

# Introduction

I celebrated my 42nd birthday recently. Even now, I am not quite sure what I want to do when I grow up. For many people, this would seem like a major problem and, for some time in my life, it seemed like a major obstacle to me as well.

When I was 18, having just finished high school, I had the opportunity to travel and work abroad. I thought I could use this time to *“find myself”* and figure out what I wanted to become, so I took this up and made the most of it. Travelling, exploring the unknown and exciting adventures lay ahead of me.

I met different people from all over the world, learning new skills and doing any job I could find. Everywhere I went I had to earn my keep. From washing dishes in Spain, hard manual farm labour in England, to pouring pints of Guinness in Ireland (of course). This amazing experience broadened my mind and horizons. Travelling alone at a young age did something drastic to my outlook and perspective. It taught me many little lessons: that life is a learning journey, how to fend for myself, how to think for myself and how to take responsibility.

Nonetheless, at the end of that two-year season, I had no more of an idea of what to do with my life than before I started my adventures.

So, I went for aptitude tests to help me orient and direct my next move towards what to become. The results were interesting and gave me numerous options I could pursue, of what I could be when I grow up. The results did, however, not reveal what would give me meaning and purpose in my life.

I enrolled for a degree at a university because this was the *“right thing”* to do for my generation. Besides, it was an opportunity that not everyone has. Two years later, I dropped out of university because I got bored with the subjects in my study and was somewhat of a rebel – a non-conforming outlier. Then, for the following decade, I went through various jobs. I pursued a career in sales, but I was actually pursuing money. I achieved that goal and made relatively good money. But that was not fulfilling. I derived no real meaning from what I was doing. I felt purposeless. I was never really committed in the sense of

knowing that *“this is what I want to do with my life”*. Despite always putting in effort and doing my very best in every opportunity, my lack of purpose would eventually appear in the results of my labour. I would feel rundown, tired and demotivated. I was experiencing burnout. Needless to say, I would ultimately be asked to leave my job or resign out of pure frustration.

It was not like I wasn't applying myself in different areas and that I wasn't productive, but just that I did not have a clear vision of what I wanted to do as an adult. Remember I hadn't had *“a clear vision of me as a grown-up”*.

I must admit that there were times when I was disappointed with myself when I saw friends and colleagues who were very dedicated and who excelled in their careers. In those times, I felt like I had no purpose or meaning. So this question of *the meaning of my life* really stayed with me.

Being in this position of not knowing has kept me feeling like a child. In many ways I still feel 18 years old because of it. When I say this, I do so with sincere appreciation and gratitude for my life experience. I am thankful that this was the result – and I don't want to feel like an adult. Seeing life through the eyes of a child is way more fun! I have this childlike frame of mind that governs much of my perceptions and experiences. I feel like I have so much to learn and therefore I remain curious. I am always asking questions and feel like I just want to keep on learning and know more. Operating from this mindset has actually served me exceptionally well, contrary to how it may sound. It has enabled me to do what I do and be who I am today. It has enabled me to pursue this journey that I am now going to share with you.

Whenever I interact with “adults” today, I feel like I'm a child. I approach interactions and situations as if I am a juvenile. I am quiet, even a little shy. I like to listen and observe more than I like to talk. If I talk, I ask more questions and make fewer statements. This approach has enabled me to always be in a position of *“not knowing”* or where I can learn something from others. My ideas about the world, others and myself are tentative and not fixed. I only *know* what I have been exposed to in my short life. I will never, in this lifetime, be exposed to *“everything”*, so there is much that I don't know. So how can my ideas be fixed? In other words, I always have space and appetite to integrate more information into my subjective worldview. This has never changed, and I am still experiencing life in this way.

Just last week I met a girl in her early 20s at the climbing gym. We had a chat and I revealed my age. She was rather shocked. She thought I was 10 years younger. I would usually appreciate the compliment while just shrugging it off and saying it's probably just genetics and not think much of it.

But now I think differently about it...

My outlook on life has definitely had an influence in how I am ageing. Because I feel 18 and experience life from that perspective, it has left me more physically fit, stronger and in shape than others of my age. (A recent visit to a cardiologist revealed that my heart is in the condition of a 20-something)

I have lived a relatively healthy life, especially over the last 10 years or so. But in my 20s I frequently indulged in drinking, eating, smoking cigarettes and recreational drugs.

Yet, if I look at people of my chronological age who live a healthy life, they don't appear that young for their age. So, while I believe living a healthy life, biologically, is critical to delay ageing and disease, it's not the only thing that promotes youthfulness and vitality.

During the decades of indecision about what I wanted to do with my life, I remained curious and wanted to know how I could, from one day to the next, get the most out of life. It was a higher priority for me to live a rich and empowered life than it was to be something, become someone, or fulfil a specific role as I grew up. I was in pursuit of what it meant to thrive.

Being fascinated with the human mind/body system, it became a natural interest and passion, even an obsession, to accumulate as much useful information as possible in understanding this system. When I say useful, I mean information that would make a difference in the quality of life and my experience of it. I was curious and I wanted an answer to this question:

**How can I extract the most value out of this one opportunity I have of living my life?**

Physically, mentally and spiritually. Body, soul and spirit.

I was like a sponge, always on the lookout for learning. I looked at the world differently than others around me; I was attentively focusing on any information that was relevant to moving me a little bit closer to my goal. This was what I cared about, what I was intentional about, and what I paid attention to. And this attention aroused and energised me. My brain was filtering out the noise and I honed in on everything that was in line with my mission and quest. Yes, I finally realised what I wanted to do with my life when I grow up!

I made my life a learning journey, studying and experimenting as much as possible to find the way to optimise mental and physical health. Now that I am in my forties, I can begin to understand how the application of this knowledge can benefit me in terms of longevity. I connected the dots: If I could learn how to thrive, then I would inevitably minimise risk of disease and delay ageing. Even though longevity or, rather, graceful ageing was never a conscious goal, it became a pretty useful by-product.

I began reading up on biology, nutrition, exercise physiology, psychology, philosophy, neuro-semantic, neuroscience, psychoneuroimmunology, endocrinology and epigenetics. When I realised that all these disciplines speak to the outcome that I am after, I wanted to learn all that I could about them. And so I did ... and still am.

If I understood something and it seemed beneficial in my context, I would apply what I learned to myself and keep on doing whatever *that* was, as long as it provided me with good results. I made that part of me. And I learned from what didn't work and, needless to say, didn't incorporate those.

You can say I was on a quest. I suppose I was and still am seeking fulfilment, knowledge, meaning, purpose, wellness, peace and longevity all at the same time.

The importance of a right mindset is one of the elements that I identified early on. Your attitude, beliefs and perspective are the invisible guides that lead you in a direction. They determine what you pay attention to, what appears on your radar, what you experience and the outcomes you achieve. Everything else, all the distractions and clutter, gets deleted. Without becoming aware of these aspects, you cannot direct or control these areas of life that could be in your control. Without this you cannot harness the higher intellectual powers that make you human. If you do not take control of these uniquely human functions, you will in essence have no advantage over pre-sentient animals.

By becoming aware of my cognitive and emotional faculties, I learned to take into my hands a higher level of control over my health, life satisfaction and longevity.

This is what I have experienced in my life. Yet, a growing body of research is supporting my somewhat unspoken and under-pronounced personal revelation. Recent advances in science have enabled the discovery of anti-ageing and disease-modifying drugs and interventions. Fascinating work has been done on the biological side of disease prevention and the delaying of age. On the psychological side, there has also been impactful, if less publicised, work on the mind's influence on health and longevity.

We can be truly grateful that we live in times like these and we should take every opportunity to increase our understanding and knowledge of how to use these scientific breakthroughs to achieve our life and health potential.

So, this is the purpose of my book. I want to share my experience and research findings. I want to give you, the reader, some of the strategies and techniques that you can employ to get more quality and quantity out of your life.

So here I am today. After years of testing, reading, trying, coaching and experimenting, I have come up with what I believe are the basics needed to thrive:

- ➔ Start with yourself. Take responsibility for yourself. Get your own life (health, mind, space) in order before venturing out to fix anything else.
- ➔ Keep moving. As soon as you stop, you lose mobility, strength, motivation and momentum. Also, once you stop, it is very hard to start again.
- ➔ Nutrition is way more than following a trendy diet. It's a highly individual regimen. It's also much more than just macronutrients (carbohydrates, protein and fats) and body composition. It's about providing your body with the raw materials it needs to thrive.
- ➔ Human beings are aiming creatures. We always need a goal. This motivates us and gives us purpose, responsibility and energy.
- ➔ Your mind is very powerful. Your frame of mind towards things will determine the outcomes you experience and the results you achieve.
- ➔ Your beliefs influence what you perceive and experience. They can prevent you from moving towards your goals or they can accelerate you to where you want to go. You choose your beliefs.
- ➔ Be like a child. Always stay curious, always be learning and keep asking questions.
- ➔ To learn and grow, you must ensure that you perceive the broadest spectrum of the environment and develop greater awareness through integrating all that you can. This way you see more of the "territory" for what it is; your subjective map will more closely resemble reality and, in turn, empower you.
- ➔ You are a complex system consisting of a body, a soul and a spirit. To think you can compartmentalise these complicated aspects and treat them as silos is shortsighted and counterproductive. Stimulate, challenge and nurture your body, soul and spirit.
- ➔ Your environment and lifestyle (exercise, nutrition, thoughts, emotions, chemicals, supplements, medication and toxins) affect your gene expression; in other words, which genes are turned on or off and what manifests in your life. This can lead to a long healthy life or disease.
- ➔ The time to fix the roof is when the sun is shining. Don't wait for the storms; it will be too late.
- ➔ Certain lifestyle-related factors and states of mind cause inflammation, which is the main precursor for cardiovascular disease, neuro-degenerative disease and various types of cancer. Identify these and improve your chances of a good, long life.

- Living in the era of information has its pros and cons. Today, information is not in short supply, and neither are those who aim to get your attention for their financial gain. You become what you pay attention to. Live life intentionally and be selective with your attention.
- Comfort has a dark side: don't overindulge in it.
- Ageing and age-related decline could be seen as a disease that can be treated.
- Sleep is immensely important.
- Get some sunlight and spend time outdoors.
- Go on an adventure.

People I have encountered along the way often questioned me. They wanted to know what I am doing and how I am doing it, and what made me different. They wanted to know why I am mostly optimistic, feeling good and healthy, looking better and always having energy to climb another mountain (figuratively and literally).

And now I see that many, if not most, people around me are not thriving. Most are on autopilot; many are confused or unsure. Some are passively observing life from the side lines. Others are frustrated because what they are doing isn't working. Some aren't motivated or can't maintain the energy required to implement the changes needed in their lives to keep them healthy. Others remain stuck in a certain lifestyle and cycle. Or even worse, they remain victims to the unfairness that is life.

Therefore, I decided to write this book and share my journey. I believe this knowledge can empower anyone who puts it to use.

I know how valuable my findings and this information are when you apply them to your life. And I know that many others are after the same thing; they just don't have the inclination or time to go through all the years of reading, studying, testing and trial and error. Or they might fall for fads and quick fixes. *This book is not a quick fix.* It is, however, a treasury of techniques and strategies that can put you on the fast track to sustainable change and getting the most out of your years ahead, regardless of what lies behind you.

If I were content in any other job or career path, I would not have pursued this never-ending journey, and I would have been poorer because of it. My childlike curiosity and perspective have served me well, even if I initially thought it was hampering my progress and success.

I can now share my experiences with you, and hopefully some, if not all of it, can help you change the way you live life and approach your health and ageing.

I have learned that there are some general do's and don'ts that apply to everyone. However, the uniqueness of everyone's genetic blueprint and neuro-psychological profile require individual adjustments and tweaking for optimal results. Therefore, take what applies to your life, try it out and see what works for you.

Of course, I didn't figure this stuff out all by myself. Much of what I share and the success I experience today is based on ancient wisdom and decades of research and testing by others going as far back as Plato, Aristotle and the Hebrews. This content is based on work by philosophers, neuroscientists, psychologists, professors and researchers from all over the world.

*Disclaimer:* I am not a doctor. I am a meta-coach and a student of life. Please do not make any medical changes without consulting with your physician or trained practitioner. Consider your current health and decide what you can and should implement in your life.

## What the book is and isn't

This book is, like me, to the point.

It is very factual, and indeed a "how to..." book: how to reach your health, life and longevity potential; how to use your critical thinking, emotional intelligence, meaning and lifestyle to achieve a higher quality and quantity of life; and how to sit in the driver's seat of your life.

This book is about empowerment. I have researched and interpreted the most useful techniques and tips in neuroscience, psychology, cognitive science and lifestyle. If applied, these techniques will enable you to climb your mountain.

Everyone has their own mountain to climb. What's your mountain?

- ➔ Obstacle or limitation?
- ➔ Setback or disappointment?
- ➔ Declining health?
- ➔ Advancing age?
- ➔ Loss?
- ➔ Fear?
- ➔ Yourself?

It can be an unwanted event or a challenge you set for yourself. It could be anything...

You will read a few teaching stories from my personal experiences, but the

book is mostly going to give you stuff to do, mental or physical. To get the most out of this book, please do the exercises and write down notes regarding what you are learning and what you want to apply to your life. Write out your goals, plans and strategies for achieving them. Declare them.

I wrote this book to present my understanding, concepts and procedures, to make the information experiential and identify practical steps for incorporating it. I don't like to blather on, so I will be direct and to the point.

You will not get maximum value if you just cover the material and your learning is passive. Don't be deluded by thinking that just "knowing" the content will actually change or impact your life.

Get the knowledge into your nervous system. Close the knowing-doing gap by taking action. Go on the journey.

Try to explain what you understood from a certain chapter to someone else. If you cannot share what you have learned, then you have not really learned it.

After each page or concept make a summary in one or two sentences.

Make notes in the book itself (I have left space), underline sentences and highlight sections. If you prefer to work electronically, then make notes on your device. You have to embody these concepts and you have to take ownership of them.

Digest, process and integrate the information. Make it yours.

As you read something that stands out for you, ask yourself:

- ➔ How can I specifically make this part of my experience?
- ➔ How can I apply this in my situation/life?
- ➔ How can this change my life?
- ➔ What difference will that make in my life?
- ➔ What should I start doing?
- ➔ What should I stop doing?
- ➔ What will happen if I do this?
- ➔ What will happen if I don't?

That's how you learn. That's how you change. Then you read not for entertainment but for transformation. While knowledge is important, it's what you do with it that matters.

That may sound like effort ... or even work sprinkled with some discomfort. As you will see in the pages to come, in order to climb your mountain, you need to face and actually embrace some physical and mental discomfort.

You don't need a degree in psychology or neuroscience to understand this

book. You don't need any high-level education. In fact, the more intellectual and informed we are, the better we may be at coming up with arguments to support our existing, sometimes limiting, beliefs. And the harder it is for us to change. It may serve you better to read this book with the mind of a child. Be willing to let go of and unlearn some things about yourself and the world. It requires humility but can make change feel like a breeze.

I'm guessing you're reading this book to change something about your life.

Don't let this opportunity of real transformation pass you by. *I believe you create yourself.*

This book is for everyone. It has no age limit. It is never too early in life to become aware of and start practising these principles. At the same time, it's never too late.

This book will stretch your mind, and once it has been stretched by a new idea, it will never regain its original dimensions.

Climbing your mountain starts with one step. Let's go on this journey together.

It's time to:

- See beyond
- Think beyond
- Move beyond

## Structure of the book and how to use it

This book is made up of the following chapters, with the image that follows illustrating how to navigate your way through them.

### Chapter 1: Biological Code

We are born with a specific code or DNA. The environment that you inhabit and your responses to it will determine the expression or suppression of this genetic code. This response will influence the degree to which you will experience inflammation, disease and ageing. This will impact the quality and the quantity of your life journey. In this chapter we explore the biological and psychological factors that reside within your control. Then we uncover how the process of finding purpose, making meaning and developing your

potential as you engage with adversity and challenges will affect your life. This can only be achieved by taking responsibility.

## Chapter 2: Reboot your operating system (OS)

Taking ownership and responsibility for what is within your control empowers you to influence your future and achieve the outcomes you desire. If you don't, you will remain a victim of your circumstances. This is why I call this the rebooting of your operating system. If your programmes are not running smoothly, you need a reboot. You need to take control of and responsibility for your primary powers of thinking, feeling, speaking and acting. Only after taking responsibility can you start using your programming powers to update and operate your mental software to its full benefit.

## Chapter 3: Update your software

The brain has a programming language. The nervous system interprets input via the senses, then represents that information, formulates action and directs behaviour. This dynamic process is happening mostly outside your awareness. Information is filtered through your orientation, beliefs, ideas, memories, meanings and then gets represented internally as a map or navigation system, shaping your subjective reality. This chapter will bring these unconscious coding principles and mechanisms to your awareness. This provides the understanding of coding and programming to update old or distorted maps. The accuracy and quality of your map will determine your destination. This map resides in your meta world.

## Chapter 4: Enter your meta world

Your meta world is where the magic happens. This world is above and beyond our daily living, operates mostly outside awareness, yet is where our cognitive and emotional superpowers reside. If you increase your awareness of metacognition, emotional intelligence and meaning making, you can harness your most powerful internal resources. Here you will learn how to programme yourself by using your meta state awareness. Learn how to change your thinking, feeling, responding and believing to optimise your life. Now you re-design your map, write your own code and become a software developer.

## Chapter 5: Become a software developer

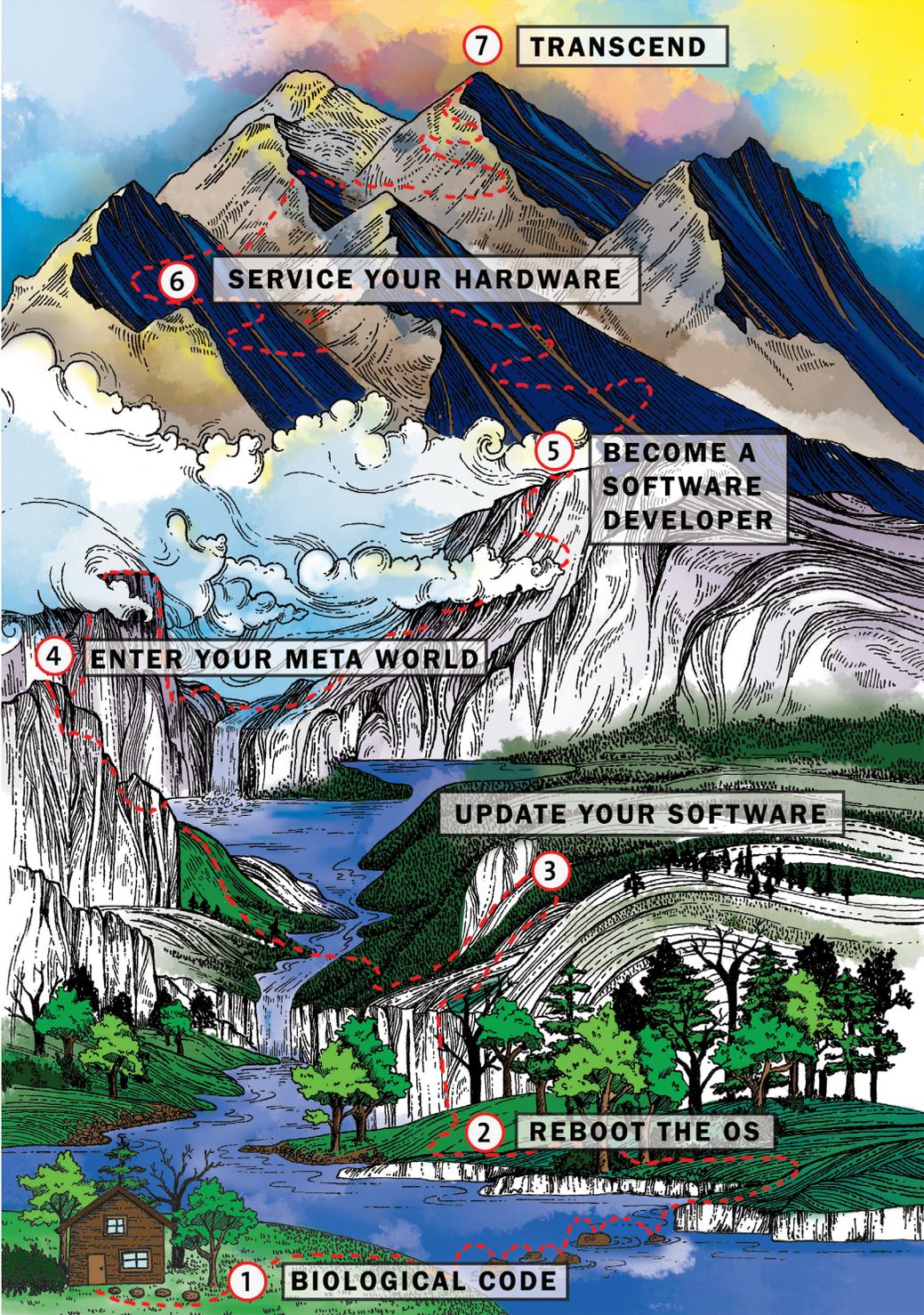
Our states influence our mental and physical health, performance and longevity. Having developed the tools in your meta world, you will now be able to engineer a life filled with meaning and purpose. In this chapter we look at the coding of motivation, as well as the six steps to programme meaning and purpose into your daily life. This will protect you against burnout, inflammation, disease and pre-mature death. You are now equipped to easily programme yourself to implement the behaviours and habits that will enable a long and fulfilling life.

## Chapter 6: Service your hardware

Your hardware is made up of your actions, habits and behaviours. This is your body executing the instructions it receives from your software. This is effectively the output and outcomes you experience on your journey and will have a significant impact on the quality of your life. Your lifestyle plays a big role in which of your genes get activated and which remain dormant. In this chapter I will explain nine of the best strategies that you can apply to optimise your immune function. This is the *What* and the *How*, and finally in the last chapter we will uncover the *Why*.

## Chapter 7: Transcend the machine

Potential is something that lies dormant in all of us. Having clearly designed goals give us an orientation and protects us from many ailments. Achieving your dreams and goals are not only of benefit for achievement's sake but for making you someone who can transcend your circumstances. In this chapter we will unlock motivation and explore your *Why* power that drives your willpower. By exploring new territory and setting goals we unlock potential and find meaning beyond ourselves.



## Map key

This book is written to serve as a guide or map for your journey. For this reason, I have added in this map key to identify important junctures in the process. These keys will point you in the right direction and help you get more from the content. To extract the most value, don't brush past these points but rather use them as markers to keep you on track while exploring this new territory.

### Keep practising

If you see this icon, it means you have an exercise to do. It will include some thinking, some writing and maybe some doing. Get a pen and notebook or open a note on your device and follow the instructions. The change comes from the doing.



### Keep reflecting

If you see this icon, it means you must pause for a moment and reflect on something. Don't just brush over this and read the following section. Take a minute or two to really think about how that content or idea applies to your life and situation.



## Keep writing

If you see this icon, it means you have some writing to do. Always have a pen or pencil handy. Write in this book or in your journal or your device. Don't just skim over this and discount the small action. We translate knowledge into behaviour by taking action.



## Worksheets

Scan this QR code to download a template for each of the worksheets that appears in the book or visit <https://keepthriving.co.za/online-resources/>. This is if you would prefer not to write in the book and would like to download or print and complete the exercises elsewhere. This will also allow you to repeat, duplicate or revise the exercises.



# Chapter 1

## Biological code: Inflammation, disease, ageing and meaning

**Core idea:** You are born with a specific genetic code into a specific environment. You have no control over this inheritance. You do, however, have control over how you respond to your code and to the environment. This will determine which of your genes are expressed or suppressed and, in turn, impact your health, fulfilment and longevity.

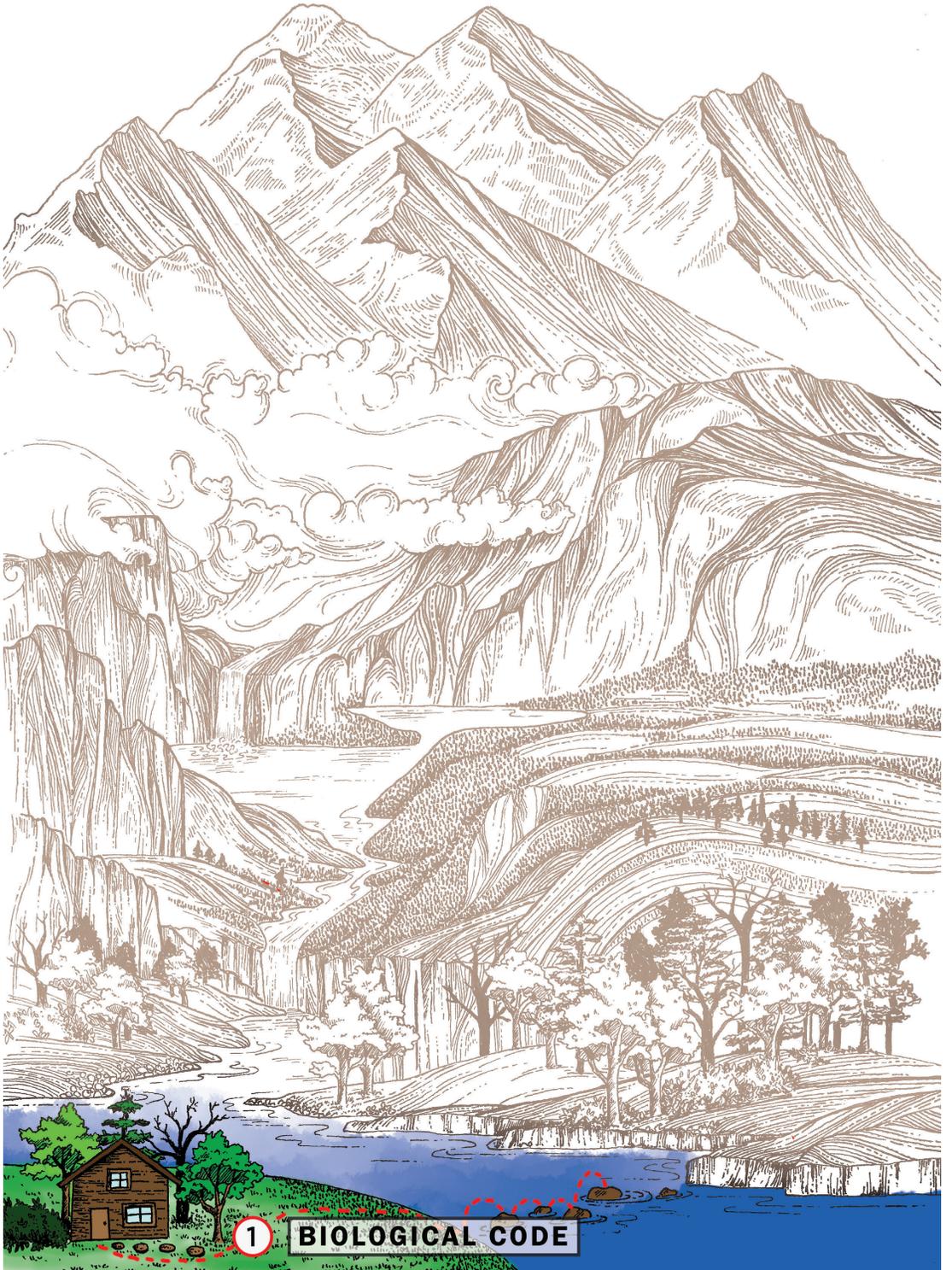
From birth your default response to the environment puts you in a pro-inflammatory “survival” state. This book will show you how to change that response to make “thriving” your default state.

Worldwide, three out of five people die due to chronic inflammatory diseases like strokes, respiratory diseases, heart disorders, cancer, obesity and diabetes (Pahwa et al., 2021).

Inflammation and disease go hand in hand. Ageing and disease go hand in hand. Therefore, inflammation and ageing go hand in hand.

So how can you curb inflammation, disease and ageing?

Do you remember the tale of Peter Pan, the magical boy who refused to grow up? He had no intention of becoming old and wanted to remain in Neverland with the Lost Boys. Neverland is a metaphor for an eternal childhood, childishness or immortality. Peter wanted to have fun and remain a child. But who can blame him? The only adult role model he had to emulate was the



captain of the pirates, the ruthless James Hook. And, let's be honest, if being like Hook was what it meant to be an adult, then I wouldn't want to grow up either. He was a tyrant who had lost his hand (mobility and strength?) to Pan in a fight, who, in turn, fed it to a crocodile that was lurking in the waters, waiting to eat the rest of him. The same crocodile had swallowed a clock, a constant reminder that time or death is creeping up on its victims. The crocodile already had a piece of Hook.

That's what happens when you age. Time already has a piece of you. It's developed a taste for you and it's going to eat you. Hook was so traumatised by this that he responded by becoming a resentful tyrant.

Time truly waits for no man, and it will eat you.

Mortality is inevitable; ageing is happening to you right now. But how you respond to the beasts of ageing is within your control. You cannot prevent it, but you can mitigate some of its worst effects. Ageing doesn't have to be *that* ugly. You don't have to become a resentful tyrant. You can choose how you respond to the beasts in your life. This will have a big impact on your journey.

The thing is, if you stay in Neverland, you don't acquire the skills to tame the beasts; the beasts that evoke fear, resentment, anger, guilt, bitterness, shame and disease. Developing the higher-level cognitive abilities of a self-reflexive consciousness only comes if you accept, embrace and learn critical thinking and emotional skills. By staying in Neverland, you are still vulnerable and exposed to the crocodile – and with only one hand.

This book will help you arm yourself better to deal with the beasts that lurk in the murky waters; the beasts responsible for causing inflammation.

## Inflammation

Chronic inflammatory diseases are the most significant cause of death in the world today. According to the World Health Organization (WHO), chronic diseases rank as the greatest threat to human health.

### **What is inflammation?**

In a research paper by Pahwa et al. (2021) titled "Chronic Inflammation", it is explained as follows:

Inflammation is part of the body's defence mechanism. It is the process by which the immune system recognises and removes harmful and foreign stimuli towards the beginning of the healing process. Inflammation can be

either acute – short term and rapid, usually in response to tissue damage, injury, microbial invasion and harmful compounds – or chronic – persistent and low level, lasting for months to years. Chronic inflammation, which is central to our discussion, can result from the following factors:

- ➔ Failure to eliminate the cause of acute inflammation
- ➔ Exposure to a low-level irritant
- ➔ Autoimmune disorder (immune system attacking healthy tissue)
- ➔ Defect in cells responsible for mediating inflammation
- ➔ Oxidative stress and mitochondrial dysfunction
- ➔ Chronic negative or destructive emotions

Therefore, the causes for chronic inflammation can be biological, environmental or psychological.

Genetic factors also come into play and should not be ignored. However, epigenetics explains that even though we may be genetically pre-disposed to certain conditions or diseases, those genes still need certain environmental triggers or conditions to be expressed (activated). If not activated, they can and will remain dormant in the body without ever affecting your health.

I inherited from my parents a catalogue of genetic predispositions that I need to consider if I want to thrive. I am lactose intolerant, cannot convert vitamin A from plants and have high magnesium, iron, choline, fibre and collagen requirements. I am sensitive to saturated fats and carbohydrates. If I don't monitor these closely, I show potential for obesity and insulin resistance. I also have a higher-than-normal pro-inflammatory response, high cholesterol and a moderately reduced natural anti-oxidative protection. On top of all that I have a high risk for thyroid dysfunction.

Each day I must take all these elements into consideration and take steps to mitigate the risk as much as I can. This includes my nutrition plan, supplements, exercise and rest. I had to give up dairy ("Oh cheese, how I miss thee...") and food high in saturated fat, and incorporate more avocado pears and olive oil. Now and again, I may have some cheese or milk, but I can see the effect it has on my system. Just because I have these predispositions, it doesn't mean that they will manifest. I have in fact already reversed symptoms and pain through my lifestyle changes.

According to this paper by Pahwa et al. (2021), the common risk factors that promote chronic inflammation include:

- ➔ Increase in age
- ➔ Obesity

- ➔ Diet
- ➔ Smoking
- ➔ Low levels of sex hormones
- ➔ Physical and psychological stress
- ➔ Negative mental states
- ➔ Sleep disorders

It's important to note that acute inflammation is vital for your survival; it forms part of the healing process within your body. The inflammatory response is switched on when the sympathetic nervous system is activated in response to a possible "threat" from trauma, pathogens, injury or stress (real or perceived). Your immune system is on high alert to repair any tissues that may be damaged and energy is made available to be utilised during the stressful situation. All non-vital bodily functions are put on hold to ensure adequate resources are made available to deal with the threat.

Now the body is in a pro-inflammatory state. Blood system macrophage, a type of antigen (defence cell) responsible for detecting, engulfing and destroying pathogens (intruder cells), is released. The macrophage sets the immune response in action leading to the release of pro-inflammatory mediators. These mediators are necessary to protect the body against "intruders or attack".

This is great in a survival situation that only lasts for a short while, such as acute physical stress or injury. When the threat moves on or is dealt with, inflammation has done its job and is switched off. This is what happens in a perfect world. In the short term, inflammation promotes healing, helps us adapt to external physical stressors and internal pathogens and plays a crucial role in survival.

However, problems appear when you keep exposing yourself to whatever is causing the inflammation or if there is in fact no physical "intruder" present or if the cause of inflammation is psychological in nature and it doesn't move on.

Acute inflammation is protective; chronic inflammation on the other hand is the precursor to many types of diseases, even an early death.

Whether inflammation is a friend or foe depends on your body's ability to switch it off when it is no longer needed. The problem is, we don't live in a perfect world and, often, chronic inflammation persists.

Firstly, there is a need to differentiate between physical stress, like trauma from an accident, intense exercise, hunger, famine or a mugging and psychological stress, like fear or anxiety.

Stress, like most things, is a subjective experience. It varies from one individual to the next; however, some common causes of psychological stress include, but are not limited to, the following:

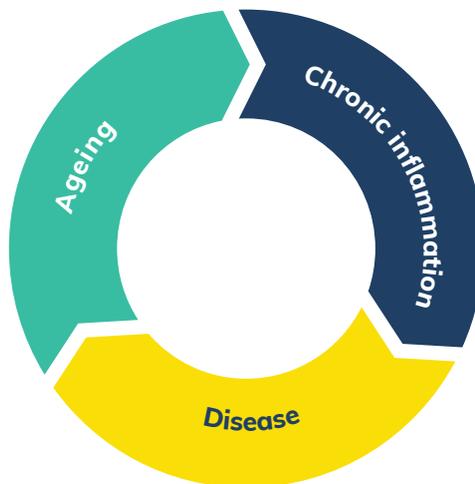
- Sudden changes in your environment or daily routine
- Severe disappointment like loss of a loved one or divorce
- Retrenchment or retirement
- Disturbed sleep
- Severe traffic or constant travelling
- Fear and anxiety
- Diagnosis of disease
- Physical trauma like injury

Therefore, the one main key to health, wellness and longevity is removing inflammation triggers and, thereby, reducing chronic inflammation in your body.

This research paper also lists the common signs and symptoms that develop during chronic inflammation:

- Pain in the body, joints or muscles
- Chronic fatigue and insomnia
- Depression, anxiety and mood disorders
- Gastrointestinal complications
- Weight gain or weight loss
- Frequent infections

One thing that appears to be consistent in all this is that ageing and disease go hand in hand. Inflammation and ageing go hand in hand. By curbing inflammation, disease and ageing, you will extend years of your health while compressing the years of morbidity.



**Fig 1.1: The spiralling influence of inflammation, disease and ageing**

# Biological influences of ageing

## Why ageing can be viewed as a disease

As science marches forward and reveals more and more about what ageing actually is, we have a prime opportunity to take note of what is happening on the forefront and use to our advantage what the pioneers of the industry are revealing. Researchers like Prof. Valter Longo and Dr David Sinclair are doing ground-breaking work in the field of juventology.

For many decades researchers have been focusing on reducing disease to alleviate its impact on quality of life as well as to reduce pressures on the healthcare systems. The thinking was that if we can reduce the various chronic lifestyle-related diseases, we will experience a higher quality of life in old age, thus lowering the financial impact on the system. This makes good sense. After all, we want to see fewer sick people, not only for the financial implications but also for improving the quality of life for all people. Unfortunately, this research has not been focused because inherent to it has been the *a priori* that the array of human diseases occur in separate silos.

Luckily, many researchers today are viewing ageing as a major risk factor for most chronic diseases. There is increased disease vulnerability and death that accumulates with age. Therefore targeting ageing to reduce the overall burden of disability and chronic disease makes more sense than targeting individual diseases.

Ageing is seen as the common denominator in all these and other diseases:

- ➔ Cancer
- ➔ Cardiovascular disease
- ➔ Neurodegenerative disease

The bottom line is: prevent or delay the negative effects of ageing and you delay disease, morbidity and death. Reduce inflammation and you will delay or prevent disease.

More funding and grants are being made available worldwide for research towards slowing the rate at which we age. Today you and I are in a position to take advantage of what this technology is revealing.

Some of you may think you don't want to live to a very old age. Not being able to do "this or that" is humiliating and degrading. Being relegated to spending your last years in a bed with little or no mobility is no way to experience life. I completely agree. I myself am very active and would not necessarily want to extend a sedentary life for the simple sake of living longer to age 120 or whatever.

That being said, if the quality of my life were good, why would I want to die? I think most of us would want to extend the quality years of life – those years where you are physically and mentally able to be productive, pursue dreams, contribute value, connect with friends and family and engage with the world.

This means shortening the period of morbidity, which can be defined in the following ways:

- I. The quality or state of being morbid: an attitude, quality or state of mind marked by excessive gloom, hopelessness and helplessness.
- II. Any physical or psychological state considered to be outside the realm of normal well-being. The term is often used to describe illness, impairment or degradation of health.

So, when I say reduce morbidity, I mean reducing the span of time preceding death during which you experience psychological states of gloom and/or physical states of illness or disability. This period often precedes death. What if you could reduce this from, say, 10 or 15 years, to a year or less? If you could live longer and can enjoy the extra time, then great! The most important thing, from my perspective, is to increase your allocated time and improve the quality of your life during that time.

“It’s about balance”, according to Dr Peter Attia MD. I like how he says that longevity is being in that place of balance between lifespan (living longer) and health span (living better).

Increasing lifespan or living longer comes down to delaying the inevitable death. This equates to delaying the onset of the following events or conditions that collectively account for approximately 80% of deaths in a non-smoking population:

- Cardiovascular disease
- Cerebrovascular disease
- Cancer
- Accidents

Increasing health span or living better comes down to avoiding, or at least delaying, the following three categories of decline:

- I. **Cognitive decline** includes waning brain function in the areas of executive function, processing speed and memory. Alzheimer’s disease is its severest form, but many less severe forms of dementia and cognitive decline are pervasive.
- II. **Physical decline** is a decrease in stability, flexibility, mobility, strength, muscle mass, bone density, aerobic function, functional movement, sexual function and freedom from pain.

- III. **Psycho-emotional decline** includes loss of skill regarding mindfulness, social interaction and social support, accompanied by loss of meaning, purpose and fulfillment.

Death is inevitable; however, a loss of these three elements of health span is not. They are relative or progressive but not inevitable.

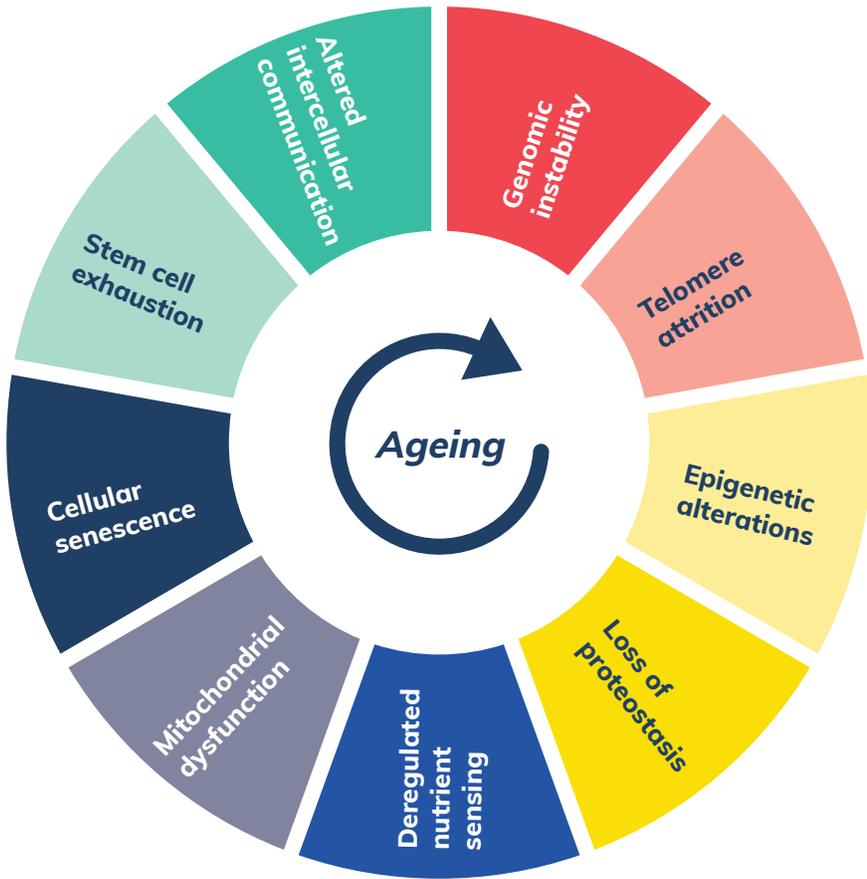
## Increasing lifespan and health span

In his book, *Lifespan*, Dr David Sinclair summarises the nine hallmarks of ageing, which most of the current research agrees, as:

- ➔ Mutations within your cells that occur during cell division and are caused by DNA damage (genomic instability)
- ➔ Gradual loss of the protective end caps of your chromosomes (telomere attrition)
- ➔ Changes in gene expression influencing which genes are turned on or off (epigenetic alterations)
- ➔ Loss of healthy protein maintenance and balance in your cells (proteostasis)
- ➔ Deregulation of nutrient sensing or your cell's ability to recognise and respond to fuel
- ➔ A loss in cellular energy production (mitochondrial dysfunction)
- ➔ Formation of “Zombie” cells which then inflame other healthy cells (cellular senescence)
- ➔ Exhaustion of stem cells that replace and repair any other cells
- ➔ Degeneration in signalling between cells, producing inflammatory molecules (altered intercellular communication)

Interventions aimed at addressing any of these biological hallmarks may add a few years of wellness to our lives. If we can address all of them together, the result could be vastly increased average lifespans. By slowing down ageing, you can forestall disease. By delaying disease, you can push back death.

Dr Sinclair believes that there is one cause of ageing that exists upstream of all these hallmarks, that there is one singular reason for why we age – “Ageing, quite simply, is a loss of information” – or more specifically the loss of genetic information.



**Fig 1.2: The nine hallmarks of ageing**

He further explains that there are two types of information in biology: analogue and digital. The analogue information is epigenetic information and the digital information is genetic (DNA). Both of these are storage systems that have benefits and drawbacks. But ultimately it is the preservation of information in these systems that influences the rate at which we age.

Scientists have found that we have numerous genes that create survival circuits. They are referred to as “vitality genes” because they have demonstrated the ability to extend both average and maximum lifespans in many organisms. However, these genes don’t just make life longer, they make it healthier, which makes “vitality genes” a good name for them.

These genes form a surveillance network within our bodies, communicating with one another between cells and organs by releasing proteins and chemicals into the bloodstream, monitoring and responding to what we eat, when we eat, what we think, what we feel, how we move and what time of day it is.

These vitality genes, proteins or enzymes (actually longevity-signalling pathways) include various sirtuins as well as mTOR and AMPK. They tell us to hunker down when the going gets tough (discomfort), and they tell our cells to multiply fast and reproduce fast when the going gets easier (comfort). These pathways or defence systems are all activated in response to biological stress.

All species are resource limited and have evolved to allocate available energy either to reproduction or to longevity, but not to both.

The genetic survival mechanism can be summarised as follows: organisms will always be in one of two states, depending on the environment and the availability of resources – good times (comfort) or tough times (discomfort), feast or famine.

In good times, when nutrients and other resources are available, the organism directs energy and time towards reproduction to ensure the survival of its species. However, when times are tough and resources are scarce the organism hunkers down and directs its limited energy towards repairing damaged DNA. This temporarily stops all sex and reproduction until the DNA repair is complete. This makes sense, because while DNA is broken, reproduction is the last thing an organism should be doing. Cells that fail to pause while fixing DNA will almost certainly lead to the loss of genetic material or information (hyper-ageing). If DNA is broken, part of a chromosome will be lost, or, if duplicated, the cells will likely die or multiply into a tumour.

Therefore, the cell hunkers down when DNA gets damaged, revives itself, and is primed for survival and thriving.

The vitality genes tell us to hunker down when the going gets tough and they tell us to reproduce quickly when the going gets easier. Trading reproduction for repair, these genes order our bodies to “buckle up” in times of stress and protect us against the major diseases of ageing.

They mute inflammation, prevent cell death, boost mitochondrial function, battle muscle wasting, improve DNA repair and boost cognitive function.

As mentioned, this defence system is activated by biological stress. This means that by exposing ourselves to the right amounts of stress (discomfort), through certain lifestyle tweaks or habits, we can activate our vitality genes without damaging our cells. This process is called hormesis and refers to adaptive responses of biological systems to moderate environmental or self-imposed challenges through which the system improves its functionality and/or tolerance to more severe challenges.

If you focus on certain lifestyle practices, you can pull all the correct mental and physical levers that will help you thrive.

This helps you build up a strong and robust immune system that can then withstand and fight off major life-threatening stressors and disease, because it has been conditioned to do so. We can control these longevity-signalling pathways and can fundamentally transform the quality and duration of our lives. This means you can condition and optimise your “survival system”. By applying strategies for thriving, you harness the elements that are within your control, and you are able to manipulate your biochemistry and psychology for optimal health.

That's the biological basis for thriving and the foundation for longevity. But what about the psychology?

## Psychological influences of ageing

As I noted, recent advances in science and progress in artificial intelligence and markers of biological ageing have enabled scientists to discover and evaluate the efficacy of age- and disease-modifying drugs and interventions. Thus, much work has been done on the biological (hardware) side of disease prevention and the delaying of age.

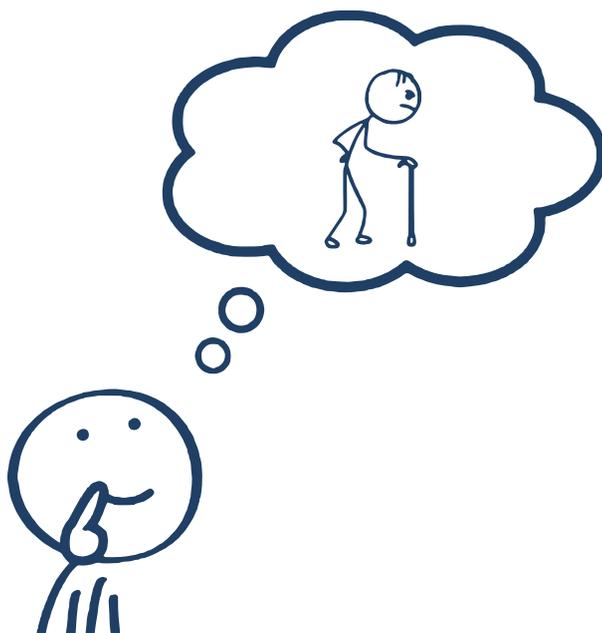
Yet, what about the psychological (software) side? Not much is being said of how this can influence health and longevity.

Let's turn our attention to how our thinking influences our ageing and how psychological interventions can be used to modify well-being, attitudes towards ageing and the ageing process itself.

*Your attitude towards ageing is more important than your age.*

Recent studies on this topic reveal interesting connections between your perceptions and beliefs about your own mortality and physical frailty and your health. In the research done by Zhavoronkov et al. (2020), the data makes a compelling case that perceiving yourself subjectively as younger than your chronological age may influence age-related biological decline. In other words, your perceptions of your age have been shown to influence your health, mental state, cognitive function, longevity and general well-being.

Based on this I will explain how feeling younger than your chronological age can improve your health. Keep in mind, the converse of this model is also true: better health drives a younger subjective age.



**Fig 1.3: Your attitude towards ageing will influence the process**

## Chronological, biological and subjective age

So what age are you really? Let's define the different types of age.

**Chronological age:** This is your calendar age, how many years you have been alive and this is indicated on your identity document.

**Biological age:** This is your age based on biomarkers of health (and a better predictor of health and longevity). A biomarker is any measurable metric that can be used as an indicator of a particular disease state or some other physiological state of an organism.

There are biological biomarkers like blood pressure, heart rate, blood lipid profile, DNA methylation, telomere length, oxidative stress, cellular senescence, inflammation, etc. There are also phenotypic biomarkers like walking speed, time to get up, standing balance, grip strength, body mass index, waist circumference, muscle mass, etc.

Your biological age reveals your “true age” in that it provides more accurate insight into your expected mortality and morbidity.

**Subjective age:** This is how old you *think* you are or how old you *experience yourself to be*. It is most typically measured as the answer to “how old you feel”. Subjective ageing is mostly dependent on internal causes and is also a very important psychological marker of ageing.

I still experience life through the eyes of a child. Yet, being a late bloomer didn't help when I was trying to buy beer in the early days. All my teenage friends could get into the bars but I did not have it easy until I could eventually produce a valid ID. Teenage years were tough.

However, this lack of appearing “older” eventually became a benefit. My good friend Johan still jokes about the times I was asked for my ID at nightclubs in my mid-30s! My youthful subjective age probably shook my confidence as a young man, but it definitely has unlocked many perks later in life.

Multiple studies by Zhavoronkov and others (2020) have demonstrated that a younger subjective age is associated with better mental and physical health, healthy behaviour, cognitive function, well-being and satisfaction with life. At the same time, an older subjective age is significantly associated with decline in health, healthy behaviour and overall survival rate.

In addition, people with an older subjective age have been shown to have higher levels of systemic inflammation, as well as obesity, diabetes, pulmonary/muscular dysfunction and increased incidences of other diseases.

Neurophysiology and subjective age may also be connected. A study published by Kwak et al. (2018) found that subjective age was a predictor for younger brain age. In the findings elderly individuals who reported a subjective age similar to or younger than their actual chronological age exhibited a higher volume of grey matter.

A subjective age of five years older than chronological age exposes one to a two-fold increase in mortality rate, while a subjective age of five years younger was recognised as a major protective factor against death. This means that, if you have a subjective age of  $\pm$ five years relative to your chronological age, you are roughly doubling or halving your own mortality rate.

Therefore, subjective age can be seen as a very important and accurate psychological marker of ageing and an important predictor of health outcomes. It only makes sense that biomarkers of psychological age, which are just as important as those for biological age, can be employed for the purposes of ageing and disease prevention. These two types of markers actually complement one another.

For example, daily vigorous activity will have a beneficial effect on your biological age. At the same time, it will make you feel better and have a

beneficial impact on your subjective age. In other words, there is positive reinforcement at play between your biological age and subjective age. Factors or behaviours that influence one will likely influence the other.

While some factors that influence subjective age like genetics, cultural values and life experiences are non-modifiable, there are modifiable factors you can use to youthify your personal perception of ageing, nudging it towards a mindset that promotes productive and healthy behaviour. Since personal attitude towards ageing is strongly associated with the incidence of age-related diseases and mortality, modifying it through mental pathways can be an effective way to increase human lifespan and health span.

Focusing on the modifiable psychological factors while implementing healthy lifestyle changes offers compelling and promising opportunities to anyone seeking self-improvement and longevity. The current research suggests this combined approach has a high potential to promote a good life.

What this means is that if you add psychological strategies, in the form of changing beliefs, attitudes and expectations of ageing, and combine these with physical activity, knowledge and other lifestyle factors, it could offer a promising intervention to increase the quality and quantity of your life. In this book I will endeavour to show you how to change hardwired beliefs for the better. More on that a little later, but first let's look at some interesting research.

A study by Stephan et al. (2018) has shown that feeling older than your chronological age (a higher subjective age) is associated with:

- ➔ Cellular senescence
- ➔ Telomere shortening
- ➔ Psychological stress
- ➔ Depression
- ➔ Various diseases
- ➔ Cognitive dysfunction
- ➔ Higher risk of mortality
- ➔ Certain personality beliefs and traits (like neuroticism)

For our purposes, I want to focus on the personality traits and beliefs that displayed a connection with a lower subjective age. The prevalence of the following traits all decreased subjective age:

- ➔ Positive reappraisal (re-framing)
- ➔ Being outgoing
- ➔ Optimism
- ➔ Conscientiousness (goal-oriented)
- ➔ High life satisfaction
- ➔ Personal accomplishment

The research by Zhavoronkov et al. (2020) showed that out of 50 psychosocial markers of ageing, these traits are associated with a reduction in mortality risk. (In later chapters I will show you how to apply all these traits and lead you through exercises on how to change your outlook and beliefs for the better.)

The reality is we can increase our productive longevity by slowing down or even reversing biological and psychological ageing. This can be done by looking at the modifiable factors listed below:

- Health status and disabilities
- Education and knowledge
- Physical activity
- Longevity expectation
- Work or application
- Environment
- Social relationships
- Psychological support
- Personal beliefs

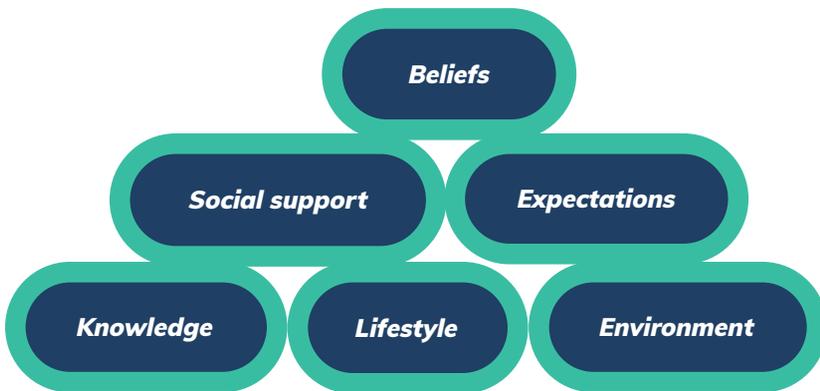


Fig 1.4: The modifiable factors that influence ageing

## Eudaimonia

Have you heard of the term eudaimonic well-being? In the word “eudaimonia”, “eu” means “well” and “daimon” means “divinity” or “spirit”, therefore the term means, having a good indwelling spirit that guides virtuous living.

D.L. Norton (1977) framed eudaimonism as an ethical doctrine in which each person is obliged to *know and live in truth with his daimon*, a kind of spirit

given to all persons at birth. This doctrine describes a journey of progressively actualising an excellence consistent with your innate potentialities. Norton was following in the footsteps of Plato, Aristotle, Nietzsche, Kierkegaard, Jung and Maslow. He suggested a theory for the individual's search for his/her place in the bigger scheme of things.

Eudaimonia embodies the great Greek imperatives of self-truth (know thyself) and self-responsibility (become what you are).

Aristotle wrote about this in his *Nicomachean Ethics* (cited in Ryff, 2018). He wanted to find an answer to the fundamental question of human existence: "How should we live?" His answer was: "Reaching for the highest of all human good achievable by human action." Aristotle mentioned happiness, but underscored that it was not some obvious and basic object like pleasure, wealth or status. He said the highest of all human goods was *activity of the soul in accord with virtue*. It was in elaborating the highest of all virtues that Aristotle got to the heart of eudaimonia, which he saw as a *realisation of one's true potential* – achieving the best within oneself.

There are obvious modern parallels to Aristotle's characterisation of eudaimonia as self-realisation, played out individually, each according to personal abilities, strengths and talents. Research increasingly suggests that meaning and purpose is important for health, well-being and longevity.

A paper published by Ryff (2018) brings our attention to what science is now revealing that echoes the Greek philosophers: meaning and purpose are connected to eudaimonic well-being (EWB). This is distinct from, and mostly inversely related to, happiness (hedonic well-being).

The eudaimonic approach focuses on meaning and self-realisation. It defines well-being in terms of the degree to which a person is fully functioning. Long-term life satisfaction is found here. The hedonic approach focuses on happiness and defines well-being in terms of pleasure attainment and pain avoidance. Short-term happiness is found here. The former is a deeper, more enduring state. People who fall in this group have lower levels of pro-inflammatory gene expression. The latter is more superficial and transient. People in this group have higher levels of pro-inflammatory gene expression.

If you are happy but have no sense of meaning, you may have similar gene expression patterns as someone who is chronically ill.

It really means that *doing* good is better than *feeling* good. EWB (eudaimonia) refers to the subjective experiences associated with living a life of virtue in pursuit of a higher purpose. You can improve your health, quality and quantity of life by incorporating meaning and purpose in your daily activities. This can prevent psychological and physical illness and distress, and delay morbidity and death.



**Fig 1.5: The six key components of eudaimonic well-being**

The six key components of eudaimonic well-being are:

**Autonomy:** Emphasises independent, self-determining and self-regulating qualities of the person. Do you show resistance to enculturation? Do you follow your conviction or do you follow the crowd? Do you have an internal locus of evaluation? Do you look inside or to those around you for approval? Do you feel delivered from or dependant on convention? Are you free from or captivated by the norms that govern everyday life?

**Environmental mastery:** Refers to the ability to choose or create environments suitable and conducive to your needs. Can you manipulate and control complex environments and actively participate in changing the surrounding world through mental and physical means? Do you affect your environment or does your environment affect you? Are you an active participant or a passive recipient?

**Personal growth:** This is all about self-realisation and achieving personal potential. Do you see life as an ongoing opportunity to learn, grow and evolve yourself over time towards becoming all that you are capable of? Are you actualising your potential or letting it go to waste? Are you realising your true self? Do you confront new challenges and obstacles in order to mould yourself into a stronger person? Or do you take the easy way by avoiding difficulty, discomfort and suffering?

**Positive relations with others:** Do you have the ability to love others without personal gain? Do you have strong feelings of empathy and affection for all human beings and the capacity for great love, intimacy, deep friendship and close identification with others? Or do you find it difficult to show love, empathy and affection?

**Purpose in life:** Do you have a sense of purpose and meaning? Do you feel your life is intentionally contributing to something? Can you face significant adversity or challenge through finding/creating meaning amidst suffering?

**Self-acceptance:** Do you have a positive regard towards yourself? Have you completely and fully accepted all of yourself, including your past? Have you acknowledged and come to terms with your dark side? This form of self-acceptance is deeper than standard views of self-esteem because it involves awareness and acceptance of personal weaknesses as well as strengths.



Let's take a short test to assess how you fare on EWB. Give yourself a score of 1 (lowest) to 5 (highest) for where you find yourself for each of these components. Review the components once more, then give yourself an honest evaluation.

If you are not happy with any of these areas of your life, make a note to include it as a goal or an outcome you can work towards. (I will provide a template in chapter 7.)

Back to the research. For those who score high on EWB, for those who have purpose in life, there is a direct link to several positive health outcomes:

- ➔ Better sleep
- ➔ Improved cognitive function
- ➔ Lower risk for CVD and diabetes
- ➔ Lower risk for neuro-degenerative disease (dementia)
- ➔ Lower risk for various types of cancers
- ➔ Lower risk for multiple chronic inflammatory conditions
- ➔ Lower risk for disability
- ➔ Lower risk for premature death

People who score high on EWB are also more likely to be pro-active and embrace preventative health services and utilise resources at their disposal.

Eudaimonia emphasises meaning-making, self-realisation and growth, quality connections to others, self-knowledge, managing life and marching to one's own drum. These qualities are of particular importance in today's world of political, social and economic confrontation.

This research by Ryff (2018) revealed that older adults, in general, had lower levels of personal growth and purpose in life compared to young and midlife adults. There is, indeed, a decline in purpose and growth as individuals age, but this was not consistent across old age as some older adults were decidedly above the average. Their capacity to maintain high levels of EWB was linked with multiple benefits for health and longevity. This underscored the protective role of EWB against the challenges of ageing. Again, high levels of eudaimonia is linked with multiple benefits for health and longevity.

## The underlying neural and genetic mechanisms

- Individuals with higher levels of EWB responded more logically and less emotionally to negative stimuli. Those with higher levels of purpose recovered faster from negative stimuli. They also showed reduced amygdala (fear, anxiety, etc.) activation and were slower to evaluate such information as negative.
- There is a link between high levels of EWB and the activation of reward circuitry (goal pursuit and achievement). This results in lower cortisol (stress hormone) release, illustrating the interplay between EWB and stress hormones.
- Higher levels of EWB are linked to greater volume of grey matter (insular cortex). This part of the brain handles the higher order functions.
- EWB is linked to gene expression, specifically the downregulation of pro-inflammatory genes. High hedonic well-being is associated with increased expression of pro-inflammatory genes. EWB thus appears to convey health-related benefits related to gene expression not evident for hedonia.

These empirical findings suggest that meaning making and self-realisation increases your capacity to maintain high well-being in the face of socioeconomic difficulties, the challenges of ageing, and in dealing with life limitations, challenges and setbacks (trauma, disease, loss, retrenchment or retirement). Moreover, those who sustain or deepen their well-being as they deal with adversity show better health profiles, thereby emphasising the broader benefits of eudaimonia. Having this approach frames encounters

with adversity as catalysts that could fuel deeper experiences of personal growth, self-acceptance and self-realisation.

By taking on this frame and incorporating meaning, you will be empowered to see life as a journey where chaos and challenges have value and purpose. It gives you a powerful framework for dealing with life's problems. Facing and climbing your mountains will transform you. It will help you to establish order and build a stronger, healthier, fitter, braver and more resilient version of yourself.

Life brings about many adversities, and, especially today, we are going through challenging times. Loss of roles, loss of loved ones, stress, fear, isolation, disease, setbacks and limitations can all increase vulnerability to depression and more disease. One way to buffer yourself against this is the promotion of meaning and purpose.

Meaning and purpose isn't something you pick up at the shopping centre or pharmacy. You don't find it on Netflix, Google, social media or the app store. There is no instant or quick fix for this. *Meaning is not found or stumbled upon. It's created.*

By taking on the journey of reading this book, you will learn how to incorporate more meaning and purpose into your life. Having a better understanding of this will be good, but you must do the exercises to get the full benefit.

Having purpose is not a fixed trait, but a modifiable state. It can be developed through strategies that help you engage in meaningful activities, environments, people and behaviours. This process requires reflection and dialogue, then a commitment to act.

Conversation and understanding alone is not enough; you need to take action towards personal growth, self-acceptance, positive relationships, autonomy, new activities, new territory and expanded perspectives. You also need the humility to acknowledge that you don't know it all and that it's okay to ask for help.

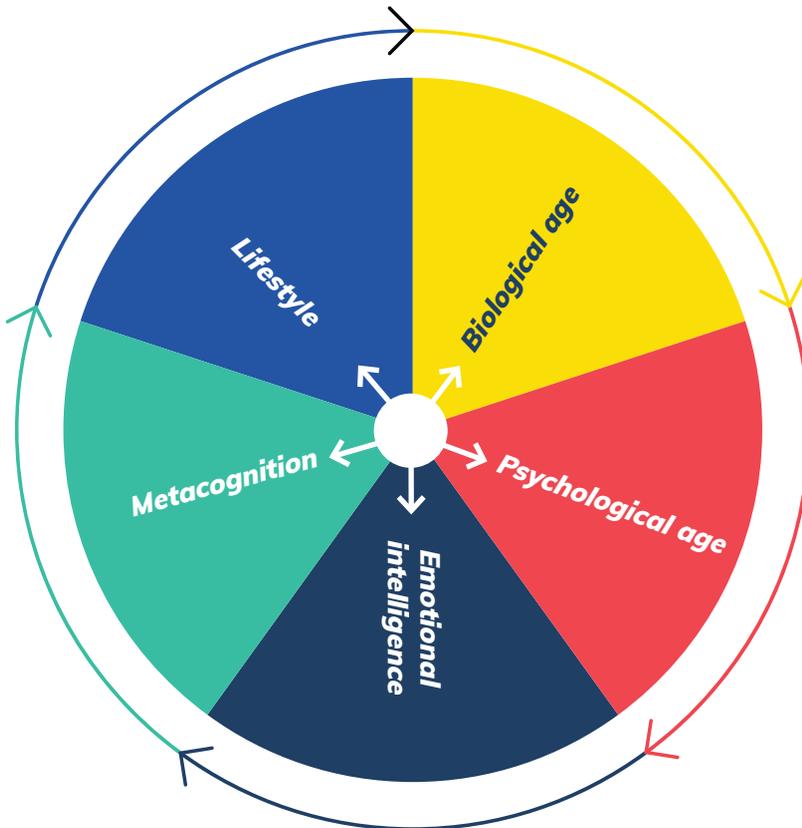
One of the key ingredients to a healthier, more motivated, productive and fulfilling life isn't knowing the meaning of life, but building meaning into your life. One day at a time.

Meaning is created not found.

The purpose of this book is to provide you with the knowledge and strategies to address all the above-mentioned factors. It really makes a strong case for mind over matter. Your thinking overrides your doing. Your psychology overrides your biology. Your software programmes your hardware. You can influence your physical condition using your mind. Your willpower can overcome physical limitations.

As you journey with me through the following chapters, I will provide strategies on how you can employ the following interventions:

- ➔ Positive re-appraisal or reframing life events and destructive emotions
- ➔ Goal setting and outcomes-based living
- ➔ Changing limiting beliefs
- ➔ Increasing meaning and purpose
- ➔ Acknowledging achievements and experiencing gratitude
- ➔ Fostering strong social connections
- ➔ Psychological support: coaching, therapy, discussion groups
- ➔ Adjusting your longevity expectation
- ➔ Changing stereotypical negative thinking regarding age
- ➔ Psychological affirmations to support health and vitality



**Fig 1.6: The factors that determine the quality and quantity of your life**

### Key takeaway

Ageing is something we all experience daily. Research is ongoing on this topic, but, in the meantime, there are a few levers you can start pulling today to optimise your life. Firstly, lifestyle factors that are within your control. Secondly, how you think, feel and respond to events you encounter along the way. Thirdly, how you make meaning and develop your potential in dealing with setbacks, challenges and adversity.

These are the three main areas of influence that we will explore in more detail in the following chapters.

If the body is your hardware and the mental and cognitive processes are your software, it makes sense that the instructions are coming from your brain or mind. These mental processes are the starting point for fighting inflammation, disease and age-related decline. If your thinking processes are not addressed, any changes in your behaviour and lifestyle will be short lived (excuse the pun).

In the next chapter I explain how to reset your operating system, in order to take full responsibility for yourself. Only by starting here will you experience true and sustainable transformation.