

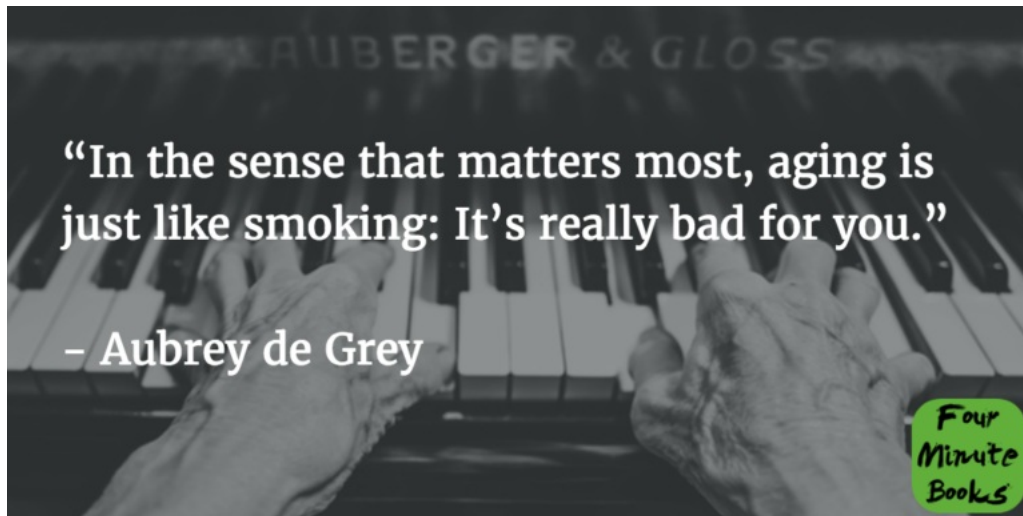
Ending Aging Summary

 fourminutebooks.com/ending-aging-summary

1-Sentence-Summary: *Ending Aging describes how the process of aging is like a disease and therefore, treatable, by outlining the seven primary ways in which we age and possible antidotes to all of them, plus a glimpse into the future of potentially indefinite human life.*

Read in: 4 minutes

Favorite quote from the author:



One of my coaching clients is very passionate about biotech, longevity and anti-aging. He recently told me about SENS, a foundation dedicated to the battle against death. Now I found out that their Chief Science Officer Aubrey de Grey has written this book, so I had to give it a go.

He argues that the biggest problem in fighting off what most of us believe to be inevitable is funding – we know what to do and science knows how to do it, there's just not enough money to pay for it.

In *Ending Aging* he identifies the seven primary causes of aging and how to deal with them.

Here are 3 lessons to help you age less:

1. The solution to aging isn't prevention or medication – it's repair.
2. Mitochondrial mutation is one of the biggest aging factors, and it can be taken care of.
3. In order to win the war against aging, we need to change our mindset.

Want to live to be 150? Better read on then!

Lesson 1: The cure for aging is neither prevention, nor medication – it's repair.

The most common way to deal with a disease is to prescribe medication for it. Have a headache? Take a pill. Have heart problems? Take a pill. Itchy feet? Take a pill.

The problem with medication is obvious: You never get to know what caused the problem in the first place, and can therefore never really fix it. You're just treating symptoms.

Another, slightly better idea is to prevent getting sick in the first place. But you can only do that if you know what causes the disease. With aging however, that's impossible, because there is a plethora of contributing factors, so it becomes hard to pinpoint which ones *you* personally should address.

How to fight against aging then? The answer is to **repair the damage that has been done until you first start treating aging**.

For example, if a 40-year-old is expected to live to be 80, and you cut his aging speed in half with preemptive measures, his remaining life span doubles from 40 to 80, and he can live up to 120. But if you jump in when he's 40 and repair all the damage up to that point, he might now only have the damage of a 20 year old – **but can continue that treatment for the rest of his life**. As long as he keeps repairing prior damages, he can keep extending his life span, maybe up to twice his expected age, and might live to be 160.

Lesson 2: A huge aging factor is mitochondrial mutation, and it can be dealt with.

You might have heard a thing or two about free radicals. Usually, all of the outmost electrons of an atom pair up in twos, which makes them stable. These are the lines you see around the letters in chemical formulas (like here). However, some reactions can cause an electron on the outer shell of its atom to end up by itself – which makes it a free radical.

Free radicals are highly reactive. They're very unstable, so they're dying to react with something and team up with another electron. So much in fact, that they'll tear apart close-by molecules, just to react, often setting off a chain reaction.

Therefore, **free radicals are troublemakers in your body**, and they don't just come in from the outside. Many of them are produced in your mitochondria (the so-called power plants of your cells, which deliver energy to all cells), and can lead to a change in your mitochondrial DNA. These mutations accelerate aging, so it'd be best to stop them.

A potential solution is allotopic expression: By hiding a healthy backup copy of your mitochondrial DNA in each cell's nucleus (that's the core of the cell, which has protective shields around it), we could save it from exposure to free radicals!

Lesson 3: If we want to win the war against aging, we'll have to change our mindset first.

Most anti-aging treatments, like the one above, are still in experimental stages. Aubrey de Grey says the time we waste with trying to get more funding and waiting for drug trials to be approved actually costs more lives than the experiments it takes to get them released.

For every person, who dies from using an experimental stage drug, ten die, because they had to wait too long for their drug to be approved.

Our brains prefer safety now over bigger benefits later, but unless we shift our mindset to accepting that some people will die on our way towards ending aging, we'll create further and further delays by exaggerating every single failed treatment cause.

Aubrey himself currently has a project called robust mouse rejuvenation going, where SENS is trying to extend the life span of mice from three to five years, with treatment beginning in year three. He hopes that proving anti-aging technology works in mammals will help speed up the drug approval process and get us to infinity a lot faster.

Ending Aging Review

Ending Aging was an out of the box read for sure! Very specific, incredibly detailed, and quite insightful. It's interesting to see the development of this crucial branch of medicine and science, and alarming how little attention (and money) is paid to it. Even if you don't want to live forever (I know I don't), well worth a read.

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What else can you learn from the blinks?

- What SENS stands for
- Why graves should glow, and how the fact that they don't might help us end aging
- How vaccination might cure Alzheimer's
- The highly debated solution to cancer that already exists
- Which contributing factor to your age is actually called AGE and why

Who would I recommend the Ending Aging summary to?

The 18 year old college freshman, who thinks he can party and drink like crazy, because his body will forgive the damage as he's still so young, the 45 year old woman with a physically demanding job, who's had her first serious health issue recently, and anyone who doesn't want to die.

