseph Mercola:** You could, but you'd have to take large large amounts of it. You see some people taking pounds of carrots every day, they turn this orange color. You wouldn't -



**Greta Blackburn:** Yes, that's what made me think of it.



**Dr. Joseph Mercola:** You'd have to take huge amounts. More so than advisable, so practically you wouldn't have to worry about it. But it's useful for treating a lot of pretty interesting components that really treat me. One is it can prevent the most common form of blindness at least in the advanced world, which is age-related muscular degeneration. I mean, it just stops it dead in its tracks. And then, cataracts, which is, you know, not quite as bad because we have an easy surgery that can help correct that, but nevertheless, why have the lenses obscured and have it surgically replaced. And then, also, something that we're exposed to, especially with the upcoming summer in the United States and North America, it piratically decreases your likelihood of getting sunburned.

So, if you're on a dose of about four milligrams or so, it's not that you won't get sunburned, but if you do, it will dramatically decrease the intensity of it and the peeling and the side effects you get. So it really is a very effective protector against ultraviolet radiation. The substance is produced by these marine algae to protect themselves against the sun, so it provides the similar benefit in humans.

It's really an amazing substance. One of my essentials that I take, three nutrient supplements. I think they're important, but they're not to be taken in place of a lousy diet. The basic components you can do to stay healthy and increase your longevity is to make sure that you're eating a phenomenally healthy diet. That's the key. Really low levels of fructose so that you don't increase your insulin levels, because you know, the single most important element of optimizing anti-aging strategies from my perspective is really to lower your insulin levels. You do that with diet and exercise, but primarily diet.



**Greta Blackburn:** You know we've got Robb Wolf coming on later, so we're excited to talk about the whole paleolithic thing, but tell us a little bit about Ubiquinol and your thoughts on that.



**Dr. Joseph Mercola:** Well Ubiquinol is another interesting nutrient. It helps regenerate the mitochondria, and it actually helps regenerate all the other antioxidants, because it recycles them like vitamin E and vitamin C, because after they donate those other antioxidants donate their electrons, Ubiquinol is the one that recycles it. Now many people may know it as CoQ10, and may also recognize that one in four Americans in the United States are on statin drugs to lower their cholesterol and I vigorously disagree with that. I think hardly anyone needs to be on them.

But nevertheless, significant percents of our population are, I think it's medical malpractice that these individuals are not placed on CoQ10 because the statin drugs are very potent enzyme inhibitors in the liver and they will stop your body's ability to make this critically important nutrient. So as a result, when you're place on a statin, you obliterate your body's



ability to make CoQ10, which normally decreases as you age anyway. And then additionally, you can take CoQ10 as a supplement, but after you get to be about forty or so, certainly fifty, your body's ability to actually change that CoQ10 which is the oxidized version to the reduced version which is Ubiquinol, it becomes fairly limited.

So, the Ubiquinol is the reduced version, and that would be the version that's a bit more expensive, but the one that you want to take if you're over forty years old because that's going to work more effectively. It's profoundly effective and what intrigued me about it is there's some really some amazing studies they've done in rats that had significant extension of improvement in life expectancy, so I was particularly intrigued with those studies and thought they would be useful to put in my regimen, especially in light of the fact that the levels tend to decline as you age. So, it seems to be a useful supplement. It's one of my top ones that I use personally.



**Greta Blackburn:** Great, great. And then the third thing that I want to just specifically ask you about is, you know, you and I actually we didn't meet at my fit camp, we met at the Manhattan Beach Project, and I had the good fortune to have you come and speak at my fit camp and we agreed that we love high intensity level training, and since then you've gone out and trumped me and taken it to the next level with your Peak Eight. But I want to just have you tell our listeners about high intensity level training, particularly visa the longevity and the aspects that will make it what we call an exercise that keeps you younger rather than wears you down, wears you out.



**Dr. Joseph Mercola:** I want to express my great appreciation to you for introducing me to Phil Campbell, who really has done some amazing bio-nary work in helping provide a format to easily understand and apply some basic simple strategies to get these benefits. But, I started my exercising program in 1968 and for nearly four decades, I was exercising intensely with cardio, traditional aerobic, running, types of exercises, and throughout my journey I learned that was not the best thing for a variety of reasons, and probably seventy to eighty percent of the population of people who are exercising are exercising inappropriately. They're not using this high intensity training.

And briefly, the reason you want to do this is as you get to be over forty years old, that most of us a decrease in our ability to make growth hormone, and just like women about the age of fifty go through menopause, all of us go through what's called cenatopause where our body's ability to generate enough growth hormone and growth hormone is phenomenally important for maintaining our vitality and health as we age, and keeping our muscle mass great. So, in fact, so much so, that people pay to get this injected – like a thousand or two thousand dollars a month, and although it works, it doesn't work as well because there's no biofeedback to control the optimized levels. So the best way to do it is to have your body make it, and your body can make it in spades if you do this type of exercise, and basically the cool thing about it, it's literally only four minutes of exercise, four minutes!



**Greta Blackburn:** You can do anything for four minutes, right?



**Dr. Joseph Mercola:** Well, you'd think so, but I'm telling you, if you're doing this Peak Eight, and Phil called it Super Eight or a different type of eight, but I thought Peak Eight was a little better.



**Greta Blackburn:** But we could call it Puke Eight, because frankly if you're not feeling like that's what you want to do, you're probably not doing it right.



**Dr. Joseph Mercola:** Well, we didn't think that would work too well to encourage people to do it, but puking would also be certainly be appropriate, just not very motivating. But here's an accurate description of what happens though, there's no question, because essentially, just for those who are not familiar with it, and briefly, the total time of exercise is twenty minutes, but that includes a three minute warm-up and then eight cycles of where you're intensely going for thirty seconds, and then after the thirty second intense exercise, you recover for ninety seconds where you're exercising really gently, and then you repeat that cycle seven more times for a total of eight, and then the cool down.

And the goal is when you're intensely exercising, is to get your heart rate up high enough so that you're at your maximum calculated heart rate, which is done by taking two-hundred and twenty subtracting your age. So for someone like myself, who would be fifty-six, so it would be one sixty-four. And you don't do that after the first peak, but by the time you get to your third, fourth, fifth cycle, you're getting close to that. And when I first started doing this, I was only able to get up to, well, I got up a little bit higher, maybe one sixty-eight or so on the Peak Eights. But a year later now, because I first learned about this in Mexico at Cancun, I think it was Cancun. It was Cancun. Now, just reading it actually just two days ago, I got my heart rate up to one seventy-five. I'm really pleased, and so you know, that shows that, normally that doesn't happen, you know, you don't continue to increase your heart rate with exercises. But it's a powerful demonstration, that if you're committed to these types of exercises, that you'll get phenomenal benefits.

And I actually had my growth hormone tested through Dr. Johnson Wright's lab, who's another pioneer in anti-aging, and I've actually had the highest growth hormone he ever had measured except for one and the other person had a pituitary tumor, and we did a lot of other tests to confirm I didn't have a tumor. You can do that, I mean I've got the documentation that you can just dramatically increase your growth hormone levels. It's just really quite shocking.



**Greta Blackburn:** Well I think the best documentation would be before and after pictures like the ones I've seen of you. In fact what I'm going to ask you to do offline maybe sometime this week, and we'll get some follow up information to people is, I'd love if you'll give up some before and after pictures because that's the most compelling reason to do it. I mean, it's phenomenal. Not that you were in bad shape by any means, but you just dramatically changed your body.



**Dr. Joseph Mercola:** It just changed my whole life. So, I mean, you've been a phenomenal influence on my personal health, and I'm deeply appreciative for your catalyzing that interest.



**Greta Blackburn:** Oh, well thanks so much, Joe. And I promised you that we wouldn't take up your whole night here, and I just want to tell you, yeah, your impact on a lot of things, and we'll be talking in future tele-seminars, this whole concept, and I'm not going to get into it now, but it's this thing of grounding, earthing, whatever you want to call it. There's so many things that you're just such a pioneer in and thank you so much for your input in everything I'm doing and for your participation and support. I'm gonna let you go, I know people want to ask a thousand questions, but we'll be doing this again, and I just want to thank you so much and let's touch base and keep the movement going.



**Dr. Joseph Mercola:** Oh well thanks, Greta. I appreciate the opportunity to invite me onto your presentation, so thank you.



**Greta Blackburn:** Thank you, and I'm going to give them your website info when you get off because you'll be embarrassed, but thank you so much, Joe.



**Dr. Joseph Mercola:** Oh, thanks a lot. Bye.



**Greta Blackburn:** So for those of you can go do [www.mercola.com](http://www.mercola.com). You'll see me on there on his blog as telemerediva. You can sign up for ongoing information from Dr. Mercola at [www.mercola.com](http://www.mercola.com). Okay so, David, are you still with me? David Kekich?



**David Kekich:** I'm still here, Greta.



**Greta Blackburn:** Okay. I want you guys with your pens and papers. Here's three and four and these are per Joe's explanations are Astaxanthin, that's the thing that turns the flamingos pink and red, and Ubiquinol for fighting oxidation, and high intensity interval training. So please write that down on your paper, these are part of the steps, we'll be reviewing them later. So, it's three and four. Number three is Astaxanthin and Ubiquinol, and that's for fighting oxidation, and number four is high intensity interval training.

## **Secret #5 – Caloric Restriction & Secret #6 – Raising Your Good Cholesterol**



**David Kekich:** I want to remind everybody to get those lists out, those notepads that Greta recommended you get out, and take some notes because this stuff is going to really be important for you, and then what Cliff will be talking about later has to do with secrets five and six. And secret number five is caloric restriction.

Now, I don't know how many of you know what caloric restriction is, I mean obviously it means taking in less calories, but a caloric restriction is the only proven way to extend the maximum lifespan in mammals.

There are a lot of things you can do to expand average lifespan, but the maximum lifespan is only extended by one way in mammals, and that's caloric restriction, and that means reducing caloric intake by about thirty to forty percent from the level that you should be consuming, not that you necessarily are consuming. And also, of course having good nutrition in the process.

When I say not how many you are consuming, the average American consumes about fifty percent more calories than they should be consuming. And let's just say we should be eating on average about 2,000 a day, and of course the amount depends on your body size and your level of activity and so forth, but we're actually consuming over 3,000 right now, maybe as much as 3,300 a day. So you want to get down to that 2,000 range and then subtract thirty to forty percent. So as you can see that's a spartan way to live. That's really tough. People do do that and they avoid disease. We haven't been able to test this on humans long enough to see if it extends or maximizes lifespan. Obviously the researchers might die before the subjects die because of the lifespan of human beings.

We do find that people who are calorically restricting themselves don't get Diabetes, they just don't get Heart Disease, and hardly ever get Cancer. They live really healthy lives, but they are thin, they are hungry, they are cold, their sex drive wanes and it's a tough tough way to live. But the good news is there are technologies and there are products emerging called CR – caloric restriction – CR stands for caloric restriction, mimetics. CR mimetics are compounds that mimic the effect that caloric restriction has on your genes and your gene expression. In other words, they're supplements or they're drugs that will trick your genes into thinking that your body is going into a starvation mode or a fasting mode. And Cliff will tell you more about that as well.

Number six is lower your LDL and your blood glucose levels and raise your HDL. LDL is low



density lipoproteins and HDL is your high density lipoprotein. LDL is your bad cholesterol and your HDL is your good cholesterol. Now there's a product that I've been using for about four months. It's a brand new product and I was privy to getting into the pre-launch of it, and it's called StemCell100. And this is incredibly effective and amazing. It was the result of about, gosh, over thirty years of research, and Cliff will talk more about this as well, but I just want to tell you what it's done for me.

My blood glucose level, that's your sugar level basically, was really good before I took this product, but even though it was good and it was at really healthy levels, this product, StemCell100, dropped it by eleven percent since my previous reading and my HDL, it increased slightly. Even though my total cholesterol dropped from 154 to 146, now that's significant, because when your total cholesterol drops, typically your LDL and your HDL drop right along with it, because it just makes sense that all your cholesterol drops. But when one goes up and the total goes down, that's really significant, especially when if one that goes up is the good cholesterol, like HDL. My LDL level dropped by over eleven percent, so you can see what this has done for me.

And again, Cliff will talk more about this, but I want to move on real quickly and talk a little bit about weight control, and I know how tough it can be for some people to control their weight. Especially with all the temptations we see out there now with fast food and processed food and all the stuff that's really bad for you, that's really profitable for the food manufacturers, and it just tastes great. I mean, they have a knack for making these things taste wonderful, and their marketing efforts are compelling and it's just so hard to resist those temptations.

But there is a product now that is called, it's actually a diet product called Irvengia from Life Extension. And for the people who need help through weight loss, people who really don't get their arms wrapped around the exercise program a little bit, the Paleo. Diets for example, fasting, reducing those caloric intakes from 3300 on average down to maybe half that, total inactivity, we really have a lot of people in this country who are gaining weight by leaps and bounds. They just need help. I mean the weight loss industry is huge, it's massive and there's a reason for that. We'd like to be able to deflate that a little bit by having people get better lifestyle habits, but part of this weight loss industry includes a supplement called Irvengia. And it's a breakthrough. It combines natural compounds, and they combat the Asian-related fat accumulation by several mechanisms, and they've got human clinical trials that prove this out, they've got lab animals.

When they (lab animals) ate it, their actual glucose elevations dropped by about ninety percent compared with non-supplemented animals. And this is really important as we age because people that are healthy, people that are young, they really convert fats and sugars into energy very very easily. But as we age, that doesn't happen as naturally and as easily, so it's really important to reduce their absorption.

But I do want to stress, this is a supplement. They have drugs as well that work, I would say avoid drugs, avoid surgery, do the things that are natural. Just convert your lifestyle, modify your lifestyle, but whatever supplements you take, make sure that you combine those with healthy eating habits and regular exercise. They're just not going to do you any good. You're going to work against yourself if you don't take care of yourself physically. And of course, results are going to vary depending on each individual's condition.



**Greta Blackburn:** Good stuff!

## **Secret #7 with Robb Wolf, 'Eating Right' The Paleo Diet**



**Greta Blackburn:** Okay, we're ready for that last secret, secret number seven, and this is with a man some of you may know. You've certainly heard of his movement of which he's the figurehead, the Paleolithic Diet. Robb Wolf is going to explain to us secret number seven, the Paleolithic Diet. Robb, are you there? Robb Wolf?



**Robb Wolf:** Hello.



**Greta Blackburn:** Hey there.



**Robb Wolf:** How's it going?



**Greta Blackburn:** It's going well. Are you listening? Are you catching some good tips here?



**Robb Wolf:** I have Astaxanthin and Ubiquinol written down, so I'm set. I've already gotten my nickel's worth out of this show.



**Greta Blackburn:** How can you say Astaxanthin, how do you say that so easily?! I can't say that word. Alright, whatever, okay. David, you're a big fan of Robb's and I know you recently got The Paleo Solution, his book, as well as Everyday Paleo, his associate Sarah's fantastic cookbook. So say hi to Robb, DK.



**David Kekich:** Big fan, Robb. I'm glad I finally got to meet you. And I want to tell you that the Paleo lifestyle is a key stone to my longevity program, and I'm not sure if you, I guess you probably know Michael Rose at UCI, but his last fifteen years of research showed that being on the Paleo lifestyle, that's not just diet but it's also the way they move, exercise and so forth, it actually stops the acceleration of aging. It brings it to a screeching halt. It doesn't stop age, you still age, but if you get on the Paleo Diet and the Paleo lifestyle, he's found, that if you do it in your fifties, sixty years old, when you're eighty or ninety, you're going to be aging at the same rate as you did when you were at fifty or sixty. In other words, your chance at dying at eighty or ninety in any given year will be the same much lower chance that you had when you were in your fifties or sixties. So, it's huge. It's absolutely gigantic. I've been on this for a year now, and I just can't talk too much about it. So, why don't you go ahead, Robb. I don't mean to cut into your time.



**Robb Wolf:** Oh, not at all. What would you folks like to chat about?



**Greta Blackburn:** You know what, Robb? I think the thing is when people hear it, their first response is, "Oh, weird. Eating like a caveman. Eating like a hunter gatherer. What does that mean?" so maybe just give us the basics. Just again, bullet points and basics. Like that.



**Robb Wolf:** Sure, and you know to maybe demystify it a little bit, nobody would raise an eyebrow about somebody, you know, would come in and potentially say, well cows evolved to eat grass, koala bears evolved to eat eucalyptus leaves, and human beings spent three of the last five million years as hunter gatherers, and so that's the way that our DNA has been formed in these small extended family groups, hunting and gathering, wild meat, fresh caught fish, seasonal fruits and vegetables, roots and tubers, balanced omega-3 omega-6 ratio, with a real powerful eye toward saturated versus monounsaturated fat, usually a pretty good balance within that. A ton of antioxidant intake, loads of vitamin A, vitamin D vitamin K, all these things that we seem to be in short supply on.

So what it is is it's just a largely unprocessed simple diet. I've had that challenge out for most dieticians and health care providers to put together a diet based around grains, legumes, and

diary, you know, the kind of cornerstone of the food guide pyramid, or even still now the new my plate recommendation or whatever that thing is. But you know, build a diet off of these neolithic foods, the grains, legumes, and dairy. Put together 2,000 calories of your diet and we'll put together 2,000 calories of my diet, and we'll see which one has more vitamins, minerals, and antioxidants in those 2,000 calories. And what we'll find is that the Paleo approach ends up trumping pretty much anything else you can put together unless you're taking a vitamin supplement.

And I like the supplementation schedule that I've heard today because it's conservative and specific. We get ourselves into the deep end of the pool when we start recommending high dose B vitamins, particularly like folic acid and what not, so we can have some actually increased rates of breast, colon, and prostate cancers from the methylation properties of things like folic acid, so I liked the targeted, concerted, you know, schedule of supplementation here. But, I mean that's really the nuts and bolts of the Paleo approach.

And then we take an eye towards lifestyle also. So we recommend good amounts of sleep in a dark room. There's some good biophysics and biochemistry for making that recommendation through and through. Influence to sensitivity, decreased cortisol levels, we recommend interval typed training mixed with some strength training so that we maintain muscle mass. Maintain normal hormonal signaling as long as we possibly can throughout life, and then lots and lots of sun, and lots and lots of interesting challenges, and lots of community. These are the things that are kind of woven into our DNA and are really integral to us being healthy and happy and living a fulfilling life.



**Greta Blackburn:** Robb, what would the best source of the books that you have out there? I mean first of all, the best website for people to go to get the real basics, because they're going to want to take a deep dive into this and we don't have the time for that tonight, but what would be the best website for them?



**Robb Wolf:** You know, my site. There's a ton of great sites out there. My site, if you go to [robbwolf.com](http://robbwolf.com), and then frequently asked questions, I have everything that anybody would need for free. It's a quick start guide, shopping and food guide, the food matrix, and it's all there for free and it's kind of interesting. Most people end up buying my book after actually doing the program for free online because they get really good results and then they just kind of learn and expand their understanding of the diet.



**Greta Blackburn:** So I'm going to send people to r-o-b-b wolf, like the animal, dot com. What we're going to have to do, it's becoming so obvious, we've got to do another of these calls. We're going to have to compartmentalize it and dig deeper into each area, and I'm going to want you to come back then and hope that you will.



**Robb Wolf:** Sure.





**Greta Blackburn:** I want to thank you for coming on tonight, and you know, there's going to be some ongoing ideas to this and I'm going to count on you to help support our listeners and finding our way through this maze. Okay?



**Robb Wolf:** Sure. It's been a honor being on the show.



**Greta Blackburn:** Thank you so much, Robb. I'm looking forward to talking to you again. Thank you.



**Robb Wolf:** Take care.



**Greta Blackburn:** So, we've got another one, guys. We've got secret seven. If we're talking longevity and we've got the studies by the evolutionary biologists to prove it, Paleolithic Diet is the good way to go. And there are people out there who are vegans and raw vegans and all of that and that's great, but we're just saying that for the purposes of this information on this call, the Paleolithic Diet is something to at least take a look into.

## **The Future Of Anti Aging With Aubrey De Gray**



**Greta Blackburn:** Okay, I understand that we do have Aubrey De Gray on the line and man, I don't know how we made that happen between London, New York, Salt Lake City, Northern Cali, his mountain view lab. Anyway, we did it. I want to thank you, Aubrey, for taking time from that crazy schedule of yours and all of that exciting research that you're doing. I want to remind you and applaud you again for that amazing panel you participated in in at the World Science Festival last week in New York and people can see that if they go to [www.worldsciencefestival.com](http://www.worldsciencefestival.com). It was just really stupendous. I mean, that should be a prime time TV show. But anyway, here's what I need from you, Aubrey. I mean, you can dig so deep into this stuff that I think there's about two people on the planet that can even understand what you're saying, and you're one of them. What I want for our purposes of this call, is just

the semi-brainiac explanation, the for the masses explanation of what SENS is all about. And people who want to take a deeper dive can go to [sens.org](http://sens.org), and they can contribute, because God knows it's worthy of that. But tell us what SENS is?



**Aubrey De Gray:** Well, it's actually a pretty simple concept. So, I think most of your listeners are going to be familiar with the term, regenerative medicine, already. Regenerative medicine, is of course, a very high profile area by medical research right now, and it encompasses, first of all, stem cell therapies, which are burgeoning, of course. Many of them are moving into the clinic now. And secondly, tissue engineering, the creation of artificial organs outside of the body, which are then transplanted into the body. Which of course is also an extremely high profile area, getting a lot of mainstream media attention as well as of course, by medical attention.

Now, regenerative medicine is actually not just restricted to those two areas. Really it can be defined as everything that involves restoring the structure of biological material to how it was before it suffered some kind of damage. If you restore a whole organ by replacing it, that counts as regenerative medicine. And if you restore an organ by injecting stem cells into it or into the bloodstream so that they can repair the organ's tissue, then that's also regenerative medicine.

In addition to those two areas, we need to consider molecular regenerative medicine, which is essentially either repairing the internal structure of a cell, or sometimes repairing the structures outside the cell, the extracellular matrix, or the extracellular medium. Now in aging, damage accumulates gradually throughout the body in all of those ways, inside cells, outside cells, cells dying, cells not dying when they're supposed to, you know, it happens. And SENS is all about applying regenerative medicine to that range of problems, that large range of things that go wrong during aging. What about applying regenerative medicine at all of those levels - molecular, cellular, and whole organ, so as to restore the structure of the body to something like it was early in adulthood, even if the therapies are applied quite late in life?

And normally, I describe SENS in terms of seven major types of damage that we need to fix. Really, that classification is designed not so much to simplify the problem, but really to organize the problem. In other words, to allow us to describe the types of therapy that we need to develop because within each category, it's more or less the same therapy that we need to actually implement. And some of these therapies are quite a long way off. As I mentioned, some therapies, in tissue engineering, and in stem cells research are already in the clinic, and one or two things at the molecular level are also in the clinic, but many of these things are quite a lot further off than that. In many cases, several years away from being even demonstrated in life. But still, we at least know where we are going with all of this. We have detailed plans, detailed ideas of what needs to be done, starting from where we are today, to make all of these therapies a reality. And I certainly believe that once we've done so, we will have a similar degree of medical control over aging to what we currently have today, over most infectious diseases spreads out. In other words, we will eventually control again indefinitely.



**Greta Blackburn:** Now I've heard, and I think this is a really good way of looking at it and I think people can get this. You've talked about the classic car scenario, comparing this to restoring a classic car. Can you just briefly give us that little story?



**Aubrey De Gray:** Sure. So, a lot of people have a sort of, almost a spiritual view about aging. They think that it's somehow intuition that it's somehow different from other things that go wrong in the body that we give specific names to like, you know, cancer, or Alzheimer's Disease, for example. I don't know really, I mean there are many reasons why people get this wrong, why they think of aging as somehow different from the rest of what goes wrong in the body. But the result of that in this conception is that the essential feeling that there would be some kind of warranty period, so to speak, on how long the body can last, and that this warranty period is somehow immutable.

So, I'd like to talk about cars in order to explain why that's wrong, in a way that people can relate more easily to. What I say basically is, well if you've got a car and you own it until it collapses, but you know, every year you're going some kind of maintenance on it. There's a certain amount of maintenance that the law requires you to do, but that's not comprehensive enough, and that's why the car gradually goes downhill and eventually kills over in maybe fifteen years, from the point when it was built.

However, we also know that certain cars are a lot older than that. In some cases, a car will get to maybe fifty years old because of just being built well in the first place. Like you know, Land Rovers, for example, they'll last up to fifty years because they've got corrosion resistant metal and really tough tires and all those good things. However there are other cars that last maybe fifty years or so, not because they were built that way, but because they've been more comprehensively maintained than the law required as I mentioned earlier.

So, if you take VW Bugs, for example, there are just as many fifty year old VW Bugs driving around the streets of America as there are fifty year old Land Rovers. And that's because they've been well-maintained even though their warranty period is a hell of a lot less than fifty years. More than that, we can actually say that that approach, the maintenance approach, is actually better, is actually more powerful than just building the car well in the first place. Because if we ask how many cars are there out there that are a hundred years old, we'll see, you know, quite a few vintage cars, and of course none of those cars were built to last a hundred years.

They were the ones that were built like the VW Bug to last only a decade or two, and yet that comprehensive maintenance approach has succeeded in going them out not just to fifty years, but to one hundred years. And you know, we don't have any two hundred year cars now, but that's not because we don't know how, it's because cars haven't been invented two hundred years ago. I think it's a very good chance that one hundred years from now, there will be two hundred year old cars.



**Greta Blackburn:** Yeah. Well here's what I love about that. It gives people a really easy way to look at this. It's not quite as confronting as the science, for those of you who don't like taking that deep of a dive. Aubrey, I want to thank you. We're moving at break neck speed here and I know that you're on the go. I want to remind people that you've got a big conference, always have conferences going on, and for people to know about those, they need to go to

sens.org. You, like the top researchers in all of these fields, are looking for funding and it's a huge mission, so I encourage people to go and donate whatever they can donate and now all of a sudden they're investors in the longevity mission. But, thank you for your time and we're going to call upon you again and try to get you to join us on further conversations if you will.

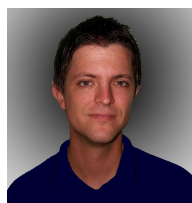


**Aubrey De Gray:** My pleasure. Thanks very much. Bye!

## Conclusion



**Greta Blackburn:** Bye! Wow. That was just a great talk with Aubrey. It's always so fun to speak with him. I love that accent. I could listen to him reading a box of crackerjacks. So, I think we've got to all agree that we've had a great call. We didn't have as much time as we would have liked, but we filled in the blanks and pieces of the puzzle. I'm going to turn this to over to Cliff- our founder...



**Cliff Fontenot:** Hi guys, this is Cliff Fontenot, founder and CEO of the 100 Is The New 50 Anti Aging Society. It is my privilege to introduce to you our breakthrough "Nuke Aging Kit". If you want to see what we have put together for you, click the button below... I can't wait for you to see this!

***Nuke Aging Kit ?***