

Ben Greenfield Fitness Podcast

“The 7 Different Reasons You Age (& Potent, Proven Molecules To Enhance Longevity & Slow Aging).” w/ Guest Dr. Sandra Kaufmann

Published: 25 July 2019

www.bengreenfieldfitness.com/stopaging

I recently read the book ["The Kaufmann Protocol: Why We Age and How to Stop It"](#).

It is the first comprehensive approach to aging that tackles why we age, and then recommends a strategic, scientific formulation to decelerate the process. The book brings practical information to everyday people, and takes the science of aging out of the laboratory and into the real world.

The first half of The Kaufmann Protocol discusses aging on a cellular level, which separates it from all other anti-aging fads. We age because our cells age and it is this understanding that allows the protocol to combat aging for people from all walks of life. This is presented in terms of the seven tenets, or categories, of aging which comprise topics such as DNA alterations, mitochondrial energy, and aging pathways. These are explained in both scientific and laymen terms, such that anyone can understand the process. A series of analogies paralleling the cell to a factory assist the reader in following the logic. The second half of the book reviews the top fifteen molecular agents that curb the aging process. Each agent is examined, discussed and then rated in terms of the seven categories, thus granting it a Kaufmann Rating number. This number is essentially a snapshot of its anti-aging properties, and allows the reader to create a regimen to fit their personal needs.

Alternatively, the book suggests the most common protocol, the PANACEA, which is a combination of five molecular agents. This regimen is fantastic for most people over the age of 40, but it certainly is not comprehensive. With the tools and knowledge presented in this book, the reader can determine what is best for them as individuals. This book is also meant to be a complimentary addition to the [Kaufmann Protocol App](#) which will allow the user to track their progress and stay up to date with all of the new scientific findings that will continue to make aging truly optional.

Dr. Sandra Kaufmann began her academic career in the field of cellular biology, earning a Master's Degree from the University of Connecticut in Tropical Ecology and Plant Physiology. Turning to medicine, she received her medical Degree at the University of Maryland, and completed a residency and fellowship at Johns Hopkins in the field of pediatric anesthesiology. For the last seven years she has been the Chief of Pediatric Anesthesia at the Joe DiMaggio Children's Hospital, a nationally recognized center of excellence.

Her avid interest in the science of anti-aging begun many years ago as an intense hobby. Utilizing her knowledge in cell biology, human pharmacology and physiology, this hobby

bengreenfieldfitness.com/stopaging

has now become a main focus. The Kaufmann Protocol represents years of non-clinical research leading the first ever, comprehensive theory of aging, complete with an explanation of why we age and the tools to decelerate the process.

During our discussion, you'll discover:

-How Dr. Kaufmann, a pediatrician, became interested in longevity and anti-aging...

- She became interested in it simply because she wanted to enjoy her life as long as possible
- After reading and researching, she realized there was no overarching theory, nor a comprehensive system on anti-aging and longevity
- Aubrey de Grey's [SENS Research Foundation](#)

-Dr. Kaufmann's 7 Tenets of aging...

- [The 7 Tenets of Aging](#)
- Information Systems (DNA)
- Cellular Energy (Mitochondria, NAD)
- Cellular Pathways (AMP Kinase and mTOR system)
- Quality Control (autophagy)
- Security System (Immune system) fails for 3 reasons:
 - Unable to fight infection over time
 - Cells become cancerous over time
 - Upregulates systemic inflammation
- Work Force (Individual Cells)
 - Short acting cells (few hours to a few days)
 - Goldilocks cells (1-12 years)
 - Cells that live forever
 - Senescent vs. quiescent cells
 - Quiescent is reversible, a state of repair
 - Senescent is partially repaired; damaged but still of some use
- Waste Management (AGE's, lipofusion)

-The numerical ratings system Dr. Kaufmann created based on the 7 Tenets of aging...

- [The Kaufmann Rating System](#)
- Ratings are from 0-3 (0 being of no value, 3 being highly efficacious)
- Criteria to determine efficacy:
 - Does it work in theory
 - Does it work in a test tube
 - Does it work in a small rodent lab
 - Does it work in humans
- It gives people an educated guide to make decisions for themselves

-How the app Dr. Kaufmann created helps people understand their genetics and longevity...

- [The "My Protocol" app](#)
- Her work began as a hobby, yet more and more people came to her seeking a protocol; the app was created to help as many people as possible
- The app experience
 - Starts out with a quiz
 - Asks if you want a standard protocol or if you want to build your own
 - It follows you every day
 - Rates exercise and foods

-The most overhyped yet least effective ingredients, as well as the most effective...

- [The up to date list of recommended ingredients and compounds from Dr. Kaufmann's website](#)
- The least effective
 - Vitamin E; astaxanthin and delphinidin are more potent alternatives
 - [BGF podcast w/ Dr. Barrie Tan on Vitamin E supplements](#)
 - Co enzyme Q
 - Fish oils
- Use [Visomitin eye drops](#) and [Carnosine eye drops](#) for superb vision
- The most effective:
 - [Pterostilbene](#)
 - [Astaxanthin](#)
 - [Nicotinamide Riboside](#)
 - [Curcumin](#)
 - [Carnosine](#)

-Pterostilbene: Why is it so great?...

- Epigenetic modifier
- Very strong free radical scavenger
- Increases activity of endogenous antioxidants
- Activates your sirtuins
- Activates AMP kinase
- Caloric restriction mimetic (tells your body you're starving when you're not)
- Increases DNA repair mechanisms
- Increases autophagy
- Similar chemically but more potent than Resveratrol

-Why Astaxanthin is the bomb...

- [Bioastin](#) is Dr. Kaufmann's favorite brand (edible sunscreen)
- Increases exercise capacity
- It's not a supplement because there is no endogenous astaxanthin in our system

-The magical attributes of Carnosine...

- Gets into your muscle and is a buffer (don't get the burn)
- Transglycosylating agent; blocks formation of AGE products
- Men have more than women, and young people have more than old people
- Can only get it from muscle

-Dr. Kaufmann's thoughts on the latest research regarding Metformin and its hampering of mitochondrial response to exercise...

- It uncouples mitochondria and electron transport chain; becomes less efficient
- May not be the best for an athlete (unless you take it at night)
- Everything is "best guess" when it comes to dosing for anti-aging
- Take branch chain aminos
- Decreases absorption of B Vitamins

-Dr. Kaufmann's anti-aging lifestyle beyond the supplements and compounds discussed thus far...

- Rock climber
- [Haritaki](#) holiday
 - Chebulic acid is the strongest antiglycation agent there is
 - A huge flood intermittently is the best way to go
- Doesn't use stem cells

-The maximum potential human lifespan based on protocols like the Kaufmann Protocol...

-And much more

Click here to get a PDF version of the show notes for this episode

Resources from this episode:

[-The Kaufmann Protocol: Why we Age and How to Stop It](#)

[-My podcast with Dr. Barrie Tan](#)

[-Visomitin eye drops](#)

[-Carnosine eye drops](#)

[-BCM95 Curcumin](#)

- [Metacurcumin](#)
 - [Superessentials Fish Oil with Astaxanthin](#)
 - [Organic haritaki powder \(for chebulic acid\)](#)
 - [My podcast with Bill Andrews about TA65 and TAM818](#)
-

Compounds recommended by Dr. Kaufmann

- [Aloe Vera](#)- 5,000~10,000 mg/day
- [Alpha Lipoic Acid](#)- 300~600 mg/day (diabetic treatment- 600~1,800 mg/day)
- [Andrographolide \(Andrographis Paniculata\)](#)- 400 mg/day
- [Apigenin](#)- 50 mg/day
- [Astaxanthin](#)- 2~12 mg/day (Athletes 12 mg/day) - take with food
- [Astaxanthin](#)- 2~12 mg/day (Athletes 12 mg/day) - take with food
- [Astragalus TA-65](#)- 100~250 mg/day (Cycloastragenol 5~25 mg/day, Astragaloside IV 50 mg/day)
- [Carnosine](#)- 500 mg - 2 times daily
- [Chebulic Acid](#)- 200~500 mg/day (Can take up to 1,000 mg/day)
- [Cistanche Deserticola](#)- 675 mg/day
- [Curcumin](#)
- [Delphinidin](#) (usually available as Maqui Berry) - 500~2,000 mg/day
- [EGCg](#) - 400~500 mg/day (1 cup Green Tea = 50 mg) - Take without food
- [Ecklonia Cava](#)- 50 mg/day
- [Ellagic Acid](#)- 250~500 mg/day
- [Melatonin](#)- 3~10 mg/day - Take before bedtime
- Metformin - 500~2,000 mg/day

-[Naringenin](#)- 250~500 mg/day

-[Nicotinamide Riboside](#)- 250~500 mg/day

-[Polypodium](#)- 500 mg/day

-[Pterostilbene](#)- 50~150 mg/day - Take with food

-[Pyridoxamine](#)- 50~250 mg/day

-[Quercetin](#)- 500 mg/day (up to 1,200 mg/day)

-[Resveratrol](#)- 100~250 mg/day (up to 500~1,000 mg/day)

-[Rosmarinic Acid](#) (available as Lemon Balm or Rosemary) - 100~400 mg/day

-[Sulphoraphane](#)- 400 mg/day

-[Yerba Mate](#)- 600~900 mg/day

Episode sponsors:

-[Kion Lean](#): Support for normal blood sugar levels and healthy energy metabolism, even after large, carb-rich meals. Ben Greenfield Fitness listeners receive a 10% discount off your entire order when you use discount code: BGF10.

-[Harry's Razors](#): Try the shaving company that's fixing shaving. Get a \$13 value trial set that comes with everything you need for a close, comfortable shave when you go to harrys.com/greenfield

-[State and Liberty](#): Whether you're sitting in an office, traveling for work, or looking to dress it down, these are the best possible dress shirts from style, to fit to comfort. Type in discount code "BEN" to get 10% off your first order, or head to one of our store locations in New York City, Boston, or Chicago and mention this podcast to get 10% off your order.

-[Zip Recruiter](#): As your qualified candidates roll in, we make it easy to screen & rate them, allowing you to make the best hiring decisions for your business. Try it for free when you use [my link](#)!

Do you have questions, thoughts or feedback for Dr. Kaufmann or me? Leave your comments below and one of us will reply!