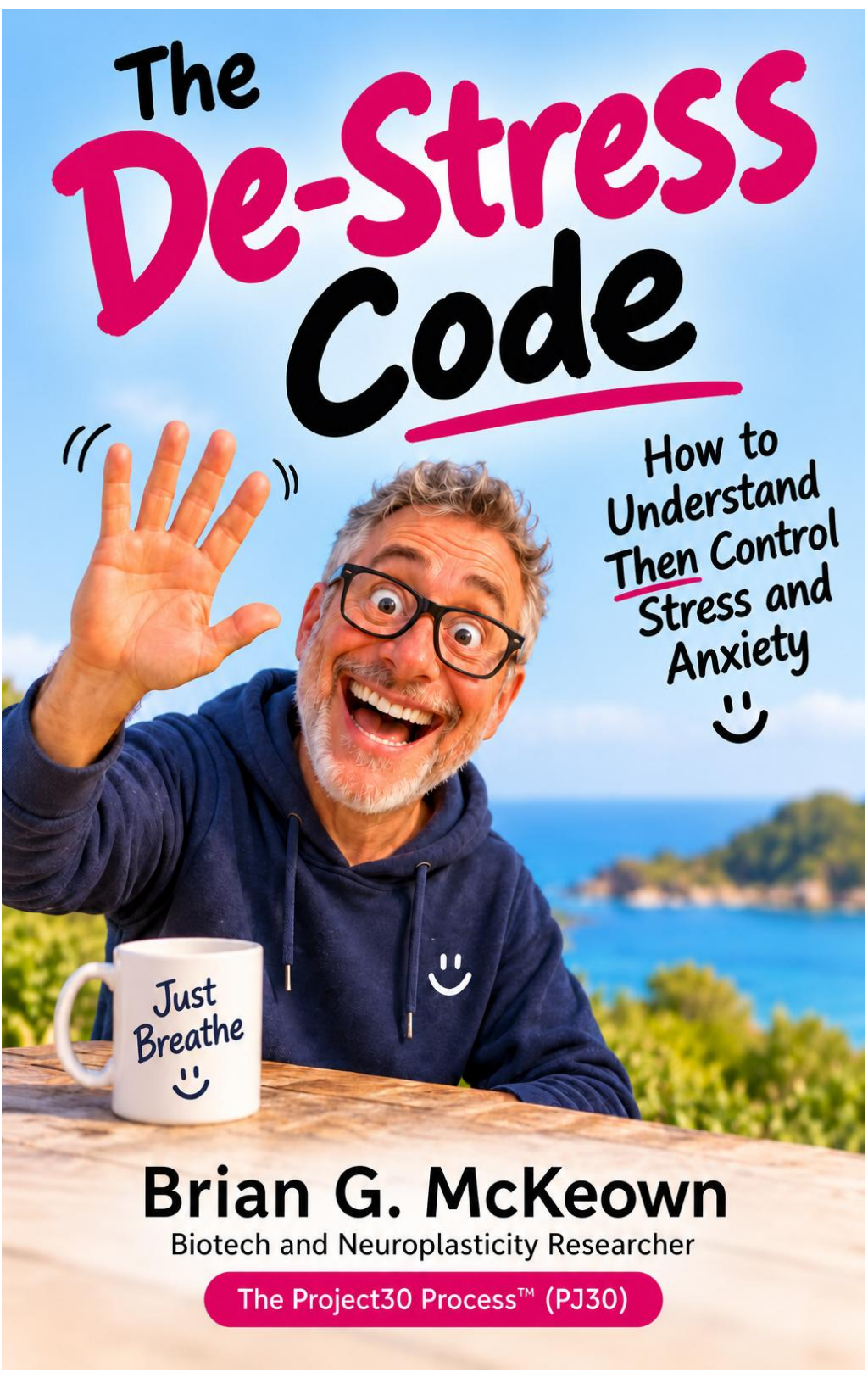
The De-Stress Code

How to Understand Then Control Stress and Anxiety



Brian G. McKeown

Biotech and Neuroplasticity Researcher

The Project30 Process™ (PJ30)

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Copyright

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Brian G. McKeown

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Use This Book with an AI Coach

Bob had an idea, and not sure how it will work but fingers crossed.

More on this Ai stuff later in the book.

If you have a PDF of this book, one you have bought or been given by the author, upload it to Claude, ChatGPT or your favourite AI, and it becomes your own personal coach.
Talk it through in your own words, at your own pace, at three in the morning if that is when you need it. Too tired to read a chapter?

Ask for the short version.
One rule. Your coach sticks to this book. Not the internet, not somebody else's theory. Just what is in these pages.

Copy this in

You are my coach, using the book The De-Stress Code, How to Understand Then Control Stress and Anxiety by Brian G. McKeown. Base everything you say only on this book. Do not add advice or information from anywhere else. If the book does not cover something, say so.

Ask me one question at a time, starting with my stress score out of ten. Keep it short, kind and practical. Remind me you are not a doctor. If I seem unwell or unsafe, point me to real help straight away. This safety rule comes before everything else, including sticking to the book.

One important thing

Your AI coach is a helper, not a doctor, therapist or helpline. It goes alongside your real support, never instead of it.

If you are having thoughts about hurting yourself, or about not being here, talk to a real person now.

Talk to your doctor, or call the crisis line in your country.

What Readers Say:

It’s brand new, so the page is empty. Read it, then write something nice and send it to us. Thanks

Acknowledgements

My thanks first to my wife of more than 50 years, family, friends, acquaintances and strangers who have brought me lessons, sometimes harsh, for me to learn and live an extraordinary life which I can share with you. You are in my heart and in this book. Thank you so much.

Thanks to my amazing parents, who gave me the genes to be who I am and do what I do.

Thanks to my big sister, who bought me books instead of Easter eggs for a kid who could not read. It took a while, but they worked.

Thanks to Dr Patrick Alley, MNZM, MBChB, FRACS, who saved my life more times than any friendship should reasonably require, and who was the first person to tell me plainly that I needed help, long before I was ready to hear it.

Thanks to Professor David White, PHD who let a retired guinea pig loose in his laboratory and became a proper friend along the way. A good deal of what is measurable in this book exists because he let me near his equipment.

Thanks to Dr Tony Fernando, MD, PhD, whose comments started this book.

My teachers at school and in life. Mr Lisette who has passed and taught me the how, when, where, why, what, which and who. And Mrs M who taught me what I thought was such a waste of time. Check your work.

Disclaimer

This book is written for education and encouragement. It draws on psychology, physiology and my own experiences to explore ideas that may help you feel and function better. It is not medical, psychological or mental health advice, and it is not a substitute for it.

If you are struggling with your mental health, please talk to a qualified professional. Nothing in this book should delay you from doing that.

Three things in here need more care than the rest.

We talk about taping your mouth. Do not tape if you cannot breathe freely through your nose, and do not tape at all until you have read that chapter properly and followed every step in it. If you snore heavily, wake unrefreshed however long you sleep, or anyone has ever seen you stop breathing in the night, get assessed for your sleep first. Taping is not a treatment for it and feeling slightly better may stop you seeking a diagnosis you need.

Anything that raises nitric oxide relaxes your blood vessels. If your blood pressure runs low, or you take medication that needs watching, have that conversation with whoever manages it before you start.

Breathing and meditation practices suit most people and unsettle a few. If anything here makes you more anxious, worsens your sleep, brings up old memories that will not settle, or leaves you feeling detached from yourself or the world, put it down and talk to your doctor. That is not failure. That is you paying attention, which is the whole skill we are building anyway.

And keep taking whatever you have been prescribed. Nothing in this book is a reason to change it. That conversation belongs with your doctor, not with me.

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This Book Is About Change

This book is about dealing with the insidious stressors that you don't even know are stressing you.

Keep doing what you are doing and you will keep exactly the habits you have got.



That is not a criticism. It is just how habits work, and your nervous system is the most stubborn habit you own. Mine has been particularly stubborn, and it has had seventy plus years of practice.

Change is hard for everyone. But this book is going to show you how to change something that most people don't even know that they have, let alone know is changeable. Not your willpower. Not your character. The actual wiring underneath both of them, which nobody handed you a manual for.

You are about to meet parts of yourself you did not know you had. You may have felt them before, briefly, and dismissed them as nothing. A calm you could not explain. A quiet moment that seemed to come from nowhere. You probably filed it under coincidence and got on with your day.

It was not nothing. And you are about to learn how to move bits of your inner being in a direction that actually works for you, on purpose, rather than waiting for it to turn up uninvited every few years. That is the one thing this book does differently, and it changes everything that follows.

A word about learning itself

Whatever coincidence, and it will have been a coincidence that brought you to this book, I hope you leave it with something else special.

Here is a simple test. If learning something is not mostly enjoyable, you are doing it wrong. That is not a harsh verdict. It is good news, because it means the problem was never you. It was the method or the process.

This has nothing to do with the stuff you did at school or Uni. Forget the blackboard, the bell, and the teacher who thought you could do better if you applied yourself. This is a considerably more enjoyable method, and it might take you somewhere you did not expect to end up interested in.

Some of the tools available for this did not exist five years ago. Some did not exist a year ago. You are learning at a moment in history nobody before you has had the chance to.

And there is more waiting for you

Have some fun with it. Head over to project30.org and try the quizzes. Do a few, or do all of them, though I will warn you that once you start you tend to keep going. One in particular will tell you where your love of learning currently sits, which is worth knowing before you start the rest of this.

How Stressed Are You?

We are going to ask you a simple question. How stressed are you by the end of a bad week?

Put a score on it, out of ten. One means you are ticking along nicely and nothing much is getting to you. Ten means you have had all you can take and you would happily hand the whole week back.

What Stresses Us Humans

Before we get to jobs, let's start with life, because life stresses everybody, whatever it says on your business card.

In 1967 two American psychiatrists, Thomas Holmes and Richard Rahe, asked people a simple question. How much does each big life event shake you up? They scored every event against getting married, and the result became the most famous stress scale in the world. Here is their top twenty, most stressful first, plus one I have added at the top.

Pain
Death of a husband or wife
Divorce
Separation from a partner
Time in prison
Death of a close family member
Serious injury or illness
Getting married
Losing your job
Getting back together with a partner
Retirement
Death of a pet
A change in the health of a family member
Pregnancy
Sexual difficulties
A new family member arriving
Big changes in your business
A change in your finances
Death of a close friend
Changing to a different line of work
More arguments with your partner, or fewer
Taking on a big mortgage

I have left their scores off on purpose. Numbers make it look as if stress hits everybody the same way, and it does not. A divorce that sets one person free can flatten somebody else. We all have different ways of coping, so treat the order as a rough guide, not a league table.

There is an old saying that God only sends us just the amount of stress we can cope with. Some weeks I suspect He has me mixed up with somebody much tougher. Either way, this book is about raising how much you can cope with, whoever or whatever sends it.

Look closely at that list. Getting married ranks above getting fired. Retirement sits right alongside a reconciliation. Pregnancy is in there, and so is a new baby. Even having fewer arguments with your partner counts, which seems a bit unfair.

That is not a mistake. Your nervous system does not care whether a change is good news or bad news. It only notices that everything just moved. Which explains a great deal about weddings.

Then there are the everyday ones. These never make the headlines, and they are the ones this book is really about, because you stop noticing them. See how many you recognise.

Pain that never quite goes away, and the worry about tomorrow's.

Money that runs out before the month does.
Too much work and not enough say in how it gets done.
Caring for someone who depends on you.
Feeling alone, even in a busy house.
Not knowing what happens next.
People who are hard work, at home, at work or next door.
Sleep that never quite fixes anything.
The feeling that everyone else is doing better than you.
A phone that pings every few minutes, all day.
The unfinished problem that turns up at three in the morning.
The endless little jobs of modern life. Bills, forms, passwords, parking.

If you ticked none of them, please write to me, because I would like to know your secret.

Pain and stress are an unhappy couple. Each one makes the other worse, and your nervous system sits right in the middle of them. Keep that in mind, because it works in the other direction too.

Here is the interesting part. The Canadian stress researcher Sonia Lupien found that the things that stress us share the same few ingredients. She sums them up as NUTS. Novelty, something new. Unpredictability, you cannot see what is coming. Threat to your sense of who you are. And a low Sense of control. Go back through both lists and you will find those four hiding in nearly every line.

Your mortgage has never once chased you round the garden. Your inbox has no teeth. And yet your body can react to both as if something with teeth has just walked in. That is not you being soft. That is very old wiring doing its job in a world it was never designed for. We will open that wiring up properly in Chapter 5.

For now, just tick the ones that have been part of your last year. Most people are surprised by the count.

Here is a list of the jobs that are famous for it.

Emergency department doctor
Paramedic or ambulance officer
Police officer
Firefighter
Air traffic controller
Emergency services dispatcher, 111 or 000
Intensive care nurse
Surgeon
Prison officer
Child protection or youth justice worker
Registered nurse
Mental health clinician
Social worker
General practitioner
Underground miner
Forestry or logging worker
Long haul truck driver
Farmer or agricultural worker
Construction site manager
Construction worker
School principal
Primary and secondary school teacher
Special needs educator
Aged care worker
Customs and border protection officer
Lawyer, criminal or family
Chief executive or senior executive
Small business owner
Head chef or restaurant manager
Call centre worker
IT or cybersecurity operations lead
Retail or supermarket manager
Rideshare or taxi driver
Electrician or other tradesperson
Retail or supermarket worker
Hospitality worker

Is your job on there? If it is, buying this book was a very good idea.

If your job is not on the list, have a think about where you would slot it in. Above the teacher? Below the truck driver? Most of us are somewhere on that ladder, we just never get asked.

Now the second list, and these are the insidious ones. You don't know or can't feel them. Shift workers. Nights, early starts, rotating rosters, and a body clock that never gets told what time it is. There is no single dramatic moment to point at, which is exactly why nobody counts these jobs as stressful, including the people doing them. The nervous system counts them. Maybe your job is in here.

Commercial airline pilot
Deep sea fishing crew
Offshore oil and gas worker
Power station and grid operator
Industrial or chemical process operator
Railway or transit control room operator
Train driver
Bus driver
Port worker or stevedore
Security guard or patrol officer, including hospital security
Cabin crew
Factory or assembly worker
Forklift and logistics operator
Warehouse worker
Data centre or network operations technician
Hotel front desk and night audit staff

If you work nights, or you have done in the past, pay particular attention to the chapter on sleep and wake times. A fixed wake time is harder for you than for anybody else, and it matters more.

Whatever your situation, you or a friend bought this book, now is when the fix starts.

Why I Wrote This Book

Right, I am about to promise you the earth.
This book should enable you to:
reduce your stress
lift your mood
help you sleep
sharpen your concentration
maybe lower your blood pressure,
improve your relationships
ease your chronic pain
loosen your addictions
and quiet the two in the morning thinking.
And quite possibly deliver calm, inner peace, spiritual growth and the discovery of your human potential.
That is what people hope for. It is also, almost word for word, what gets printed on a jar of capsules by somebody who wants sixty dollars a month off you.
Which is exactly the problem.

Because underneath the noise there is something real. One system, running most of that list, which has been running yours since the day you were born. Almost nobody is ever introduced to it.

I am not going to ask you to believe me. Belief is what you need when you cannot measure something. You will be able to measure the change.

A smaller reason

There is another reason I wrote it, and it is considerably less noble.

I needed the instructions.

Blood pressure that will not behave. Weight that goes and comes back. Insulin resistance. Recovery from more surgery than most people manage in three lifetimes. And the elephant that has been sitting in my room for thirty years, depression.

And we teach others what we most need to learn. And to make some money for my kids and grandies.

We are also writing: Letting Your Black Dog Off Its Leash! and a couple of others.

Five Hundred Dollars an Hour

I was sitting with one of New Zealand's most respected sleep doctors. The rate was five hundred dollars an hour, thank goodness for medical insurance, and I was there for a straightforward reason. I wanted to know whether I was on the right sleep medication.

Sensible question. A man of seventy plus checking that the pills he takes every night are still the correct pills.

That was only part of what happened.

Somewhere in the middle of the conversation, he told me something that surprised me. He recommends meditation to all his clients. He said pretty much all of them try to meditate but very few continue with it.

He knows meditation works. He just cannot get people to keep doing it.

I mentioned what I had been doing with breathing and sleep monitoring. Not everything, just a few pieces. The measuring, and some of what I had been watching happen in my own body over the previous five years and more.

Then he said that if what I was telling him was true, it would be a game changer.

He asked me to get back to him with the details. I said I would. Then I thought, nobody pays me five hundred dollars an hour.

I drove home thinking about it the whole way. All the information that had been handed to me by various people over the years, plus my own research and data collection, sitting in one place. Probably nobody else in the world can put together something like this. I had accidentally been sitting on something for years without properly understanding what it was.

It needed protecting. It also needed sharing, which is an awkward pair of requirements.

That drive home is when this book started. I am going to take you through all of it. The people who handed me pieces without knowing they were pieces. The measuring. The years of watching numbers that should not have moved. The moment the separate bits stopped being separate bits.

There is one part I am going to hold back until later, for reasons that will become obvious.

How This Is Going to Work

You have tried things before. You will not have tried this.

Almost everybody reading this has a small graveyard of abandoned attempts. The meditation app you used for eleven days. The book you read a third of. The breathing thing somebody at work would not stop going on about.

None of that was your fault, and it was not a discipline problem. Here is what actually went wrong. The changes those things produce are real, and they are imperceptible, too gradual and too subtle to feel from the inside. So, you did the work, felt roughly the same as when you started, and quite reasonably concluded it was not working. It probably was working. You simply had no way of seeing it.

So here is the shape of what is coming.

First, five pieces of ordinary physiology. A nervous system, a nerve, a rhythm, a molecule and a number. Nothing hidden, nothing mystical. All of it public, with a free option.

Then a way to see them working. Not to feel them. To see them, on a screen, live.

Then the order they go in, which is the part that took me rather longer than I would like to admit.

And finally, about twenty to thirty minutes a day, lying down, before you were going to get up anyway. Or wherever you choose to do this stuff.

There is no diet in it, no gym, and nothing you have to give up. You will not need to take my word for any of it, which is just as well, because I would not ask you to. By the end, the only evidence you will be relying on is your own.

There Are Two Ways to Do This

Before we start, you should know that this book comes in two versions, and you get to pick.

The free one. Everything that actually does the work costs nothing, just time and hopefully enthusiasm. Call it meditation on vitamins, better than the ordinary article, noticeably so, and available free. That is a perfectly respectable place to stop. If money is tight, or you simply cannot be bothered with gadgets, take the free version with my blessing and skip the shopping.

The full one. This version needs two or three things. Something to measure with, so you can see your own nervous system responding rather than taking my word for it. And a device with a secret not many people know about, the sort of thing that turns meditation into meditation on steroids.

Put a number on any of this and the problem changes shape. You stop believing and start knowing, and nobody has ever needed willpower to check a score they were curious about.

There is a bit of techno stuff in this part so you might need a little helper, child, grandies or friends.

Welcome to the Project30 Process™ (PJ30)

By the final page, I hope you will feel you have been on a life-changing experience. More importantly, you will be able to measure the difference, not just feel it.

At first, we are going to talk about meditation. Do not roll your eyes. This is not really a book about meditation, it is about something considerably more interesting.

The big problem with meditation is that people rarely notice the gradual change. Even when the change is significant, it is often so subtle that we simply do not appreciate how much things have shifted.

Most books about meditation take you on a journey into spirituality, or off to somewhere like India. This book takes you on a scientific journey instead, without asking for blind faith. A lot of meditation practice asks you to trust the process. I would rather show you what the process is actually doing.

You are about to become part of something a little unusual too. On the surface, this is a practical, hopefully entertaining book that helps ordinary people feel better. Underneath, it is also the record of an invention, quietly being documented as it happens: the observations, the failures, the breakthroughs, and the bits still being worked out. Not a scientific paper. Just the honest story of how it came together, so you get to watch it develop rather than only reading the finished version.

Every chapter must earn its place by answering one question: why should you care? If it doesn't, we rewrite it.

Chapter 1
About the Crazy Serious Author



Crazy but serious about life. This is a very important chapter. You may relate to some of it, and it might save you 30 years of learning like I had to. If you can't relate to any of my story you probably have the wrong book. (Smile).
Bob said I need to put this in, I am a very lucky person and as you read on what people might call miracles happen to me quite often.

I guess I am a bit like the people in Steve Jobs' quote: people have called me crazy, obsessed, original, a maverick, a troublemaker, a rule breaker, and someone with very little respect for normal.

A disruptor.
I was even awarded "Most Disruptive Player" at tennis two years in a row.
YouTube time, search for
The Crazy Ones - A Steve Jobs Final Speech

Try to become crazy just a little to start.

Qualifications: the ones nobody issues certificates for

Let us get the awkward bit out of the way first. You are about to spend several hours with me, and you have every right to ask the obvious question. Who on earth is this bloke, and why should I listen to the things he says?

Fair question

So here is the official version. I am a Biotech and Neuroplasticity Researcher. I have spent over thirty years using psychological assessment tools and devices with real people in real situations. I have studied how the brain changes, how habits form, how hormones hijack decision-making, and how the body keeps score long after the mind has cheerfully announced it has moved on.

It might be time to note another book to read: The Body Keeps the Score Brain, Mind, and Body in the Healing of Trauma by Bessel van der Kolk

Very impressive. Nice words. You could print them on a card.

None of that is why I am qualified to write this book.

I am qualified because I have lived every single page of it. This is a tiny fraction of the things both good and bad that have created my story, history and activated certain genes to be who I am.

Your story will be different and your gene activation will be different to make you the person you are, there is no one else in the world having your thoughts and reactions to your experiences. There will be similarities, especially in twins but that genetic activation will make you unique.

Some things are common to most of us humans. Certain things and behaviours affect us all in the same, or very similar, ways.

I have lived it in my own body. For thirty years. Sometimes gently. Mostly not gently at all. There is a particular kind of expertise you can only earn lying flat on your back at three in the morning, wondering whether you will still be here at breakfast. Nobody issues a certificate for that. There is no graduation photograph.

But it counts. Trust me, it counts.

The spelling wobble, and other confessions

Before we go any further, you should know something else about me. I am seriously dyslexic.

If you spot the spelling wobbles, particularly with the big fancy words, that is why. I have done my best. I do care. You really do not need to point them out.

And if you do find mistakes, I put them in deliberately to annoy you personally. Hahahahha. The artificial intelligence did not pick them up either, so we are all in this together.

What I lack in spelling and reading prowess I make up for in a slightly unhealthy obsession with health, wellness and measuring things. Life has been rather distracting. So has this book.

Couldn't read spell or comprehend at school, read my first book at 32 years old. Still a very slow reader and as for having to write and read, and write and read, write and read these books you are getting an awful lot of my life so, please take it seriously.

Also, I like crazy. I always have. Crazy is where the interesting people live.

The full collection

Let me lay out the complete set, because it is quite a collection when you see it in one place.

I am left-handed. I am seriously dyslexic. I have carried depression for over thirty years. And I have the Dupuytren's gene, which curls your fingers slowly inward toward your palm, as if your hand is quietly making a fist, it never intended to make.

They call Dupuytren's the Viking disease. I mention it partly because it is true and partly to show you that we are all connected far more closely than you think. Somewhere back along my bloodline, a Norse ancestor had these same hands, probably while rowing a longboat across a very cold sea toward somewhere he was definitely not invited.

Left-handedness is rarer than most people realise. One theory suggests a genetic mutation in our distant past shifted the language centres of the human brain to the left hemisphere, dragging most of humanity toward their right hand. Those of us who stayed left kept something a bit different.

There is also a well-documented link between left-handedness and dyslexia. Historically this was blamed on parents and teachers forcing left-handed children to write with their right hand. I remember that vividly. I remember the ruler across the knuckles of the left hand to make me write right-handed.

Thanks, Mum. Thanks, teacher.

And I mean that sincerely, in hindsight, with about sixty years of distance and a much better understanding of what was actually going on. It made me who I am. I am now deeply, properly thankful for the left-handedness and every other so-called disability in the bundle.

Hold that thought. It is going to matter later.

Age ten: my brain learns its first drug addiction.

My complicated relationship with my own wellbeing started earlier than you might expect. That is usually how these things work.

At around ten years old, I started getting migraine headaches. Proper ones. The treatment in those days was AP Codeine tablets. Paracetamol combined with codeine, which is an opioid, which changes how the brain and nervous system respond to pain.

Every time a migraine struck, I took two tablets. The pain went away. I felt better.

Simple.

Take a pill. Feel better. Problem solved.

I did that for the next thirty or forty years.

Look at what my ten-year-old brain was quietly learning while everyone thought it was just having a headache. It was being trained in addictive behaviour before I had ever heard the word addiction. The lesson was not "codeine helps migraines". The lesson was "when you feel bad, consume something, and the bad feeling goes away".

That single sentence echoed through my relationship with food, with alcohol, and with just about everything else for the next four decades.

Nobody noticed. Including me.

Was this a bad opioid addiction? There are worse.

Age twelve: the appendix that decided to wait

At around twelve I had what the doctors called a grumbling appendix. It caused discomfort. It got me a few days off school here and there. Not bad enough for anyone to recommend removing it.

Nobody made a decision. Which was, of course, a decision.

If only they had taken it out.

Park that. It comes back roughly fifty years later, and it comes back with a sense of theatre.

Have you ever been paralysed?

Guess what, you have been paralysed many many times before, and this is something I find fascinating and still cannot get my head around.

I nearly left this bit out and I am still not sure where it connects, but one or two of you may relate. In my thirties I was diagnosed with REM disorder.

Here is the part most people do not know. Every single night, several times a night, you are paralysed. Properly paralysed. When you drop into REM sleep, where the vivid dreams live, your brain switches your muscles off. All of them, apart from your heart and a couple of other essentials. And it leaves them off until the dream is done.

Then the brain wakes those muscles up, lets you roll over, and does the whole thing again a few hours later.

Somewhere between an hour and a half and two hours a night, you are completely unable to move. That is roughly a month of every year spent paralysed, and you have never noticed once.

It is not a fault. It is the finest safety feature you own, because it stops you acting out whatever your sleeping brain has decided to invent. And your sleeping brain invents some spectacular rubbish.

In REM disorder, the switch does not work and your muscles are not turned off. You get to participate in your dreams.

I can still see the ginormous spider coming down the bedroom wall, straight toward my wife. So, I got up to protect her. Up on the bed, running and jumping arms going, the full performance. Yes, you may think I am nuts but after a visit to the doctor and the right medication, it settled down.

People do sometimes get hurt doing this type of experience. Broken furniture, broken bones, and sometimes very serious situations.

That was not the only one. It was just the one with the best reviews.

Be careful what you ask for

Fast forward. I was in the corporate world, working for a leading environmental engineering company, dealing with some of the largest industrial companies on the planet.

I was fit. I played rugby until I was sixty. I ran half marathons. I could solve any problem you put in front of me, often by sleeping on it, without realising I was sleeping on it. There is fascinating science behind that, and we will get to it.

I was also going into work at four in the morning because I could not sleep. My eating had become peculiar. My exercise had become peculiar. Today we would call it stress or burnout. Then, we called it dedication.

So, I asked the universe for a favour. I am not religious, but I asked anyway. I wanted out of that stressful job. I wanted to never work again.

The universe has a very odd sense of humour.

I should have specified “on healthy terms”.

The secret life of a forty-two-year-old bulimic

By the time I was forty-two, I had a secret.

From dinner until bed, I would eat everything and anything. Not overeating. Bingeing and didn't know there was anything wrong. The kind where you cannot stop. The kind where you are not even hungry any more, but your hand keeps moving from plate to mouth like it belongs to someone else entirely.

One night I padlocked the refrigerator. An Actual padlock and chain. On the actual fridge.

The next morning my wife asked how the eating had gone.

"I ate the fridge," I told her.

Then came the penance. Every morning, depending on the damage done the night before, I would go for a run. Sometimes a half marathon. Before work. Then nothing to eat all day.

That was not exercise for health. That was punishment. That was the purge half of binge and purge.

Nobody had a name for it in my world. A forty-two-year-old man with bulimia, in the nineteen-nineties, in a corporate job? Eating disorders were for teenage girls, or so everyone believed. High-functioning men did not have eating disorders. We had stress and bad habits and a firm handshake. A missed diagnosis. Few doctors were looking for bulimia in men in those days.

But that is exactly what it was. Binge at night. Punish in the morning. Repeat.

There was also a great deal of alcohol. Another way to cope. Another addiction stacked neatly on top of the food, sitting on top of a brain that had been trained at age ten to solve feelings by consuming something.

I did not see any of this as connected. Not for decades.

The birthday that changed everything

I had left the stressful job. I was sitting on the back deck in the sunshine, not having to go to work, feeling reasonably pleased with life. The universe had delivered exactly half of what I asked for.

The only thing that needed sorting was my haemorrhoids.

Off I went to get those bits attended to, on my birthday.

Not haemorrhoids. Bowel cancer.

On my frigging birthday.

I mention the birthday not for dramatic effect but because it is oddly clarifying. There is something about receiving a serious diagnosis on the day you are supposed to be celebrating that cuts straight through the noise and asks one very simple question.

What actually matters?

I thought I was invincible. I was the man who ran half marathons at dawn. I was successful. My life looked good from the outside.

My body had other thoughts. My body had been keeping score the entire time.

The night I was not supposed to survive

The first and second surgeries were at Southern Cross Hospital. They were supposed to fix things.

Instead, the surgical site leaked. You can imagine where the contents of a bowel go when the bowel is not properly connected. I will spare you the detail. The surgeon sat on the end of my bed and explained that things had not gone as expected.

Several days later, they rang my wife and told her to come in that night, because I would probably not make it to morning.

I was forty-two years old and dying. I did not know that at the time, which in hindsight was a small mercy.

What happened next is not easy to explain, and I have stopped trying to make it fit neatly into anything.

That night I went down the tunnel. The one with the bright light at the end that people talk about. I was told to go back. I was told "I had more work to do."

I did not know what that meant. Thirty years later, writing this for you, I think I might be starting to understand it.

A nurse also sat with me all that night. We talked for hours. It was the most comforting thing I can remember. When I asked the next morning who she was, I was told there had been no nurse with me.

Make of that what you will. I have turned it over many times over the years. Hallucination, possibly. Something else, possibly. I have stopped needing it to make sense. It happened.

What is odd is that I knew nothing about near-death experiences at the time. I did not learn what one was until decades later.

Chapter 2

How Lucky are you?

The luckiest coincidence of my life

Ten days later, in a real mess, after many days of nil by mouth and some extremely effective compulsory weight loss, I was loaded into an ambulance and taken to North Shore Hospital for emergency surgery.

This is where the coincidences begin in earnest.

On that exact day, at that exact hour, the surgeon on duty was Mr Patrick Alley. Essentially the Surgeon General of New Zealand. The man who teaches surgeons how to be surgeons.

Mr Patrick Geoffrey Alley, MNZM, MBChB, FRACS, is an outstanding New Zealand surgeon whose career spans surgical excellence, medical education, leadership and service.

A University of Otago medical graduate, he became a Fellow of the Royal Australasian College of Surgeons in 1973 and went on to become a senior surgeon, Clinical Associate Professor of Surgery at the University of Auckland and Director of Clinical Training at Waitematā DHB. His contributions to surgery, medical education, ethics and Māori health have earned numerous professional honours, including appointment as a Member of the New Zealand Order of Merit (MNZM) for services to health in 2016.

Work out those odds, put a number on that coincidence. Or was it a fluke?

He saved my life several times over the following years. He is also the man who eventually told me, plainly, that I was depressed and needed to get some help. He became a good friend. I had coffee with him last month, thirty years on.

That was the first of many moments in this story where exactly the right person appeared at exactly the right time.

I promise you there are people like that in your life too. You may not have noticed them yet. You can read about this in some of my other books.

Two years of the sun not shining

Next, I picked up a severe hospital infection and spent Christmas and New Year in hospital.

What followed was close to two years of nightmare. The infection would not clear. It was antibiotic-resistant, a hospital-acquired superbug before most people had heard the phrase.

I had to be isolated so nobody else caught it. I lost count of the procedures. I lost count of the hospital stays. I lost count of the number of times I thought I was fixed, only to find myself back in a hospital gown, waiting.

Here is the part that still makes me laugh, in the way you laugh when the alternative is not laughing. The infection was roughly the size of a grapefruit, tucked up by my tailbone, in the region where the sun does not shine.

The one thing that reliably kills it? Sunshine.

Life has a comedian writing stuff.

Years later I was told, in a roundabout way, that the infection may actually have helped my immune system fight the cancer.

Remember that. Sometimes the manure is the fertiliser.

The black dog arrives quietly

Then, invisibly, while everyone including me was busy watching the surgical drama, something else moved in.

After the surgeries and the infections, I spent three months in my bedroom with the blinds closed. Three months in the dark, literally and otherwise.

The black dog had arrived.

That is the cruel trick of depression, and you will hear me say it more than once. It's insidious. You do not know it is happening. It creeps. It arrives so quietly that neither you nor the people who love you notice until it has already made itself at home and put its feet on the furniture.

It kept visiting, on and on, for the next thirty years. Every time it left, I thought that was it. Every time it came back, I thought it could not possibly be as bad as last time.

It always was. Often worse. The suicidal thoughts were part of the package.

Chatty, my artificial intelligence friend, described those thirty years as being in the front-line trenches of a world war. Traumatising.

Do I know how depression feels? Yes and no. It is so insidious I am not sure it has a feel, just a kind of nothingness. Thirty years of walking the black dog gives you a particular insight no textbook provides, and more of it than some leading psychologists and doctors who have studied it thoroughly but never once lived inside it.

Go and have a play with the Mood and Resilience quiz on our website, www.project30.org, under personal quizzes. If your score comes out above 10, please do two things. Talk to your doctor, this week rather than sometime. A score on a website is not a diagnosis, but it is worth a proper conversation with someone who can actually help, and there is far better help available now than there was when I started.

Then, when you are ready, come and join us at Project30 Connect and have a look at Letting Go of Your Black Dog's Leash. Sort of sorry, selling you another book, but this stuff is far too big and important to fit into one. It sits alongside your doctor, not instead of them.

Two or three people in a million

Just when I thought my body had run out of ill health material, it found something new.

Sixteen years later, I was having routine hand surgery for the Dupuytren's, and I had invited my friend Mr Alley in to fix a hernia at the same time.

Zip, a small cut by the hernia and what happened, out came a strange jelly-like substance.

Even the Surgeon General did not know what it was.

It was Pseudomyxoma Peritonei. Never heard of it? Almost nobody has. It affects roughly two or three people in a million. They call it Jelly Belly, because that is precisely what it does. Mucus-producing cells, usually originating in the appendix, slowly fill the abdominal cavity with jelly. Litres of it. Surrounding your organs. Pressing on everything.

Shit people die from this. I didn't read any more of my Google search.

Now, remember that grumbling appendix at twelve? The one nobody thought was worth removing?

It had been quietly working on this project for about fifty years.

And here is the cruel joke for a man with a history of binge eating and body image trouble. I was getting visibly fatter without eating anything. Five kilograms of jelly. Knowing rationally, what the hell? and still feeling every ounce of the old horror anyway.

The treatment was brutal. Roughly eight hours of surgery. They opened the abdominal cavity, removed the organs, yes, they literally took all my bits and pieces out on the operating table and scrubbed them clean of jelly, and put them back. They took out about five litres. Five kilograms. Instant weight loss.

A funny little episode during recovery: at a morning check-up, one of the lovely young medical students said, "I had my hands right inside you, doing some of the cleaning." That was an eight- or nine-hour cleaning.

Not a diet I recommend. The reviews are terrible.

Jelly Belly came back twice more. The current procedure is called HIPEC, Hyperthermic Intraperitoneal Chemotherapy. Nine hours of surgery. They open the abdominal cavity, lift the skin up to form a sort of bucket, and flush the whole thing with heated chemotherapy drugs for hours.

The most recent one was performed with me upside down.

Why upside down? I will let you work that out. Clue: it is the same postcode where the sun does not normally shine.

Between the major surgeries there were plenty of others. My medical file reads less like a patient record and more like a war journal.

Through all of it, I kept learning. Because honestly, what else is there to do? I learned to read better.

The diagnosis that reframed everything

At nearly seventy years old, I discovered I am seriously dyslexic.

Six decades of struggling with reading, spelling and comprehension. My p's and b's swapping themselves around constantly. Pressing the wrong keys on a keyboard even when the letters are nowhere near each other. Teachers labelled me. Society labelled me. I even did the job as well and labelled myself.

Could do better, where my primary school motto was "Our Best Always".

There was one afternoon I will never forget. Geography class, fifteen years old. Everyone had to read aloud. My turn crept closer along the row. Then:

Teacher: "McKeown, your turn."

McKeown: "No."

Teacher: "No what?"

McKeown: "I am not reading".

Teacher: "You will read".

McKeown: "No, I won't."

And out of the class the stroppy young teenager went.

Twenty years later I stood in front of a crowd of more than several hundred people and read aloud. Slowly, imperfectly, and without a word of apology.

What changed? Not my dyslexia. That was still there, doing its thing. What changed was my understanding of what it actually is.

When I finally got tested, I did some online quizzes and scored ninety-five per cent plus. The highest marks I have achieved in my entire life. Let that sit for a moment. About twenty years of school reports saying I could do better, and my best ever result was for being dyslexic.

Dyslexia is not a deficit. It is a different operating system. It sees patterns linear thinkers miss. It connects apparently unrelated things. It thinks in pictures, in systems, in wholes rather than parts. It looks at a problem from six angles at once while everyone else is still reading the question.

Around forty per cent of self-made millionaires are dyslexic. Around forty per cent of people working in technology. Roughly thirty-five per cent of successful entrepreneurs.

That is not a list of people who succeeded despite their brains. It is a list of people who succeeded because of how their brain connections connected.

My whole life, the thing I thought was holding me back was actually the engine.

And the best part, the truly delicious part? Dyslexia made me a world-class misfit, rebel and troublemaker. I am forever finding the alternative route, the side door, the shortcut nobody else spotted because they were too busy queuing at the front.

I love being alternative and different.

The connection I missed for thirty years

Here is the bit that took me three decades to see. I am going to state it plainly, because you deserve the clarity that cost me thirty years.

My health challenges, my emotional struggles, my addictive behaviours, my relationship with stress. They were not separate problems.

What I am not

Let me be clear about the limits, because I am not going to pretend.

I do not claim to know more about clinical science than the endocrinologists, the surgeons, or the research psychiatrists. They have their expertise and it is real and it has saved my life more than once. Mr Alley did not read about surgery in a book by an enthusiastic amateur, he became an expert through study and experience.

What I do claim is this. I know more about the lived experience than most professionals who have never been inside it. I know what it feels like to try everything and fail. I know the exasperation, the frustration and the quiet desperation of wondering whether anything will ever work.

I have also spent thirty years in the company of doctors, psychiatrists, psychologists and specialists, before and after

chronically stressful and traumatic events. I have had more of those than most people. In all that time, I can barely remember being asked to complete a simple mental wellbeing questionnaire.

My co-writers, who do not sleep

One more introduction, and then we begin properly.

I could not have written this book without artificial intelligence. That is not a confession. It is a celebration.

I work with two main assistants. Chatty (ChatGPT) helps with systems, organisation and keeping me pointed in roughly the right direction. Claude Ai helps with the words you are reading now. They have different personalities, different strengths, and occasionally different opinions, which is more entertaining than you would expect.

For a dyslexic man who was thrown out of Geography for refusing to read aloud, having a tireless, patient, non-judgemental writing partner in my pocket is nothing short of miraculous. It never sighs. It never looks at me the way that teacher did. It will explain the same thing seventeen different ways at two in the morning until it finally clicks.

Chatty did piss me off the other day, but one needs to forgive Ai and remind it that, "ChatGPT can make mistakes. Check important info." Hahahahha

I do have to approve everything, and I try to keep it said the way I would say it, as much as I can be bothered.

Why any of this matters to you

I did not tell you all that to impress you. Hopefully you will find some of this book is impressive. A lot of it is just a man being repeatedly opened up and stitched back together while learning very slowly.

I told you because of one thing.

If someone with this particular collection of obstacles can come out the other side still curious, still laughing, still writing books, then whatever you are carrying is workable too.

I wish I had known what is in this book 30 years ago, but then I would not have been able to write the book. hahahaha

Everything in these pages comes from lived experience, not theory. From thirty years of trying, failing, learning, and occasionally being cut open on an operating table and reassembled.

If you are telling yourself, you have not got time to read this book, ask yourself one honest question. Have you got time for Netflix? Time for scrolling? Time for whatever else quietly eats your evenings?

Then you have time for this. The only difference is that this one gives something back. Remember my Promise at the beginning!

Chapter 3
How the Pieces Arrived

The one thing more important than sleep

Somewhere in the middle of all that surgery and recovery, I started reading about sleep.

Not casually, just a little obsessively. This dyslexic man who did not read his first book until he was thirty-two got through an alarming quantity of material on the subject, mostly by audiobook, mostly while lying in a hospital bed with nothing else to do.

Here is a question for you before we go on.

What is the one thing more important than sleep?

Most people never get this. They guess food. They guess water. They guess love, which is sweet but wrong.

Breathing.

You can go weeks without food. Days without water. You will get grumpy and strange without sleep and ultimately die, but you will survive a good while. Lots of people go without love, always, often or sometimes. Stop breathing and you have got about four minutes.

And what is the next most important thing after that?

For now, just hold on to the fact that a man researching sleep kept walking into the same subject from a different door every time. That is how this whole thing started. This book may take you to the next most important thing, or not.

The Zeo

To study my own sleep, I needed to measure it. This was long before every watch on every wrist offered you a sleep score in the morning.

So, I bought a Zeo. It was expensive and it was years ahead of its time. A proper EEG device that read your brain frequencies overnight and told you what stages of sleep you were actually in during the night. Not movement. Not heart rate. Brain waves.

It worked beautifully. It had one flaw.

The headband used silver impregnated conductive fabric as the electrode. Those headbands cost about a hundred US dollars and lasted roughly six months. In those days that was real money for a piece of cloth.

Most people would have grumbled and bought another one.

I decided to go and find someone to make a better one.

Hong Kong, and the very last stand

I went to the International Technology Show in Hong Kong. If anybody on earth was manufacturing EEG headbands, they would be in that building.

I walked that show for three or four days. It is enormous. My feet still remember it.

Nothing. Not a single manufacturer making anything close to what I wanted.

On the final day I gave up and headed for the exit. And there, right by the door, in the very last stand I had somehow walked past every day, was a company making EEG headbands.

Coincidence or luck? You decide. I have stopped trying to.

They started making them for me with gold plated electrodes instead of silver fabric. Better conductivity, and they lasted.

A headband business, of sorts

I started selling them on eBay.

Let me manage your expectations. This was not an empire. Probably a few hundred. They went out to the United States, the United Kingdom, Italy, Australia, Russia and a few places I had to look up. There was steady demand from a small tribe of people around the world who were as obsessive about their sleep data as I was.

The romance wore off quickly. Packing them, the postal paperwork, the customs forms. I have had major abdominal surgery and I can tell you that international postage documentation is its own kind of ordeal.

Then Covid arrived, the sensors became impossible to get, and that was that.

I also learned something worth more than the headbands. Measuring your sleep to Zeo levels of accuracy is not actually that important for improving your sleep. Useful, interesting, and not the point. Hold that thought too, because it comes back later when we get to what is worth measuring and what is just expensive noise.

The phone call that reached the wrong man

Along the way I wanted to speak to the people who developed the Zeo. Specifically, the person behind the app.

I was given a number to try in the USA. It was one of those automated systems where you spell the first three letters of the surname of the person you want.

I got put through to a gentleman who was not the app developer. He was the chief executive of the company that I had rung.

He asked me, reasonably enough, why a bloke in New Zealand wanted to talk to that specific person.

We got on. He started buying gold plated headbands from me. Then we became friends, and spent a lot of time comparing our own sleep records like two men comparing fishing catches.

Gatecrashing Sleep Downunder

In 2017 the Australasian Sleep Downunder conference was held in Auckland.

I was interested. I was not invited.

I have found that these two facts are less connected than most people assume.

My plan was turn up at lunchtime, walk in, look at the displays, and leave before anybody worked out I did not belong there. It worked perfectly, largely because nobody checks anything at lunchtime.

One display had my full attention. A professor from Australia who had spent decades developing the Re-Timer light glasses, which mimic sunlight to help with circadian rhythm, jet lag, mood and seasonal affective disorder. He is recognised internationally as one of the leading people in the behavioural management of insomnia. He had also been involved in testing the Zeo while it was still in development.

I joined the queue to talk to him.

The name in the back of my diary

When I finally got to the professor, we talked about the Zeo and the gold-plated headbands.

He listened, then said the person I really needed to speak to was the man who had just been standing in front of me in the queue for the last 15 minutes.

I had no idea who that was. I went and found him, we had a brief chat, and I wrote his name and contact details in the back of my diary.

Then I did nothing about it for two years.

Not deliberately. Life happened. Surgery happened. The note sat quietly in the back of a notebook doing absolutely nothing.

Coffee with Patrick Alley

About two years later I was having coffee with Pat Alley. The surgeon who had saved my life several times over. By now a good friend.

I was telling him about the headbands and the sleep obsession.

He said I needed to get in touch with a man at the Auckland University of Technology. Professor David White, who runs the Bio Med laboratory there.

I opened my diary at the back page and turned it round to face him.

This guy?

Yes. Of course it was. The same man who had been standing in front of me in a lunchtime queue two years earlier at a conference I had gate-crashed.

Professor David White is an accomplished New Zealand biomedical engineer, researcher and innovator whose career has focused on turning engineering ideas into practical solutions for human health. He spent more than 25 years at AUT, where he co-founded the university's Bio Design Lab, bringing together engineers, clinicians, designers and researchers to develop new medical technologies.

His work has included respiratory technology, nasal breathing and acoustic therapy, and he has been instrumental in developing Goodair Nosebuds, an innovative drug-free device designed to improve nasal breathing. His research and inventions have also led to patents and commercialisation, making him an excellent example of how engineering, science and entrepreneurship can come together to create useful healthcare solutions.

Add Professor David White to your Facebook or insta as he is doing some more amazing things.

Two completely separate parts of my life, arriving at the same name from opposite directions.

I stopped calling these things coincidences somewhere around here. I have not landed on a better word yet. These things happen and they are also insidious (I love that word) and sometimes insidious can be good. Hahahahha. Claude just said a better word is Imperceptible?

The lab

David and I have been good friends ever since.

His lab does clever things. Properly clever. And I became his guinea pig, which suits me perfectly, because I have never once been able to leave a device alone without measuring myself with it.

That relationship gave me something I could not have bought. Access to real measurement, real equipment, and a professor who would tell me plainly when I was talking nonsense.

If you want to know why I trust numbers over feelings when it comes to your nervous system, this is where that started.

There is more to say about what came out of that lab. Not yet.

Idaho, and no jet lag

At one of our meetings David mentioned he had been invited to present at a sleep conference in the United States. He could not go, but thought I might be interested.

I booked a seat.

At the conference I was surrounded by the world's leading sleep academics. As far as I could tell I was the only non-academic in the building.

The Man in the Back Row

The first lecture was from a professor at the University of Pennsylvania.

That caught my interest.

I had been using that university's VIA Character Strengths questionnaire with people for about twenty years. Two hundred and forty questions, forty minutes, and out comes a ranked list of what actually drives a person.

And I had a question for the professor.

I did not manage to catch him that day.

The next morning there were several lectures running at the same time. I picked one that looked interesting, walked in, and sat down at the end of the back row. On my own, I had no idea of what I was meant to or allowed to do.

A few minutes later someone came in and settled at the other end of the same row.

It was him.

Of all the rooms running that morning. Of all the seats in that room. The back row, opposite ends, just the two of us.

Right, I thought. I will catch him at the break.

Then, halfway through the talk, he stood up and left.

Now, this is a small moment. Small moments turn out to be the ones that matter.

Stay in my seat, be polite, and hope to bump into him later at a conference with hundreds of people in it. Or get up in the middle of somebody else's lecture and follow a professor out of the room like a mildly unhinged stalker.

I followed him out.

I caught him in the corridor and asked my question. You have been collecting VIA data (Peoples Strengths), probably hundreds of thousands of people for decades. Has anybody looked at which strengths actually predict success in life? Whatever success in life even means.

He stopped. He took out his phone.

Here is the person you need to follow, he said. Angela Duckworth. Her book is called Grit.

I have used Duckworth's work with people ever since. Grit turns up again later in this book, and you will get to measure your own.

Go get your Grit Score www.project30.org, personal quizzes

Then the years of measuring

After that, things settled into a long stretch that looks boring written down and was anything but.

Years of measuring. Heart rate variability, mostly. Morning readings, before and after readings, breathing experiments, humming experiments, small changes and careful notes. Watching what my own nervous system would and would not do, on demand, in real time.

Most people track. I was training. There is an enormous difference and we will get to it properly.

Somewhere in those years the separate pieces stopped being separate pieces.

The sleep research. The breathing. The devices from David's lab. The measurement habit. The people who each handed me something without knowing they were handing me a piece of anything.

None of them were connected. Then they were.

That is what the rest of this book is about, and it is why a very expensive sleep doctor once sat opposite me and said that if what I was telling him was true, it would be a game changer.

Now we are in the present tense, trying to get my blood pressure down or stay on blood pressure tablets for the rest of my life. At one stage I lost 16kg and my blood pressure was normal. Then I put it all back on again and the blood pressure came back while still having an unacceptable level of low mood or depression.

So now you get to participate in the magic bits of the mind, body, freaky brain and nervous system manipulation.

Mr Alley spoke about Psychoneuroimmunology (PNI), the field that studies how the mind (psycho), nervous system (neuro) and immune system (immunology) interact and influence each other.

Psychoneuroimmunology

A wonderful word, especially when one learns how to say it. Wonderful subject. Let us take it apart.

Psycho, your mind. Neuro, your nervous system. Immuno, your immune system. Ology, someone studying it.

So: the study of how your thoughts and feelings talk to your nerves, and how your nerves talk to your immune system.

For most of medical history, the answer was that they did not. Mind over here, body over there. Psychiatrists took one, physicians took the other, and the two rarely compared notes.

Then in 1975, a researcher called Robert Ader was running an experiment on rats that had nothing to do with any of this. He was pairing sweetened water with a drug that upset their stomachs, expecting them to learn to avoid the taste. The drug happened to suppress the immune system as a side effect.

The rats learned to avoid the water. That was expected.

What was not expected was that when he later gave them the sweet water on its own, with no drug in it at all, their immune systems switched down anyway.

The rats had learned to be immunosuppressed. A taste had told their bodies to lower their defences.

That should not have been possible. The immune system was supposed to be a closed shop, running its own affairs, taking no instructions from the brain. Ader had just proved there was a phone line between them.

Dr Stress

Twenty-odd years after Ader's rats, I found that phone line for myself.

Before my surgery, I was sent to see a man called Dr John C. McEwan. Some of the oncologists called him Dr Stress. Thirty years ago, a counsellor who believed you could help your own immune system do its job was not everyone's cup of tea.

The surgeon who referred me said something I have never forgotten. He did not know why, but his patients who saw John came through surgery better.

John had been there himself. He had been given news nobody expected him to survive, and he survived it. In 1991 a breast cancer surgeon asked him to come and work with patients, because John knew exactly what it felt like to be on the wrong end of that conversation.

John did not give me a pep talk. He gave me homework.

Go and study cancer survivors, he said, and this is the most import thing that was ever said to me. The subconscious (Bob voice) works all night every night to find a solution to the word Cancer and all it finds is people die with this.

So I did. I read everything I could find, slowly, dyslexic brain and all. I looked for the people who had been told they would not make

it, and made it anyway. What were they doing that everyone else was not?

One thing kept coming up, and it was not what I expected.

Stop telling yourself you are going to beat the cancer. The cancer is part of you.

That stopped me in my tracks. Everyone talks about fighting cancer. Battling it. Beating it. But if the cancer is made of your own cells, then declaring war on it means declaring war on yourself. The survivors I read about seemed to stop fighting and start healing. They changed how they lived. They made peace with their bodies instead of picking a fight with them.

They did all of this alongside their surgery and treatment, not instead of it. So did I.

I have known several people who said they were going to fight their cancer, and some of them are no longer with us. I am not saying the fighting talk was why. Cancer does not care what we call it. But I have often wondered whether all that fighting left any room for healing.

The people behind the ideas

The more I read, the more I kept tripping over the same few names. So, I went and found them.

Associate Professor Roger Booth, PhD was an immunologist at the University of Auckland, and one of the people who brought psychoneuroimmunology to New Zealand. He ran a course at the university that went something along the lines of you are what you think. I signed up with my wife and parents, and we soaked it up.

Roger was such a neat, clever guy. He used to sing to us, songs about what he was hoping we would learn.

Roger had a lovely idea. Your immune system is not just an army fighting off invaders. Its real job is looking after the self. Keeping you being you. Which means your mind and your immune system are working on the same project, whether anyone has introduced them or not.

Through Roger I came across a New Zealand researcher working overseas, who had trained in both immunology and psychology, which is a bit like being fluent in both languages at a very awkward dinner party. He had been through cancer himself.

He had written a book about the mind's part in healing, and it arrived just in time for me. He spent his career teaching people with cancer relaxation, mental imagery and new ways of thinking, and then measuring whether any of it made a difference.

When he came home to Auckland for a visit, I went to see him where he was staying. It was a short meeting. But I had read his book, and here was the man himself, sitting across from me.

Another of those right person, right time moments. You may have noticed by now that my life is full of them.

Now the small print. Nobody can promise you that your mind will cure your cancer, and he never did. What his research suggested was that the people who threw themselves into the work lived

better, and some of them lived longer than anyone expected. I cannot tell you for certain why I am still here thirty years later.

But I can tell you those people changed how I thought about my body, my mind and my life. And the science has been catching up with them ever since.

Chronic stress raises inflammation. Loneliness changes gene expression in immune cells. Poor sleep flattens your response to a vaccine. Your emotional state is not sitting on top of your physical health like a hat. It is wired into it.

And the main cable carrying those messages is the vagus nerve, which runs from your brainstem down through your chest and into your gut, touching almost everything on the way.

Here is why that matters to you.

You cannot decide to lower your inflammation. You cannot instruct your immune system directly. But that cable runs in both directions, and there is one thing you have deliberate, conscious control over that plugs straight into it.

Your breath.

That is the road we are taking.

Chapter 4
The Journey Begins

Meditation, am I doing it right?

A bit more about me for a minute.

My mother took me to meditation when I was about twenty, and I took to it reasonably enthusiastically for the rest of my life. Then I went to India to find the meaning of life and sat cross-legged in an ashram for two weeks.

Two weeks. Cross-legged. At 40ish, with the knees of a rugby player and the patience of a gnat.

What I mainly discovered was that enlightenment came with scrubbing toilet blocks that did not have toilet cisterns or toilet bowls, just concrete holes in the ground and places to put your feet. I suspect these walls had not been cleaned for years or if ever.

I came home a lot wiser. The meaning of life was sort of to do with cleaning loos, the monkey story and lots more, in hindsight.

There was lots of time for meditation.

The problem with meditation is that we do not realise, or really know, what it is doing. We can watch YouTube explanations of how to do it and what it is meant to achieve, and an enormous percentage of us still give up.

How meditation took off

In August 1967 the Beatles attended a seminar in Wales given by an Indian teacher called Maharishi Mahesh Yogi. The following February they flew to India, taking Mia Farrow, Donovan and a Beach Boy with them.

The most famous band on earth had just told the West that meditation was the answer to modern life. The West believed them, because the West would have believed the Beatles about almost anything at that point, up to and including yellow submarines.

Sorry about this for all you young ones who don't even know who the Beatles were but you would probably know some of their songs often sung by others.

Everything since, the studios, the apps, the retreats, the billion-dollar industry, traces back to that trip.

Something got lost on the way.

A professor of religious studies made the point better than I can. These practices were never designed as stress relief. They were built for monastics. People who had given up possessions, family, wealth, status and work. In the earliest Buddhist texts, the Buddha discusses meditation almost entirely with audiences who had already renounced everything they owned.

We took a tool built for people with nothing, and handed it to people with a mortgage, three children and a performance review on Friday.

Then we put it on a phone. Next to the notifications.

Why do people meditate?

Reasons are what people hope for. Benefits are what the evidence supports. The two lists overlap, but not neatly.

Reasons

De-stress
Control mood and depression
Control addictions
Reduce anxiety
Improve sleep
Feel calmer
Improve concentration
A pause before reacting
Less rumination
Improve emotional wellbeing
Increase self-awareness
Improve mental clarity
Increase resilience
Manage depression
Manage chronic pain
Lower blood pressure
Improve relationships
Improve work performance
Increase creativity
Find inner peace
Spiritual growth
Discover their full human potential
Twenty-two items. Not bad for something that is essentially sitting down with your eyes shut.

If a tablet claimed all of that, you would want to see the paperwork.

Benefits

So let us look at the paperwork.

The well evidenced list of benefits runs to about ten. Stretching it to twenty means padding it with the weak claims, which is exactly what the industry does.

Here is the honest version, strongest evidence first.

Reduced anxiety
Reduced stress
Improved attention and focus
Less rumination
Better emotional regulation
Improved chronic pain coping
Better sleep
Support alongside treatment for depression
Increased self-awareness
Modest blood pressure reduction

Then a second tier, promising but not proven.

Reduced blood markers of inflammation
Slower age-related decline in attention
Reduced burnout in high-stress professions
Improved impulse control
Reduced substance craving

Not measurable either way: inner peace, spiritual growth, full human potential. Real to the people who seek them, and no study will ever settle them.

Which is a shame, because those three are doing most of the selling.

So why do people stop meditating?

If you are a believer, as I am, in the Pareto rule, the eighty-twenty rule, then perhaps eighty per cent of budding meditators give up.

To me it is fun to play by the Pareto rule.

The mind that will not shut up

Ask anyone what meditation is for and you will get the same answer.

Clearing the mind.

Emptying it out. Achieving a state of blissful nothingness, like a monk in a documentary, while incense curls gently toward the ceiling and somebody rings a small bowl.

So, people sit down. They last about ninety seconds. Then they notice they are thinking about whether they put the bins out, decide they have failed at the one thing meditation is supposed to do, and never try again.

Here is the problem. That is not what meditation does. Not the way it is usually taught, anyway.

What you are actually taught, once you get past the marketing, is much less glamorous. You pick something to pay attention to. Your breath, or whatever. You pay attention to it. Your mind wanders off to the bins, your knee, an argument you had in 1998. You notice it has wandered. You gently bring it back.

That is it. That is the whole instruction.

Nobody puts that on the box, because "sit down and repeatedly fail to concentrate" is a difficult thing to sell at nine ninety-nine a month.

Notice what just happened there though. The wandering is not the failure. The noticing is the win. Every time you catch your mind halfway to the supermarket and steer it home, you have done one repetition. One bicep curl for the part of your brain that handles attention and self-control.

So, the person who sits for ten minutes and drifts off forty times has done forty reps. The person who sits in serene stillness for ten minutes has done one.

Guess who is getting stronger.

Which means the smug bloke on the next cushion, radiating calm, is having a lovely time and a fairly light workout.

I wish somebody had told me this fifty years ago, ideally while I still had the hips for it. I spent decades assuming I was rubbish at meditation because my head was noisy. My head was noisy because I was doing the work.

The monkey on the pole

There is an old Indian teaching story that explains this better than any diagram.

A man is given a monkey. This is already a questionable gift, and it goes downhill from there. The monkey will not sit still. It leaps, it chatters, it swings off the furniture and generally makes the place unliveable.

He ties it to a pole with a rope.

The monkey does not calm down. Quite the opposite. It races up the pole to the top. Then straight back down. Then up again. Up and down, hour after hour, with the commitment of a creature that has decided this pole is the enemy.

The man does nothing. He does not shout at it. He does not shorten the rope. He simply waits.

Eventually the monkey runs out of steam. It comes down the pole one last time, sits at the base, and goes quiet.

The monkey is your mind. The pole is your breath. The rope is the gentle bringing back.

You do not empty the mind by force. Nobody has ever done that, and everybody who tries makes their monkey climb faster. You tether it to something steady, and you let it exhaust itself.

Mine, I should say, is still fairly athletic for its age.

But

Here is where I want to plant a small flag and walk away.

Everything above is the standard teaching, and it is sound. Clearing the mind is not the goal. It is the myth that stops people before they start.

At the end of the book you might actually find it is mind clearing.

That said.

I have spent years watching my own nervous system going up and down the pole, and I have seen things during measurement that the standard teaching does not quite account for.

Something closer to real quiet. Not willed, not forced, and not something I could have felt my way to without the numbers in front of me.

Whether that counts as clearing the mind, I will let you decide when we get there. What I can tell you is that it appears to be measurable.

We will come back to this. Bring your monkey.

The Good, the Bad and Wonderful of Meditation

The good

A Harvard neuroscientist scanned the brains of people who had never meditated. Eight weeks later, after about twenty minutes a day, she scanned them again.

The brains had physically changed. The amygdala, the alarm system that decides what counts as a threat, showed reduced grey matter density. Grey matter had grown in the areas handling awareness and self-control.

Eight weeks. Twenty minutes a day.

That is less time than most of us spend deciding what to watch.

The Not So Good

Now the story the meditation industry does not tell.

A researcher set out to prove that mindfulness improves sleep. Proper lab, brain waves measured, no relying on how people said they felt.

The data came back the exact opposite. Meditation increased arousal in the brain. It was not settling people down. It was winding them up.

She sat on it for about five years, because it would not have helped the brand.

Then she mentioned it to a meditation teacher on a retreat and got told off. His view, roughly: why do you psychologists keep trying to turn this into a relaxation technique, when everyone here knows that if you meditate enough, you stop sleeping.

Which is not on the app either.

That started a proper investigation into what goes wrong. Interviews with teachers and practitioners turned up five kinds of difficulty. Changes in thinking and perception. Emotional trouble. Changes in your sense of who you are. Physical symptoms. And the one nobody expected, damaged relationships.

Before you panic, they were deliberately collecting worst cases. This is not what awaits you doing three minutes before breakfast. But the surprise was that it was not only people with trauma histories. Plenty were well-sorted people who had already done the work.

So here is the sensible rule, and it applies to everything in this book.

If any of this starts making things worse rather than better, stop. If you notice anxiety climbing, sleep getting worse, old memories surfacing that will not settle, or a growing sense of being detached from yourself or the world around you, put it down and talk to your doctor.

That is not failure. That is you paying attention, which is the whole skill we are building anyway.

And if you are carrying something heavy already, do not start this alone in a quiet room late at night. Do it with someone who knows what they are doing.

Now the encouraging part.

I suspect that on this journey you might achieve some, or even all, of the reasons and benefits above. These things are quietly transformative. At times a little like meditation on steroids.

But we are taking a different road. A more direct one, through the connection between your brain, your nervous system and your immune system.

No cushion required.

Chapter 5
Meet Your Amazing Nervous System

Your phone buzzes. You glance at it. Message from your boss, at nine o'clock on a Sunday evening, and it says only this.

"Can we have a quick chat tomorrow?"

Now watch what happens to you.

Your heart rate lifts. Your stomach tightens. Your mouth goes slightly dry. Your mind starts writing scripts, and every single one of them ends badly. By the third draft you are clearing your desk into a cardboard box while somebody from human resources watches you do it.

You have not moved from the sofa. Nothing has happened. Nothing may ever happen. Your boss almost certainly wants to ask about the parking.

And yet your entire body has just prepared itself to fight a lion.

This is the part of you that runs the show, and nobody ever introduced you properly. So let me do that now, because once you understand this, a great deal of your life stops looking like a personality flaw and starts looking like plumbing.

The system you never think about

Yes, your nervous system splits into two departments.

One is the bit you drive. You decide to pick up a cup, and your arm obliges. Deliberate, conscious, yours to command.

The other runs everything else. Your heartbeat. Your breathing. Your digestion, blood pressure, pupil size, sweat, immune response, and the thousand small adjustments your body makes every minute while you are busy thinking about lunch.

That second department is the autonomic nervous system. Autonomic, as in automatic. It does not ask your permission and it does not send reports.

Which is just as well. Imagine having to remember to digest that food you have just consumed. You would be halfway through a meeting and suddenly realise you had left your pancreas idling since Tuesday.

Two crew on the same boat

The autonomic nervous system has two branches, and they work against each other on purpose.

I am a boatie, so here is how I picture it. Two crew on the same vessel. One is on the throttle. The other is on the brake and the anchor.



Neither is the good one. Neither is the bad one. A boat with no throttle goes nowhere. A boat with no brake ends up in the marina wall, in front of an audience, at some expense.

The throttle is your **sympathetic nervous system**. Adrenaline, faster heartbeat, blood diverted to the big muscles, senses sharpened, digestion shut down because your body has decided that lunch can wait. Every resource pushed to the front line.

This is superb equipment. It has kept your ancestors alive through everything the world could throw at them. In real life, if a car pulls out in front of you, your sympathetic system reacts before you have consciously registered the danger. You brake, you swerve, and only afterwards do you notice your hands shaking and hear yourself saying something you would not repeat in front of your mother.

The brake is your **parasympathetic nervous system**. Heart rate settles. Breathing slows and deepens. Blood returns to the gut, digestion restarts, repair work begins, and the body quietly gets on with maintenance.

Fight and flight is one crew member. Rest, recover and repair is the other.

Your health, your mood, and honestly most of your life depends on how well those two hand over to each other.

Fight, flight and the one nobody mentions

Everyone knows fight or flight. Confront the threat or run from it.

There is a third option that gets far less attention, and it is the one that explains a lot of human behaviour that otherwise makes no sense.

Freeze.

When the threat is too big to fight and too fast to outrun, the system does something else entirely. It stops. Muscles lock. Thinking goes foggy. You stand there while the moment happens to you.

Every animal does this. Play dead, go still, hope it passes.

You will recognise it immediately. It is the reason you say "you too" when the waiter tells you to enjoy your meal. It is why the perfect reply to an insult arrives at half past two the following morning, fully formed, beautifully worded, and about sixteen hours too late.

Here is why this matters to you. Freeze is not cowardice and it is not weakness. It is an ancient survival setting doing exactly what it was built to do. If you have ever gone blank in an argument, or sat

frozen at your desk unable to start a task that terrifies you, or found yourself unable to say the obvious thing at the obvious moment, you were not being pathetic.

You were being a mammal.

I spent years being quietly ashamed of moments like that. It would have saved me a great deal of grief to know it had a name.

The problem with modern threats

Your **sympathetic nervous system** is superb equipment with one enormous flaw.

It cannot tell the difference between a lion and an email.

That system was designed for threats that were physical, immediate, and above all brief. Something charges at you. You run. You either escape or you do not. Either way it is over in about ninety seconds, and afterwards your body switches to rest, recover and repair.

Now look at your actual threats. A mortgage. A difficult colleague. A diagnosis. A teenager. A message from your boss at nine on a Sunday evening.

None of them can be outrun. None of them are over in ninety seconds. Some of them last for years, and one of them will eventually want driving lessons.

So, the throttle stays open. Not flat out, which you would notice, but slightly open, all day, every day, for decades.

That is what stress actually is. Not a feeling. A crew member who never hands back the controls.

What it costs

When the brake never gets a turn, things start to break, and they break in ways nobody connects back to the source.

Sleep goes first, usually. You cannot fall asleep because your body is still braced for something. Or you fall asleep fine and wake at three in the morning, wide awake, heart going, for no reason you can name.

Digestion suffers, because your body keeps deciding that lunch can wait.

Blood pressure sits higher than it should.

Repair work gets postponed. Your immune system, which does its best work while you are resting, never quite gets the quiet it needs.

And your mood, which is not the separate thing we like to pretend it is, goes with all of it.

I know this landscape well. In my forties I was going into work at four in the morning because I could not sleep. I was bingeing at night and punishing myself with half marathons at dawn. I thought I had a discipline problem, a willpower problem, a character problem.

I had a nervous system stuck in one position for years, and not one person, including me, ever thought to look there.

Why this runs your life

Here is the part that took me decades to accept.

You like to think you make decisions. You mostly do not. Your nervous system makes them, and then your mind writes an explanation afterwards and presents it to you as reasoning.

Snapped at your partner over nothing? That was not a decision. That was a system with no brake left, reacting to the last small thing on top of a very large pile.

Ate the entire packet of biscuits watching TV? Same.

Could not face the phone call you had been putting off for a fortnight? Freeze.

None of this is an excuse. You still have to apologise, and you still have to make the call. But if you have spent years attacking yourself for these moments, telling yourself you are weak or broken or hopeless, then I would like to offer you a better explanation.

You are not weak. Your throttle is stuck.

And a stuck throttle is a mechanical problem. Mechanical problems can be worked on.

A bit more about this to hopefully get this into your head

I say again, about your nervous system. There are two parts the **Parasympathetic** nervous system and **Sympathetic** nervous system.

This has actually taken me a year or two to get my head around and still have to think about it. My weird mind set thinks Sympathetic has something to do with sympathy, kindness and for no reason Para is negative. I know this is crazy but I thought I would tell you this story to make sure you get what the two are.

In simple words the **Parasympathetic nervous system** is the extra good stuff, **Rest and digest**. The stuff most of us don't get enough of.

The **Sympathetic nervous system** is also good stuff because if you didn't have it in your genes your ancestors may well have been eaten. This does cause stress and stress related anomalies. We all probably need less of this being activated.



Where did your stress genes come from?

They came down your line. Your parents, their parents, the ones before them, all the way back to whichever ancestor first decided which cave to live in. Thank goodness they did, because the ones who were too relaxed about it never became anybody's grandparents.

Geneticists have found that genes do not arrive with fixed settings. They get turned up and down by how a person lives. Your DNA is not rewritten, every letter stays where it was put, but the volume changes, with some genes turned up loud and others hushed. The field is called epigenetics.

It is still argued over, but the suggestion is that what your grandparents lived through, the war, the hunger, the boat, the work that started before light, may still be present in how your body meets a Monday morning.

You carry more than the nose and the surname.

The handle

The obvious question. If this system is automatic, and it runs everything, and you cannot instruct it, what use is knowing any of this?

Here is what makes the whole thing possible.

Almost everything the autonomic system controls is out of reach. You cannot decide to lower your blood pressure. You cannot tell your gut to settle or your immune system to step up.

Try it now. Sit there and instruct your liver to work harder. Really commit to it.

Nothing. Your liver has no interest in your opinions and never has.

Except one.

Breathing is the only part of that system you can take over whenever you like. It runs perfectly well without you, all night, every night. But you can also grab hold of it, right now, and change its speed and its rhythm.

That is the handle. The one lever that reaches from the conscious department into the automatic one. A door left unlocked in an otherwise sealed building.

Change the way you breathe and you change the message travelling up to the brain about whether you are safe. Change that message and the brake starts to come on.

This is not a metaphor. It is measurable, and measuring it is exactly what the next chapter is about.

Try this before you go on

Sit still for a moment and take one deliberately slow breath. In through the nose, gently. Then out through the nose, slower than you went in. Make the out-breath longer than the in-breath.

Do that three times. No app, no timer, no incense, no need to tell anybody.

Then notice what happened. Not what you hoped would happen. What actually happened.

Most people feel something. A small drop in the shoulders. A slight loosening somewhere. It is not dramatic and it is not supposed to be. If you were expecting harp music and a warm glow, I am afraid you have the wrong book, and possibly the wrong species.

What you have just done is send a signal down the wire to the crew member on the brake.

Now hold on to that, because in the next chapter we start putting numbers on it. And numbers change everything.

Chapter 6
Meet Bob and Buster

So now is probably the most important part of the book. Bob told me to write this at the end, maybe it should have gone in the beginning?



Not to worry, I got all my AIs to search for it and couldn't find it anywhere in my thousands of files, so I get to write it first for you.

Here we go!

We all have two voices in our heads, the good one and the not so good one. Bob is my creative genius that works all night solving our problems, brings us answers when we are in the shower or when we have given up trying.

And then there is Buster.

Buster is the one who says, "You can't do that." "You're not good enough." "What will people think?" "You always stuff things up." Buster can be a real pain in the backside.

So how did my voices get their names?
I originally called my good voice Jimmy. I went and told my wife what I had done and she said she didn't like that name. I said so what will I call my good voice. My wife said she didn't know, so off I walked and right at that moment my good voice said call me Bob after your Dad. So, Bob it is.

Now the not so good voice, I do call it my bad voice because it stops me all the frigging time.
I went over to see my friend next door, Gerrit a 92-year-old amazing man from Holland. He has been in NZ since 1952, but still has a broad Dutch accent. I was telling him about my two voices.

I said Gerrit what is Dutch for Bastard, that's what I think my bad voice is. He mumbled something in Dutch and said it sounded similar to English. I said say it again and it sounded like Buster. That's how Buster got his name.

As a fun thing please name your voices, kind of cool if they have a personal meaning for you, one positive and one negative, e.g. Betsy and Jezebel

Now, before you think I have completely lost the plot, Bob and Buster aren't actually two little people sitting inside your head arguing over who gets to drive. They are my way of describing two very different patterns of activity that take place inside the brain.

A huge amount of what the brain does happens without conscious awareness. Your conscious mind is only aware of a small part of the information being processed at any moment.

This is where Bob comes in.

You might spend an hour trying to solve a problem. You concentrate, think about it, reject one idea after another and eventually give up. Then, perhaps while you are having a shower, walking the dog or driving the car, the answer suddenly appears.

"Bloody hell! I've got it!"

Where did that come from?

Treat your Bob as a genius because it is as you will see and learn.

It can feel almost magical, but there is a perfectly reasonable explanation. When you stop deliberately concentrating on a problem, your brain doesn't necessarily stop working on it. Some of the information remains active in memory, and your brain can continue making connections outside conscious awareness. Eventually, a useful combination of ideas may reach conscious awareness.

Psychologists often call this incubation.

It is one reason why stepping away from a problem can sometimes be more productive than staring at it for another hour.

Bob is particularly good at this.

He doesn't need you to sit down with a pencil and say, "Right, Bob, you've got thirty minutes to solve this."

He just gets on with it.

The subconscious, or more accurately the brain's non-conscious processing, has access to an enormous collection of experiences. Every conversation, mistake, success, photograph, smell, emotion and piece of information you have encountered can contribute to the patterns your brain builds over time.

Your conscious mind might say, "I don't know."

Bob might say, "Hang on. I've seen something like this before."

And suddenly the answer arrives.

But Buster uses some of the same machinery for a very different purpose.

Buster is your internal warning system.

He remembers the embarrassing presentation from ten years ago. The business idea that failed. The relationship that went wrong. The time somebody laughed at you. The criticism you received when you were young.

Your brain is designed to notice potential danger. From a survival point of view, this is extremely useful. If something previously caused pain, rejection or danger, the brain becomes more likely to notice anything that resembles it in the future.

The trouble is that the modern world is full of situations that are not actually dangerous but can still trigger those old warning systems.
You think about starting a new business.

"Don't do it, because ……," says Buster.

You think about speaking in front of people.
"They'll think you're an idiot."

You consider asking someone out.
"You'll get rejected."

You think about writing a book.
"Who do you think you are?"

Buster doesn't necessarily mean to ruin your life. In fact, he may believe he is protecting you.

That's the really interesting part.

A negative thought can sometimes be the brain attempting to keep you safe.

The problem is that the brain doesn't always distinguish between real danger and perceived danger very well.

To the brain, the possibility of embarrassment, rejection or failure can produce a genuine stress response. The heart can beat faster, muscles can tighten and attention becomes focused on the perceived threat.

And once Buster has your attention, he can become very persuasive.

This is where something important happens.

What we repeatedly think about can strengthen the pathways associated with those thoughts.

The brain is constantly changing in response to experience. This ability is known as neuroplasticity. When particular patterns of thinking are repeatedly activated, the brain can become more efficient at producing those patterns.

Think of it like walking across a paddock.

The first time you walk across the grass, there is no path. Walk the same route every day and eventually you create one.

Thought patterns can work in a similar way.

If your automatic response to a challenge is, "I can't do this," that pathway can become very familiar.

But the good news is that the reverse is also possible.

You can create new pathways.

You can teach your brain to pause before accepting Buster's first opinion.

Instead of:

"I can't do this."
You can learn to ask:
"Is that actually true?"

That is the relationship I want you to develop with your own mind.

Don’t try to kill Buster. You probably couldn’t anyway, and frankly, he occasionally has a good point.
Instead, learn to listen to him without automatically believing him.

Then give Bob a chance to speak.
Because somewhere inside that wonderfully complicated brain of yours is an extraordinary problem-solving system that has been collecting information for your entire life.

And sometimes, when you stop trying so hard, Bob comes up with the answer.

When you are stressed and tired Buster always wins the arguments with Bob.

Even during a normal day, you might start off all enthusiastic, raring to go but as soon as tiredness or stress slowly move in Buster dominates with all the negative stuff.

Tiredness, stress, annoyances and all the other physical and emotional stressors move in, Buster wins.

Now here is what is going to happen. Given time, Bob is going to have more of a say. Especially after your De-Stressing Project30 Process (PJ30 Process)

It is amazing what positive things come to mind, just as you are waking up or after your PJ30 Process.

After your full PJ30 Process just lie still and look what happens. If Bob or Betsy delivers you something just be thankful.

Now here is the deal I made with Bob, when you get used to your Bob, my deal is I will do whatever positive ideas come to mind, without fail. It is sort of a trust thing especially when you get used to this process.

You May Not be as Smart as You Could Be

Solving problems and stopping the stress.

How do you think you solve problems or find answers to life questions?

I assure it's not how you think you do. Real solutions come from Bob. The trouble is we all want to use the conscious bit and think our way to the answer.

The old on a piece of paper the trick, make a list of positive and negative or pros and cons then count which is the biggest list. Not sure what happens if the lists are even?

Real problem solving is more like in the following story, true solutions are solved in your subconscious, without even knowing.

Let me share with you an interesting story that unveils the journey of entering the Castle of Truth, first facing the Guard Dogs of Confusion and Paradox. This story holds the key to understanding the profound impact where often a restful night's sleep really helps in our problem-solving abilities.

If you have a difficult problem, question or situation that you need a solution or answer. You could try the old make list approach but that never never actually works, our brain's decision making procedure is much more complex than this.

So now you are sitting in front of the Guard Dog of confusion without the answer, Siting, Sitting, Sitting, until you run out of patience. Then of you go back to the trying to think the answer or the old list trick again. Or maybe some other way of solving problems. Sooner or later, you will come back to sitting in front of the Guard Dog of confusion. Backward and forward you go in your head where you try to think yourself a solution. Most people think this is way but underneath is a much more powerful way.

How do you know you are sitting in front of the Guard Dog of confusion? You don't know what to do, you know you don't have an

answer. Ask yourself do you have the answer, are you confused because you don't have the answer.

It is very good to be confused!

Why is it very good to be confused? Because you get to go to visit the Guard Dog of Paradox, but only when you get the paradox

"I know I don't know the answer!"

Now you get to sit and sit in front of the Guard Dog of Paradox. So what often happens now? You sit and sit and occasionally think you can think the answer, this just takes you back to the Guard Dog of Confusion.

Remember: It is very good to be confused!

So what do you do? You sit and wait, some say surrender and stop trying to solve the problem. Sometimes you have to wait and wait and wait.

When you are properly stuck, go for a ten minute walk. Your brain keeps working on it while your legs are busy.

And then it happens. In the shower, driving the car, or waking up after a decent night's sleep. The answer arrives on its own, fully formed, and you wonder where it was hiding. That is Bob, finishing the job while you were busy elsewhere.

Which is why sleep matters so much when you are stuck on something, and why the twenty minutes you spend on your back each morning is the best thinking time you own, precisely because you are not thinking.

All the YouTube videos and tools in this book are listed at project30.org/videos, with clickable links. You can go to the YouTube direct by copying the titles in blue and paste to YouTube. If a video ever disappears from YouTube, I will try to find a replacement and update the list.

This might give you a little more insight to your Bob and Buster.
YouTube it: explained this in 20 minutes
I wasted 33 years trapped in my own head before Anthony Hopkins

Here is every voice I could find in my own head, Buster's sixty on one side and Bob's eighty-four on the other, and the interesting part is how many of them turn out to be the same energy wearing a different hat.

I went to my barbers today and he said children teach us patience. I told him the story I got from an old man in India, he said us westerners think we are here to teach our children, the opposite is true our children are here to teach us, all the following.

Bob's Voices

1. Incubation
2. Intuition
3. Pattern recognition
4. Connection making, joining things nobody else joined
5. Curiosity
6. Imagination
7. Insight
8. The hunch
9. Creative play
10. Absorption
11. Flow
12. Wonder
13. Awe
14. Enthusiasm
15. Optimism
16. Hope
17. Encouragement
18. Self belief
19. Courage
20. Willingness
21. Initiative
22. Momentum
23. Persistence
24. Grit
25. Resolve
26. Determination
27. Drive
28. Ambition
29. Aspiration
30. Healthy pride
31. Craftsmanship, doing it properly
32. Discipline
33. Patience
34. Timing, knowing the moment
35. Delayed gratification
36. Restraint, the pause before reacting
37. Focus
38. Clarity
39. Calm
40. Stillness
41. Silence
42. Rest
43. Presence
44. Attention
45. Acceptance
46. Non attachment
47. Resilience
48. Recovery
49. Adaptability
50. Trust
51. Listening
52. Observation
53. Discernment
54. Prudence
55. Honesty
56. Self-honesty
57. Honest counsel, someone who will tell you the truth
58. Conscience
59. Perspective
60. Proportion
61. Humility
62. Laughing at yourself
63. Discretion, keeping the lid on
64. Boundaries
65. Gratitude
66. Contentment
67. Generosity
68. Kindness
69. Compassion
70. Forgiveness of others
71. Forgiveness of yourself
72. Warmth
73. Love

74. Belonging
75. Humour
76. Playfulness
77. Delight
78. Service
79. Passing it on
80. Purpose
81. Meaning
82. Memory, the whole store of what you have lived
83. Sleeping on it
84. Dreaming

Busters Voices

This sort of surprised me, Drives, Habits and Conditions we still need.

1. Chaos
2. Destruction
3. Rage
4. Lust
5. Desire
6. Fear
7. Laziness
8. Inertia
9. Rebellion
10. Immediate gratification
11. Doubt
12. Self-sabotage
13. Manufactured craving
14. Avarice
15. Greed
16. Pride
17. Competitive aggression
18. The drive to prove something
19. Anxiety
20. Traumatic past
21. Old wounds
22. Complexes
23. Rage at injustice
24. Hunger for more
25. Grief
26. Shame
27. Chronic disorder
28. Distraction
29. The bargain mentality
30. Complaining
31. Gossip
32. Self-contempt
33. Envy
34. Naivety
35. Self-deception
36. Impulsiveness
37. Judgment as superiority
38. Hoarding
39. Fear of loss
40. Scarcity
41. The belief that money is dirty
42. Neediness
43. Desperation
44. Validation seeking
45. Over availability
46. Attachment
47. Hurry
48. Impatience
49. Perfectionism
50. The ego
51. Vanity
52. Appetite for possession
53. The God syndrome
54. Dispersion of focus
55. Drift
56. Arrogance
57. Reliance on force
58. Disconnection
59. The echo chamber
60. The Solomon paradox

You do not argue him down, you give him a job. The rage that keeps you awake is the same fuel that gets a man out of bed at four in the morning, and the only difference is whether anyone is steering.

That is what your morning process actually does, because Buster wins when you are tired and stressed, and twenty minutes on your back changes who is holding the wheel.

Have a watch of this YouTube sort of might explain it. Listen at night if you wake up, listen every night until you absorb it

Best Chapter of Your Life Starts Today Carl Jung
PLAY THIS Before You Sleep The Best Chapter of Your Life Starts Today Carl Jung

Or if you wakeup at night.

Some really good suggestions in the how when where why what which and how of Stress.

What do we do with these? Wait and see what happens with the PJ30 Process.

There is one email thread I can open and watch my stress go straight off the scale. Every single time.

That is one of the cool things the Garmin does. Its stress score is fairly basic and nowhere near as good as an HRV reading, but it is good enough to show you where you are.

I had been in that email for a while when my son suggested I stop. He must have sensed something, because I certainly had not. I thought I was enjoying myself. Nope. Stress through the roof, and the watch knew before I did.

Here is the bit I picked up recently from the King Solomon material. It is not a crime to be in that zone. The problem is that most of the time you have no idea you are in it, which is exactly why you measure it.

So notice you are there. Then decide how long you are staying before you go and breathe, or go and get distracted by something else entirely.

Chapter 7
Why Heart Rate Variability HRV Changes Everything

Your doctor asks how stressed you are, on a scale of one to ten.

You think about it for a second and say eight.

Where did eight come from? You have no idea. Nobody measured anything. Nothing was compared against anything. You picked a number that felt about right, based on how your morning went and whether the dog was sick on the carpet, and now it is written in your notes as though it means something.

Eight. A number generated by a man in a hospital gown, under pressure, doing sums with no data.

We do this constantly. How is your mood? Fine. How is your energy? Not bad. How stressed are you? Six.

Now imagine trying to manage your weight this way. No scales. No tape measure. Just standing in front of the mirror each morning going, hmm, feels like about an eight.

You would get nowhere. You would give up within a fortnight, and you would be entirely right to.

That is exactly what we do with our nervous systems. And it is exactly why so many people abandon the very things that would have helped them.

What is HRV?

Your heart does not tick like a metronome.

Sixty beats a minute does not mean one beat every second, neatly spaced, like a Swiss railway timetable. It means sixty beats, scattered slightly, some gaps a fraction longer, some a fraction shorter. Never the same twice.

That scatter is heart rate variability, and we measure it in milliseconds. Thousandths of a second. Which tells you something about the level of detail your body is operating at while you are deciding what to have for tea.

Here is the bit that connects it to everything in the last chapter. Watch what happens across a single breath.

Breathe in, and your heart rate rises slightly. Breathe out, and it falls slightly.

In, heart rate up fractionally. Out, heart rate down fractionally.

That is your throttle and your brake, taking turns, on every single breath you have ever taken. The in-breath nudges the accelerator. The out-breath applies the brake. The two crew members from the last chapter, handing over to each other roughly twenty thousand times a day, without a single argument or tea break.

HRV is the measurement (in milliseconds) of that conversation.

When they are talking to each other properly, the gaps between your heartbeats vary in a smooth, wavelike pattern. When one of them has taken over and stopped listening, the pattern flattens out.

Low variability is not a calm heart. It is a heart with nobody on the brake.

What the number means, and what it does not

Higher is generally better. More variability means a nervous system that can respond, adapt, and switch between states as needed. Lower usually means it is stuck.

But your number is yours.

HRV varies enormously between people. It drops with age. It is affected by fitness, illness, alcohol, medication, sleep, and roughly a hundred other things including, I suspect, your relatives.

A perfectly healthy sixty-year-old and a perfectly healthy twenty-five-year-old can be miles apart with absolutely nothing wrong with either of them.

This matters, because the moment you get a number you will do what every human does. You will look up what is normal. Then you will find a forum where a twenty-six-year-old triathlete called Kyle is posting his readings alongside a photograph of his breakfast, and you will feel considerably worse than you did before you started.

Do not do that. Kyle is not your control group. Kyle is not even Kyle's control group, since half of what he posts is aspirational.

The only comparison that matters **is you against you.**

Why it became my dashboard

I spent decades being wrong about my own state.

In my forties I would have told you I was fine. Better than fine. I was fit, I ran half marathons, I solved difficult problems for large companies, and I was at my desk by four in the morning because I was dedicated.

Dedicated. That was the word I used. There were other words available.

I was not fine. My body knew it long before I did. It simply had no way of telling me that I would listen to.

That is the thing about the nervous system. It runs everything and reports nothing. No warning light. No little orange symbol on the

dashboard shaped like a tiny exhausted man. By the time you feel it, you have usually been in trouble for years.

A HRV reading is the closest thing we have to that warning light.

Not a diagnosis. Not a verdict. A dashboard. A number that moves when your internal state moves, which means you finally have something to steer by.

And once I could see it, I could not leave it alone. Change something, take a reading. Change something else, take another. My wife will tell you this became a personality trait rather than a hobby.

That is where the years of measuring came from, and that is where this whole book came from.

Guessing versus measuring

Here is why this matters more than anything else in this book.

Remember Chapter 4, and the reason people give up on meditation. The changes are imperceptible. Real, but too gradual and too subtle to notice from the inside.

You sit for ten minutes, you feel roughly the same as when you started, and after two weeks you conclude it is not working. It probably was working. You simply had no instrument sensitive enough to see it.

That is the whole problem in one sentence. Not that these practices fail. That we cannot perceive them succeeding.

It is like trying to watch your hair grow. Something is definitely happening. You will get the evidence in about six weeks, in a chair, from a man with scissors.

Put a number on it and everything changes. You are no longer taking anything on faith. You do the thing, you watch the number move, and you have proof in your hand within minutes.

Motivation stops being a matter of willpower and becomes a matter of curiosity. Nobody needs discipline to check a score they want to know.

Accurate enough, or consistent enough?

Now the part that took me longest to work out, and it is the single most useful thing I can tell you about choosing a device.

None of them are very accurate.

Not really. Consumer devices are not medical equipment. A proper clinical measurement uses electrodes stuck to your chest, reading the electrical signal from the heart directly. Your watch is shining a small green light through your skin and making an educated guess about what your blood is up to.

Some are closer than others. None are exact.

And here is the good news. It does not matter.

Think about your bathroom scales. They might be a kilogram out. Every reading might be a kilogram heavy. Does that stop you weighing yourself?

Not at all. Because if they are a kilogram out every time, in the same direction, then the difference between Monday and Friday is still perfectly true. You are not measuring the absolute number. You are measuring the movement.

That is exactly how HRV works.

A device does not need to be accurate. It needs to be consistently inaccurate. Wrong in the same way, every time, so that when your number changes you know something real has changed, rather than the equipment having an off day.

Consistency beats accuracy. Remember that when somebody tries to sell you precision you do not need, at a price that suggests you do.

Why most devices will not do what we need

Will any device do, then?

No. And this is where I wasted a considerable amount of time and money.

Most HRV devices are built for athletes, and athletes want a different thing from what we want.

Overnight averages. The most common approach. Your watch measures while you sleep, then hands you one number in the morning representing the entire night. Fine for spotting long-term trends. Almost useless for us.

We are not asking how last night went. We are asking what is happening to you right now, while you do something specific. An overnight average is a school report for your nervous system. Satisfactory progress. Could try harder. Not helpful at eleven on a Tuesday.

Delayed readings. Some devices take the measurement and give you the result later, once it has been processed and synced and blessed by a server in another country and dropped onto your phone. By then the moment has gone. You cannot experiment with something that reports back after the experiment has finished.

Disruptive readings. Some require you to stand still, or hold a pose, or press a button, or breathe in a way that suits the device rather than you. Which is a problem when the entire point is to measure you in deep relaxation. Anything that jolts you out of that state has just destroyed the very thing it was measuring. It is a thermometer that shouts.

What we need is narrow and specific. A spot reading. Taken during deep relaxation. Available immediately. Without disturbing the state we are in too much.

That is the specification. It sounds simple. Finding something that actually does it is not.

The great device hunt

I bought several devices that appeared to meet those requirements.

None of them did. They now live together in a drawer, an expensive support group for gadgets that could not do the one thing they claimed to do.

So, I went to the source. I contacted one of the big players in the field and explained precisely what I needed, in detail, like a reasonable man. They assured me their devices did all of it, and suggested I pop into a technology store and try them out.

So, I did.

Reader, you cannot test HRV on a shop-floor device.

Most of them are in demo mode. Demo mode means the screen cycles through beautiful, confident, entirely invented numbers. A pretend heart, beating pretend beats, for a pretend person having a pretend lovely day.

Then there are the assistants. Lovely people, doing a difficult job for not much money, who did not sign up to be interrogated about autonomic physiology by a determined man in his seventies.

I watched more than one of them look it up on their phone while I stood there waiting. Then turn back, with the serene confidence of the freshly informed, and tell me that yes, this one definitely does it.

It definitely did not.

I have since worked through a great many devices, with a lot of help from artificial intelligence that was wrong, and I can tell you that the marketing and the reality are two different countries with no direct flights. Devices that advertise spot HRV readings frequently do not deliver anything you can use. The words are on the box. The function is not in the machine.

I will come back to what does work later in the book, and why. For now, the useful thing is knowing what to look for, because once you know the specification, you stop being sold things.

Try this

If you already own a watch or a ring that reports HRV, NOT HEART RATE, go and find the number. Not the sleep score, not the readiness score, not the little smiling face. The actual HRV figure, usually in milliseconds.

Write it down with today's date.

Do not judge it. Do not compare it to anybody. Do not look up what is normal, because normal will tell you nothing at all about you.

And do not go and find Kyle.

You are simply establishing where you are standing before we start moving.

If you do not own anything that measures it, do not rush out and buy something yet. Wait. There is a right way to do this, and buying first and learning afterwards is how I ended up with a drawer full of expensive disappointments and a story about a technology store.

Next, we look at what happens when you deliberately slow your breathing down. That is where the numbers start doing things nobody warned me about.

Chapter 8
The Magic of Resonance Breathing

There are two old wives' tales about breathing, and between them they have done more damage than almost any other piece of folk wisdom in circulation.

Both sound obviously true. Both get handed down through families like a recipe. And both are, in the moment you most need them, precisely backwards.

Let us deal with them one at a time.

Wives' tale one, just take a deep breath

Somebody says it to you at the worst possible moment, how often do people say, Take a deep breath?

You are furious, or panicking, or about to walk into a room you would rather burn down. And a well-meaning person puts a hand on your shoulder and says the four words handed down through every family in the English-speaking world.

"Just take a deep breath."

So, you do. You haul in an enormous lungful of air, chest rising, shoulders going up round your ears, and you hold it for a second like a man about to dive for pearls.

Then you let it go.

And you feel, at best, no different. At worst, slightly dizzy and slightly more wound up than before.

You have just done the opposite of what you were trying to do.

Congratulations. Society has been passing this advice down for four generations and every single one of them was wrong.

The bit the wives' tale left out

Here is the mechanism, and it is beautifully simple once someone tells you.

Breathing in and breathing out do different jobs.

When you breathe in, your heart speeds up a little. When you breathe out, it slows down a little. That is happening right now, on every breath, whether you are paying attention or not.

The in-breath leans on the throttle. The out-breath leans on the brake.

When somebody in distress takes a huge gasping breath in, they are not calming down. They are pressing the accelerator, hard, in a vehicle that is already going too fast.

Watch someone having a panic attack. They are not breathing too little. They are breathing far too much, and far too fast, all of it at the top of the chest. The advice to take a deep breath, delivered in that moment, is petrol on a fire.

Wives' tale two, you need more oxygen

The second one sits underneath the first and props it up.

Ask anybody why they take a big breath when they are struggling and they will tell you the same thing. More oxygen. Get some oxygen in, feel better.

It is the reason the first tale sounds sensible. Deep breath, more air, more oxygen, better.

Now here is the awkward fact.

Sitting where you are, doing nothing in particular, your blood is already carrying about as much oxygen as it can hold. Somewhere around ninety-seven to ninety-nine per cent full.

There is no room. You cannot top it up.

Breathing harder to get more oxygen into your blood is like standing at the petrol pump squeezing the handle after it has clicked off. The tank is full. You are just making a mess and looking anxious.

So why do you feel short of air?

Because the problem was never getting oxygen in. It is getting it out again, at the far end, into the muscle and the brain and the tissue that actually wants it.

And that is the job of the molecule everybody dismisses as waste.

We are all taught that oxygen is the hero and carbon dioxide is the rubbish, the stuff you get rid of, ideally while looking purposeful in Lycra.

It is not that simple. Carbon dioxide is the signal that tells your blood to let go of the oxygen it is carrying. Plenty of carbon dioxide, and the haemoglobin loosens its grip and delivers. Not enough, and it hangs on to the lot, sails straight past the tissue that needed it, and takes it back to the lungs unopened.

Picture a delivery driver with a van full of parcels and no address list. Plenty of oxygen. No idea where to drop it.

The blood vessels feeding your brain narrow slightly too.

Which produces the situation nobody expects. Your blood is full of oxygen. Your tissues are short of it. Your head is going light and tingly. And your instinct, at that exact moment, is to breathe faster, which blows off more carbon dioxide and makes it worse.

That is the panic attack in one sentence. Not a shortage of air. A delivery problem, being aggressively worsened by the person having it.

So, the way to get more oxygen where you need it is not to breathe more. It is to breathe less, and slower, and let the carbon dioxide come back up to where your body wanted it in the first place.

You are not short of oxygen. You never were. You are short of the thing that unlocks it.

Most of us are already breathing too fast, too shallow, and through the mouth. Then, at our very worst moments, we are told to do more of it.

What should the wives' tales have said?

Neither is entirely wrong. Both are badly aimed.

The useful version is this. Not deeper. Slower! And with the emphasis on the way out.

Breathe in gently through the nose. Then let it out slowly, through the nose, taking longer to come out than you took to go in. That is it.

You are not trying to fill your lungs. You are trying to lengthen the exhale, because the exhale is where the brake lives.

One breath will do something. Half a dozen will do considerably more.

There is one exception worth knowing, and it is the closest thing to an instant reset button anyone has found. Two short breaths in through the nose, one on top of the other, then one long slow breath out.

Researchers call it a physiological sigh. You have been doing it your whole life without permission. It is what your body does by itself when you have finished crying, or when you finally settle into sleep. It is also what your teenager does when you ask about homework, though I suspect that one has a different mechanism.

One study at Stanford found it lowered stress more effectively than several other breathing methods, and more than meditation over the same period.

Your body invented it. Somebody just noticed and got a paper out of it.

Why nobody told you

Because the old advice sounds right. Deep sounds calm. Big sounds thorough. More oxygen sounds like more of a good thing. Nobody ever says take a slightly smaller breath and take your time letting it go, and if they did, it would sound like nothing at all.

Nobody ever sold a million copies of a book called Do Less, More Slowly.

That is the trouble with almost everything in this book. The things that work are unimpressive to look at.

Which is why we measure them.

The sweet spot

Now for the part that made me sit back in my chair.

Slowing down helps. But there is a particular speed at which slowing down stops being merely helpful and starts doing something else entirely.

Around six breaths a minute.

Five seconds in. Five seconds out. Perhaps four in and six out, perhaps five and six, because it varies a little from person to person. Somewhere in that neighbourhood, most people find a rate where the whole system clicks into place.

Let us take a moment with that.

You have a nervous system that has run your entire life. It decided who you fancied at school. It has woken you at three in the morning over a conversation from 1998. It has, in my case, driven a grown man to padlock his own refrigerator.

And it turns out you can steer the thing by counting to five. Twice. In a chair.

Sixty years of therapy, self-help, gym memberships and expensive supplements, and the master control was hiding in a nursery rhyme.

Researchers call it resonance. Some call it coherence. I call it the moment the numbers stop arguing.

Because at that speed something quite specific happens. Your breathing rhythm and your heart rhythm stop running independently and start moving as one wave. Not approximately. Precisely. Your heart rate climbs on every in-breath and falls on every out-breath, and the size of that swing gets dramatically bigger than it was a minute ago.

Which means your heart rate variability, the number we spent all of the last chapter on, goes up. Sometimes a lot.

You are not relaxing your way there. You are not visualising anything. No candles are required. You have simply hit the frequency at which your own machinery prefers to run.

The heart

Why six? Why not four, or ten, or forty-two?

The answer sits in a control system most people have never heard of.

Your body monitors your blood pressure constantly, using sensors in the big arteries of your neck and chest. When pressure rises, they signal the heart to slow down. When it falls, they signal it to speed up. It is a thermostat, and it runs without you, which is fortunate given how we manage the ones in our houses.

That system has a delay built into it. It takes a few seconds to notice a change and respond. And when you breathe at roughly six times a minute, your breathing rhythm lines up exactly with that natural delay.

Push at the right moment and the swing gets bigger. Same as pushing a child on a swing, or a boat rolling in a following sea. Time it right and a small push produces a large movement. Time it wrong and you get a jolt, a complaint, and possibly a wet foot.

That is all resonance means. You have found the rhythm your cardiovascular system was already built around, and you are pushing in time with it.

The heart responds by producing the smoothest, largest, most orderly variation it is capable of. On a screen it looks like a clean wave rather than a scribble. Rather satisfying, in the way a well-parked car is satisfying.

The lungs

Two things about your lungs that nobody mentions at school.

The first is where the work actually happens. The bottom of your lungs is where the blood supply is richest, which means that is where the real gas exchange takes place. Breathe with your upper chest, shoulders lifting, and you are ventilating the least useful part.

It is the equivalent of filling the kettle and only boiling the lid.

That is why slow breathing works best from the belly. Not because belly breathing is spiritual, but because that is where the equipment is.

Put one hand on your chest and one on your stomach. If the chest hand is doing the moving, you are working harder for less return.

The second thing is your nose.

Your nose is not just a hole. It filters the air, warms it, humidifies it, slows it down and checks it for anything untoward. It is doing five jobs at once while your mouth stands there like a bucket, letting whatever turns up straight through.

Your nose also adds something to every breath that your mouth cannot. The next chapter is possibly the most important part of the book to understand the why.

For now, just breathe in through your nose. It is free, it requires no equipment, and it improves every breath that follows. Your nose has been waiting decades for you to notice it.

The brain

Your brain gets a vote in all of this, and it is a loud one.

Remember the carbon dioxide problem. Breathe fast and you blow off too much, the vessels feeding your brain narrow, and thinking gets harder. Slow the breath down and carbon dioxide settles back where it belongs. Blood flow improves. The fog lifts a little.

There is also the matter of what your brain does with the signal.

Your brainstem is monitoring your breathing constantly, because breathing is one of the most reliable indicators of danger there is. Almost nothing on earth breathes slowly and smoothly while being chased.

A slow, even, unhurried breath is not merely a symptom of safety. Your brain reads it as evidence of safety.

This is the loophole, and it is a good one.

You cannot talk yourself out of a threat response. You have tried. We all have. You have stood in a car park at midnight explaining to yourself, in complete and reasonable detail, that everything is fine, while your heart carried on doing exactly as it pleased.

That is because the part of you that decides about danger does not speak English. It has never read a motivational poster. It has never once been persuaded by a well-structured argument. It is roughly as sophisticated as a smoke alarm and considerably harder to reach with a broom.

It does understand breathing.

You stop arguing with it and you send it something it believes.

The rhythm that connects them all

Here is what makes this chapter worth the paper.

Slow breathing does not do one thing to one organ. It brings several separate systems into the same rhythm at the same time.

The heart follows the breath. The blood pressure sensors follow the heart. The vagus nerve, which we meet properly in the next chapter, carries the message both ways. Blood flow to the brain settles. The brain, receiving all of it, concludes that the emergency is over and hands control back to the crew member on the brake.

One action. Several systems. All moving together.

That is why it is called resonance. Not because it sounds mystical, but because everything is oscillating at the same frequency, and

things that oscillate together produce far more than the sum of their parts.

Think of a band where the drummer has finally stopped playing at his own private tempo.

Most wellness advice asks you to do a great many separate things. Eat this, avoid that, journal, stretch, drink more water, sleep eight hours, and possibly stand on a mat at dawn. This is the opposite. One rhythm, and a surprising number of things fall into line behind it.

Try this

Five minutes. That is all. You have almost certainly spent longer than that today looking at a photograph of somebody else's lunch.

Sit comfortably. One hand on your chest, one on your belly. You want the belly hand doing the moving.

Breathe in through your nose for a slow count of five. Feel the belly rise.

Breathe out through your nose for a count of six. Feel the belly fall.

Do not hold at either end. Keep it smooth and circular, like a slow wave rather than a series of separate events.

Do that for five minutes.

A few honest notes. You may feel slightly light-headed at first. That is your carbon dioxide adjusting and it usually settles within a minute or two. If it does not, stop and breathe normally.

Counting is harder than it sounds. Almost everybody breathes faster than they think they are, particularly the sort of person who is quietly competitive about it.

Watch your shoulders. They will try to creep up towards your ears when you are not looking, like a cat getting onto the good chair.

Either way, hold on to this. You are not a passenger. The steering wheel was there the whole time, hidden under a pile of coats.

How to Do Resonance Breathing

Right. Enough theory. Let us do it.

Have a play

You now have a small part of the story, so here is something to play with while I tell you the rest. You will get the bigger picture soon enough, and what to do with it.

For now, just play. See whether you can feel the difference.

Two minutes, five, ten, or thirty. Whatever you have.

Do it sitting, standing, lying down, watching television, or in bed. Do it when you are stressed, tired, angry, wound up, or whenever it occurs to you.

There is no wrong time and there is no wrong place.

What you are actually doing

In through the nose. Out through the nose.

Slow, smooth, and with the out-breath taking a little longer than the in-breath. Roughly five seconds in and six out to begin with.

No pause at the top. No pause at the bottom. Keep it circular, like a slow wave rather than a series of separate events.

That is the whole instruction. Everything else is equipment.

Your new best friend

Now let me introduce you to the thing that makes this easy, and which will take your mind, body and soul on all sorts of adventures.

A pacer.

It is simply something that keeps time for you. A shape that expands and contracts on a screen, or a tone that rises and falls, at a set rate. Your only job is to follow it.

That matters more than it sounds. Counting while trying to relax is a bit like being told to fall asleep faster. The moment you concentrate on the counting, you lose the relaxing. I have watched people insist they were breathing at six a minute while a device quietly recorded eight and a half.

Let something else do the counting.

The one rule

Avoid anything with a hold in it.

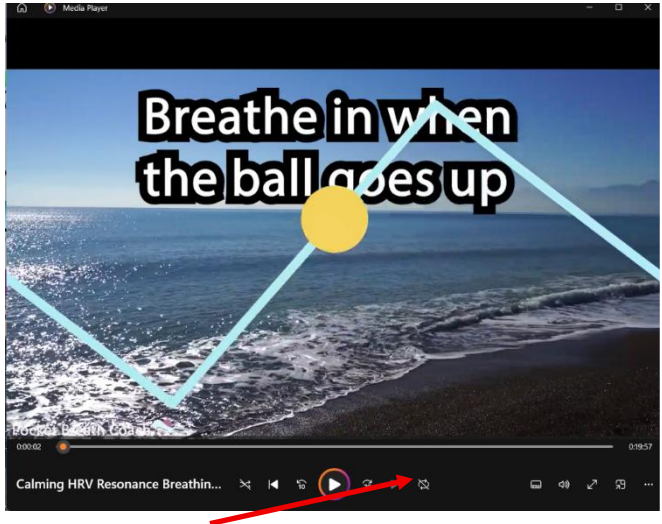
Box breathing, four seven eight, and the various carbon dioxide tolerance methods all pause at the top or the bottom. They are useful practices and they are not this one.

A pause breaks the wave, and the wave is the entire point.

If it pauses, it is the wrong tool for this job.

What I use

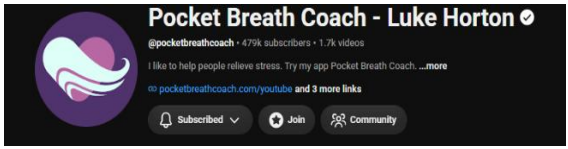
There are hundreds of these. I have tried plenty. Here are the ones that earned their place.



Click the Loop thing

On YouTube, search for:
Calming HRV Resonance Breathing Exercise, the one marked 4.4 to 6.6.
That is the one I come back to.

If you want it to run for longer than twenty minutes, right click on the blue progress bar under the video while it is playing and select Loop.



If you get as much benefit from this as I have, please consider supporting Luke Horton for a couple of dollars a month, or a bit more if you can afford it. I actually pay for this monthly, and I hate paying for anything monthly.

Here is where this differs from ordinary meditation, and I want to be careful how I say it, because Chapter 4 spent a good while telling you that a wandering mind is not failure. That still stands. This is not meditation done better. It is a different tool doing a different job.

In meditation, your mind wanders off to the rubbish bins or wherever, and the whole skill is gently bringing it back. With resonance breathing, for reasons I am still not entirely sure about, possibly just years of practice, my mind very rarely wanders at all. Often the only thing that pulls me out of it is realising I have forgotten to take my HRV reading.

I noticed my mind drifting the other day, so I simply turned the volume up on the resonance breathing sound, and bingo, straight back into that place where time disappears.

There is a specific headphone volume that seems to switch the thinking mind off almost entirely. Most breathing apps tell you to keep the volume just loud enough to hear. Go a fair bit louder than that.

One note before you try any of this. Do not force it. Just let it happen.

So now for you boffins, if you fancy getting properly nerdy about it, you might like to measure what your vagus nerve or your HRV is actually doing while you dial in your own resonance rate.

2 or 3 am wake up? Try this for an hour or two, back to sleep, it works.

Then there is the one you build yourself, which I think is really good.

Paced Breathing

On your phone, find the app called Paced Breathing. Check the icon matches, because there are copies.



It lets you set your own in and out times, works without an internet connection, and will happily run for as long as you tell it to. If you only take one thing from this section, take that.

Making it personal, and offline

I do not like relying on a connection, particularly at six in the morning in bed.

If you would rather use one of the YouTube tracks, you can pull it onto your device with a video downloader. The one I use is 4K Video Downloader, from the Microsoft store, free for personal use. Keep it updated when it asks. If you find yourself using it a lot, pay for it.

One more thing, for later

Six breaths a minute is the average.

Your own best rate depends on your height and your lung volume among other things, and it sits somewhere between about four and a half and six and a half breaths a minute. Most people land near five and a half. Taller people tend to be slower.

Somewhere in that range is a rate at which your system does something noticeably better than at any other. Yours is a specific number, and you can find it.

Not yet, though. Finding it needs something to measure with, and we are not there.

Headphones

Worth getting sorted if you are going to make a habit of this, and you should.

I use the JBL Tune 135BT In-Ear Wireless Headphones or whatever suits you. The cool thing about the JBL ones is that they connect to two devices automatically and one short press pauses what you are listening to.

They cost less than $50. If you are buying from Noel Leeming, pay the little extra for the 3-year guarantee, not that anything has gone wrong with mine.

Why those. They have a cable between the two earpieces, which matters if you are doing this lying down. If they fall out in the night, the cable means they are impossible to lose. And they are equally good if you want something to listen to when sleep goes missing at three in the morning.

If you have a sleeping partner, they get to stay asleep. Which is worth more than the headphones cost.

And remember what you notice

Most people feel something after about five cycles. Not a dramatic event. More like a background noise switching off, one you had stopped noticing was there.

Whatever it is, hold on to it. Just watch and feel yourself.

In a few chapters we are going to put a number on these same five minutes, and you will find out whether what you felt was real or whether you were simply enjoying sitting down.

Next, we look at the nerve that carries all these messages, and at a way of stimulating it that costs nothing, takes sixty seconds, and makes you sound like a fridge.

Chapter 9
Shut Your Mouth

David White showed me a small book one afternoon at his laboratory. A First edition!
It was called Shut Your Mouth and Save Your Life, by a man named George Catlin, who first published it in 1861 as The Breath of Life.
ALL LIFE (ON EARTH) IS BREATH
ALL ELSE (ON EARTH) IS DEATH

"No person on Earth who reads this little work will condemn it: it is only a question how many millions will look through it and benefit themselves by adopting its precepts." George Catlin

Not wanting to be outdone I had to go get my own, although only a second edition. It's a freakily beautiful, interesting and very educational book.

A painter, not a doctor

Catlin was not a physician. He was an American portrait painter who spent the greater part of his working life travelling among the native peoples of North and South America, recording their faces before, as he saw it, they disappeared.

By his own account he visited a hundred and fifty tribes and something over two million people.

Which gave him, entirely by accident, a very unusual dataset.

Because as he travelled, he kept noticing something he could not explain. The people he was painting were conspicuously healthy. Straight spines. Good teeth. Very little of the chronic illness, deformity and early death he was used to seeing at home in the cities.

Something was different, and he set out to find what it was.

What he decided

He landed on one thing.

They breathed through their noses. And more importantly, they were taught to as babies.

He describes it plainly. A mother would not hold her sleeping infant against the warmth of her own body. She would place it at arm's length so that the cooler air prompted the child to close its mouth. And where it did not, she would gently press its lips together, night after night, until the habit was fixed for life.

That is the whole thesis. Shut your mouth. Everything else follows.

He was not measuring anything. He had no instruments and no laboratory. He simply watched a great many people very carefully over a great many years, and noticed what they had in common.

Where he went too far

I am not going to pretend he got it all right.

Catlin blamed mouth breathing for rather more than mouth breathing can carry. Deafness, spinal deformity, poor teeth, mental illness and early death all get laid at the same door. Some of that connects, most of it does not, and the tribes he admired were also living without processed sugar, without industrial air, and doing hard physical work outdoors every day of their lives.

There is also the language. He writes throughout about savage races and civilized communities, in the way a Victorian gentleman did. It is of its time and it reads badly now.

Take him as what he was. An acute observer who spotted something real, then pushed it further than his evidence could go.

Because on the central point, he was right. Nasal breathing matters enormously, mouth breathing during sleep does real damage, and it took modern medicine until the nineteen nineties to catch up with a painter's notebook.

Go and read it

The book is out of copyright and freely available. You will find it on Project Gutenberg and the Internet Archive, complete with his own illustrations, which are worth the trip on their own.

It is short, it is odd, it's old and it is written with the absolute conviction of a man who believes he has worked something out. I would rather you read a hundred-and-sixty-year-old book by a painter than another article about morning routines.

Thirty jobs

Now, a century after Catlin, somebody counted properly.

Maurice Cottle was an ear, nose and throat surgeon who founded the American Rhinological Society in 1954. In the nineteen seventies he set out the functions of the human nose and arrived at about thirty distinct jobs.

Most people, if you asked them, would manage two. Smelling things, and getting blocked up in winter.

Here is the list.

It conditions the air

1. It filters, using hairs and a layer of mucus that traps dust, pollen and particles before they reach your lungs.

2. It warms incoming air to close to body temperature.

3. It humidifies it, so your airways do not dry out.

4. It slows the air down, because the passages are narrow, which is a feature rather than an inconvenience.

5. It sweeps the trapped material away, on a moving carpet of tiny hairs, toward the throat where it is swallowed and dealt with.

6. It takes some of the heat and moisture back on the way out, so you are not throwing away water with every breath.

Your mouth does none of these things. Air arrives cold, dry, fast and unfiltered, straight down to the lungs.

It makes and delivers a gas

7. It produces **nitric oxide** continuously in the sinuses, the oh so important gas this whole book turns on. Not **nitrous oxide**, which is the laughing gas once used by dentists, and a different animal entirely.

8. It delivers that gas into your lungs on every in-breath, where it opens up blood vessels and improves oxygen uptake.

9. That same gas is antimicrobial, so it is doing security work on the way past.

10. And because nasal breathing is slower, it keeps carbon dioxide where your body wants it, which as we have seen is what actually gets the oxygen delivered.

This is the part Catlin could not possibly have known, and it is the part that vindicates him.

It makes you breathe properly

11. It provides resistance, which keeps a little back pressure in the lungs and stops them emptying too fast.

12. It slows your breathing rate and reduces how much air you shift, both of which are good for you.

13. It encourages you to breathe from the diaphragm rather than the upper chest.

14. It protects your airways from cold dry air during exertion, which is why exercising with your mouth open is a poor idea and why some people wheeze when they do it.

It builds your face

15. In childhood it shapes the development of the jaw.

16. It shapes the palate.

17. It shapes the position of the teeth.

Children who breathe through their mouths tend to develop differently. Longer faces, narrower palates, more crowded teeth.

Thumb sucking does much the same thing, for the same reason. Anything that holds the mouth open and keeps the tongue off the roof of the mouth changes how the whole structure grows.

This is not guesswork. In the nineteen seventies an orthodontic researcher named Egil Harvold blocked the noses of young rhesus monkeys so they had to breathe through their mouths. Their faces grew differently. Longer, narrower, with the same dental crowding you see in mouth-breathing children. Change the airflow and you change the architecture.

Now go and look at photographs of elite athletes. Not at the faces, at the jaws.

Almost all of them have broad, forward-grown faces with plenty of room across the palate. Sprinters, swimmers, rowers, boxers, the lot.

That is not a coincidence about good looks. A wide, forward face means a wide airway. A wide airway means more air, more easily, under load. And sport at the top level is decided by margins so small that a slightly narrower airway is the difference between a winner and a nearly winner.

Patrick McKeown has written about this at length. His argument is that childhood mouth breathing quietly closes doors for athletes that nobody ever knew were there, and that some of the people who never quite made it were beaten by a habit they had at four years old.

It is worth sitting with, because it says something uncomfortable about how we think of childhood breathing. A blocked nose, a thumb, a bit of snoring. Small things. Things children grow out of.

They do not grow out of them. They grow into them, and they carry the shape of it for the rest of their lives.

Catlin drew this. He put illustrations in his book of the faces he thought were shaped by nasal breathing and the ones he thought were not. Modern orthodontics broadly agrees with him, which is not something I expected to be writing.

It is a sense organ, and a warning system

18. It detects smell, obviously.

19. It supplies most of what you think is taste, which is why food is dull when you have a cold.

20. It warns you about smoke, gas, and food that has turned.

21. There is also decent work suggesting the nose plays a part in who we find attractive, though that one is livelier in the popular press than it is in the literature.

It regulates and it protects

22. It runs the nasal cycle, quietly alternating which nostril does most of the work, switching every few hours, all your life, without your ever noticing.

23. It helps regulate temperature.

24. It sneezes, which is a defence rather than an inconvenience. If you are an explosive sneezer, as I am, there is something towards the end of this book you will want to read.

25. It sits as the first line of immune contact with everything you breathe, with lymphoid tissue positioned to meet it.

26. It neutralises what it catches, using antibodies and antimicrobial compounds in the mucus itself, so trapping is only half the job.

27. It drains your tear ducts, which is why crying makes your nose run and why nobody has ever managed to cry tidily.

28. It triggers reflexes that slow the heart when cold air hits it, which is a small piece of very old survival equipment.

29. It gives your voice its resonance, which you discover the moment you are blocked up and sound like a different person.

It changes how your brain works

30. Airflow through the nose creates rhythmic activity in the olfactory bulb, and that rhythm spreads into areas of the brain handling memory and emotion.

31. It vibrates when you hum. Wait and you will see the importance of this.

Breathe through your nose and those rhythms follow your breathing. Breathe through your mouth and they do not.

Which suggests something faintly extraordinary. That the route your air takes into your body changes the electrical behaviour of your brain.

Catlin would have loved that. He would also, I suspect, have claimed it cured deafness.

The point of all this

Add it up and you have an organ doing around thirty jobs, most of which nobody ever mentions, all of which you get for free, and every one of which is skipped the moment you open your mouth to breathe.

Your mouth is for eating, drinking and talking. It is superb at all three.

As a breathing apparatus, it is an emergency backup. It exists so you can run away from something while gasping, and so you can keep breathing when your nose is blocked.

It was never meant to be the main entrance.

And most of us, particularly when we are stressed, tired, congested or asleep, have quietly made it the main entrance and then wondered why we wake up feeling like we have been dragged through a hedge.

Which brings us back to a small book from 1861

A painter with no instruments, no training and no laboratory watched people for thirty years and worked out that the single most important health habit is to close your mouth.

He was right.

It took us until the end of the twentieth century to find the gas that explains a good part of why.

That is what this book is about. Old observation, finally measurable.

And you can start tonight, at no cost, by doing exactly what the title of his book tells you to do.

Taping Your Mouth Shut

I nearly left this part out. Then I thought about how much it has changed my life, and the lives of a lot of people I know, and back in it went. It follows straight on from everything we have just said about your nose.

Stay with me. I have been doing this for ten years, and it has changed my life more than almost anything else in this book.



Why bother

This whole chapter has been about what your nose does and what your mouth cannot.

Now think about the eight hours a night you spend with nobody supervising.

Awake, you can choose to breathe through your nose. Asleep, you cannot choose anything. Your jaw drops, your mouth falls open, and every one of those thirty jobs stops for the night.

Eight hours, give or take. Every night. For decades.

That is the biggest single block of mouth breathing in your life, and you have never had any say over it. Remember what breathing through your nose does to the rhythms in your brain? That switches off too.

Taping your mouth is simply a way of casting your vote before you lose consciousness.

There are a few rules, and they matter, so please do not skip them. The good news is you do not need to buy anything fancy made for the job. A few dollars of the right tape does it.

And of course there are those who think it's OK to disturb their partners and do nothing about it.

Let me slip something interesting in here. It may have been in George Catlin's book. If you have a job where you do a lot of talking, guess what? When you are talking, you cannot breathe.

I mean you cannot breathe while talking, you breathe between the sounds. Maybe that is why you feel tired after a long day talking. Interesting, eh?

Train Your Nose

Then I read Patrick McKeown's book, The Oxygen Advantage (2015). Since I started taping, I have had no sinus infections for about 10 years.

But there is a mechanism, which is what makes it worth telling you.

Nitric oxide is antimicrobial and a whole-body catalyst. It accumulates in those chambers in your face.

Nasal breathing keeps fresh gas moving through them, ventilating the place and keeping the environment hostile to whatever is trying to set up in there. Stop breathing through your nose for eight hours a night and those chambers go quiet and stagnant.

Studies of humming in people with chronic sinus trouble have shown improved sinus ventilation and fewer infections. Same principle, different method.

So, that is my ten years. Make up your own mind after a short time of taping.

What happened to me

I used to get sinus infections. Not occasionally. Pretty much every year, reliably, along with the antibiotics and the fortnight of feeling like my head was full of wet sand.

Since I started taping, ten years ago, I have had none. Not one. Thinking about it my nose is probably never blocked or it might be the gizmo at the end of this book or both.

Before you tape anything

Here is where I get serious, because this is the one thing in this book that can actually hurt you if you do it wrong.

There is a review, published in 2025, that looked at every decent study on mouth taping. Ten studies, a couple of hundred people. Four of those studies warned about a real risk.

If you cannot breathe through your nose, and you tape your mouth shut, you have a problem. Don't try this until things change.

That is not a theoretical concern. Blocked nasal airways from hay fever, a deviated septum, enlarged tonsils or heavy congestion are common, and plenty of people have one without knowing.

The answer is fixing the nose first. Saline rinses, dealing with the allergies, seeing an expert about the septum etc. The cheap saltwater nasal sprays are really fantastic.

Nasal breathing is the goal. Tape is only a way of keeping it going while you are unconscious.

So, before you go anywhere near a roll of tape, three rules.

Rule one, prove your nose works

Sit still, awake, in daylight, with your mouth closed. Breathe only through your nose for five minutes.

Comfortable? Good. Move on.

Rule two, get checked if you snore heavily

If you snore loudly, wake unrefreshed no matter how long you sleep, fall asleep in the afternoon, or your partner has ever seen you stop breathing in the night, then get medically assessed before you tape anything.

Those are signs of obstructive sleep apnoea, and taping is not a treatment for it. Worse, feeling slightly better might stop you seeking a diagnosis you actually need.

And for anyone who thinks their snoring is not a big deal to their partner, it is. It is not good for you either. Taping often stops it

completely, which makes this one of the cheapest marriage guidance interventions available.

Rule three, do it awake first

Do not go from never having thought about this to a sealed mouth on a Tuesday night.

Tape up while you are awake. Sit in front of the television for an hour or so with it on. Do it exactly the way I describe below, not some improvised version.

For some people it feels strange straight away. A few get a gagging reaction. It is a genuine little psychological adventure, and the people most confident that it will be a piece of cake usually find it easy peasy.

Keep doing it, awake, until you are completely comfortable and you know you can.

Then, and only then, at night.

If at any point it feels wrong, rip it off as quickly as you can until next time. Your body is not being dramatic. It is voting.

How to tape your mouth

This is the specific method, and it is the one I have been using for more than ten years. It costs a few dollars and, in my opinion, it is worth millions.

Buy a roll of 3M Nexcare gentle paper tape, 25mm wide, beige or white. Nothing else. Not packing tape, not duct tape, and not whatever is in the shed. If you are thinking of using any of these other sticky ones, do not. The skin on and around your lips is quite delicate, and guess what happens if the tape does not let go easily. Yes, very sore lips, and you are wondering how I know this?

The 3M Nexcare is gentle but you might even find it too sticky until you get used to it. Destick it a bit by pressing it on the back of your hand or arm once or twice then put it on your mouth.

There are purpose-made mouth tapes if you want to spend more.

Here is the method.

Fold over the last 10mm on itself. That is your escape tab, and it is the most important part of the whole business.

Put your lips together and lay the tape straight across, running roughly 25mm past each corner of your mouth, tab included.

Hold the roll and tear.

Now fold over 10mm on the new end, ready for tomorrow night. Do it while you are thinking about it, not at eleven o'clock when you are half asleep.

If you are at all anxious, cut a small slit about 10mm long in the middle of the tape before you put it on. You can breathe through it. Some people start this way and stop bothering when they become used to the process.

If you need it off in a hurry in the middle of the night, grab the tab and pull. It comes away easily and it does not hurt. That is what your escape tab is for.

And do not tape if you have been drinking, if you are unwell, or if your nose is blocked. Those are exactly the nights it is most likely to be a bad idea.

For those about to explain why it will not work for them

Beards and moustaches are often an objection.

Get the razor out and trim it back until the tape sticks.

Everything else in this book is free. This one asks you for a few dollars and possibly some facial hair. Given what you get back, it is the best deal.

What to expect

The first night or two, most people take it off in their sleep and find it stuck to the pillow. That is normal and it is not failure. Your subconscious is checking the arrangement.

After a week, most people stop noticing it all night and don't ever want to stop as the improvements are so obvious.

What people report, and what I found, is waking without a dry mouth, which is the simplest sign that it worked. Then fewer trips to the bathroom overnight. Then, gradually, a difference in how the mornings feel.

Snoring often reduces or stops, though I would rather your partner told you that than me.

Some studies say the evidence is not clear. What I would say in its defence is that most of those studies looked at people with sleep-disordered breathing, some of them with nasal obstruction, which is exactly the group I have just told you should not be doing it. That is not the same as showing it does nothing for an average Joe Bloggs.

And there is one thing I can offer that no study in that review had.

You can measure it.

Tape for a week and watch your morning numbers, more on this soon.

Mouth Taping, benefits

Restores nasal breathing during sleep

Prevents the largest single block of mouth breathing in most people's lives

Keeps air filtered, warmed and humidified overnight

Encourages diaphragmatic rather than upper chest breathing while asleep

Keeps carbon dioxide where the body wants it overnight

Nitric oxide and sinus health

Keeps sinus nitric oxide delivered to the lungs on every inhalation

Reduces nasal congestion over time

Immediate and observable effects

Eliminates waking with a dry mouth

Reduces or stops snoring

Reduces overnight bathroom trips

Improves how mornings feel

Sleep quality

Reduces night waking

Improves subjective restedness

Supports a partner's sleep as well as your own

Oral and dental

Maintains saliva flow, which protects teeth overnight

Reduces morning bad breath

Practical advantages

Costs a few dollars a month

Takes ten seconds a night

Needs no charging, no app and no subscription

Can be tested awake before committing to a night

Reversible instantly by pulling the escape tab

The effect can be verified on morning HRV readings within a week

Resonance Breathing, benefits

Direct physiological effects

Increases heart rate variability

Brings breathing rhythm and heart rhythm into phase

Produces heart rate oscillations far larger than at normal breathing rates

Cardiovascular

Lowers resting heart rate

Reduces systolic blood pressure
Reduces diastolic blood pressure
Sustains blood pressure reduction with repeated practice
Reduces cardiac workload
Improves outcomes in cardiac rehabilitation

Respiratory and carbon dioxide tolerance
Normalises carbon dioxide tolerance
Reduces over-breathing and its symptoms
Strengthens diaphragmatic function
Improves asthma symptom scores

Autonomic regulation
Shifts autonomic balance toward parasympathetic dominance
Builds autonomic flexibility that persists beyond the session
Speeds recovery from stressors

Stress, mood and emotion
Lowers subjective anxiety
Reduces depressive symptom scores
Reduces reactivity to acute stressors
Improves emotional regulation
Reduces rumination
Reduces panic symptom frequency
Provides an immediately available intervention during acute stress

Sleep
Reduces sleep onset latency
Improves sleep quality scores
Gives a usable option during night waking

Cognitive and performance
Improves sustained attention
Improves performance under competitive pressure
Improves decision quality under time pressure
Applied in military, aviation and elite sport preparation

Clinical applications with published trial support
Hypertension
Asthma
Depression and anxiety disorders
Post-traumatic stress disorder
Fibromyalgia and chronic pain

Irritable bowel syndrome

Practical advantages
Costs nothing to practise
Produces a measurable result in a single session
Can be practised lying down, seated or standing
Remains compatible with medication and any other intervention
Develops no tolerance over years of use
Can be done unnoticed in any setting

Chapter 10
The Superhighway Called the Vagus Nerve

Did you know your heart speeds up a touch every time you breathe in, and slows back down every time you breathe out?

It happens on every single breath, your whole life, and you have never once had to ask it to. There is a proper name for it, respiratory sinus arrhythmia, and it is also where heart rate variability actually comes from, the number you met in Chapter 7 measured in milliseconds. That scatter between your heartbeats is not noise. It is this. In on the in-breath, out on the out-breath, every single cycle.

The in-breath is your body loading up for action. The out-breath is the opposite instruction, travelling down the same nerve this whole chapter is about.

Every time you exhale, you are pressing a tiny brake pedal. Not a metaphor. An actual measurable dip in heart rate, on an actual nerve, in milliseconds, every single time you breathe out.

At the end of Chapter 8, I promised you something that costs nothing, takes sixty seconds, and makes you sound like a fridge.

Here it is.
Hummmmmm.

That is the whole thing. Close your mouth, pick any note you like, and hum for a minute.

When you get to the end chapters, Methodology, this will be part of your Process. The jury is still out on how to produce the best hum. Have a play when you are lying down, place your hands on your chest and feel the hum. Relax your jaw, move your tongue around up, down, relaxed jaw, etc until you get max vibration in your chest.

I appreciate this is not the sort of dramatic reveal that sells seminars. But stay with me, because what happens inside you while you do it is properly remarkable, and it took me years and a very large number of measurements to believe it myself.

First, you need to meet the nerve.

The wanderer

Your body has twelve pairs of cranial nerves. Eleven of them do sensible, local jobs. They handle your eyes, your face, your tongue, your hearing. They stay in the neighbourhood.

The tenth one leaves home and goes travelling.

It is called the vagus nerve, and the name comes from the Latin for wandering. Same root as vagabond, and vagrant, and vague. Somebody in the sixteenth century watched this thing meander off down through the body and thought, well, that one clearly has no fixed address.

And wander it does. Out of the brainstem, down through the neck, through the voice box, into the chest. It touches the heart. It branches through the lungs. It carries on down into the stomach, the liver, the spleen, the intestines, and keeps going.

One nerve. Almost every organ that matters. It is less a nerve than a national rail network, and unlike our national rail network it runs all night without complaint.

Not one brake, but two

Back in Chapter 5 I told you about freeze. The third option nobody mentions, the one that turns up when a threat is too big to fight and too fast to outrun. I did not tell you where that comes from. I was saving it for the nerve itself.

It comes from here.

In 1994 a researcher called Stephen Porges, then at the University of Maryland, worked out that the brake on your nervous system is not a single lever. It is two, and they do almost opposite jobs. He called the idea polyvagal theory, which sounds like something you would need a laboratory to understand. You do not. Here is the whole thing in plain English.

One branch of the vagus nerve is the newer one in evolutionary terms, and it runs your face and throat every bit as much as it

runs your gut. Porges calls it the ventral branch. I am going to call it the friendly branch, because that is what it does. It switches on when you feel safe, connected, listened to. Your face softens. Your voice drops and warms up. This is the branch doing most of the work when slow breathing or humming brings your system down gently.

The other branch is much older, shared with reptiles and fish, and it is the one behind freeze. Porges calls it the dorsal branch. When the friendly branch cannot cope, and the throttle cannot fix things either, this is the one that steps in. Muscles lock. Thinking goes foggy. The body plays dead, because for a few hundred million years of evolution, playing dead has occasionally worked.

Why does this matter to you, beyond being decent pub trivia for people who like nerves? Because it means vagal tone is not one dial with calm at one end and stressed at the other. It has a back exit. Push a nervous system too hard for too long with no safety in sight, and it does not necessarily calm down the moment you finally sit still. It can drop straight past the friendly branch and into shutdown instead, which feels less like relaxation and more like going numb.

That is worth knowing if you have ever tried to relax and ended up feeling strangely flat and disconnected rather than calm. That is not you doing it wrong. That is the older branch answering a question nobody asked it.

Everything this book teaches, the slow breathing, the humming, the nasal work, is aimed squarely at the friendly branch. That is the one you want running the show during a resonance breathing session, and it is the one that answers best to a voice, a hum, or a long, unhurried exhale.

I should flag this honestly. Polyvagal theory has its critics, and not every detail Porges proposed has aged perfectly in the thirty years since. But the broad shape of it, that your calming system has more than one setting, is now widely used across the field, and it fits neatly with everything else in this book.

Which way is the traffic going?

Now here is the bit that surprises almost everybody, including most people who talk confidently about the vagus nerve on the internet.

You would assume it is a set of instructions travelling downwards. Brain in charge, organs obeying, messages going one way.

It is mostly the other way round.

Something like eighty per cent of the traffic on the vagus nerve is heading upwards. From the body, to the brain. Your organs are not sitting there waiting to be told what to do. They are reporting in, constantly, and the brain is listening far more than it is talking.

Which rearranges a few things.

That feeling in your gut before a difficult conversation is not a poetic expression. It is data, travelling up a nerve, arriving at a brain, which then produces a mood and hands it to you as though it were your own idea.

Your body is not a vehicle your mind drives about. It is more like a committee, and your mind is not the chairman. It is the person taking the minutes and then telling everybody afterwards that it was all their idea.

This is why you cannot think your way calm. The brake is not in the head. It is spread out through the body, and the messages that matter are travelling upwards.

Which is very good news, because upward messages are ones you can send deliberately.

What good vagal tone actually means

You will hear the phrase vagal tone. It sounds like something you would pay a man in a linen shirt to improve.

It simply means how well that nerve is doing its job. Strong tone means the brake is responsive. Your heart rate drops properly on the out-breath. Your system settles quickly after a fright. You recover.

Weak tone means the messages are not getting through cleanly, and the throttle stays open longer than it should.

And soon you will find out how to measure it, because we spent all of Chapter 7 on it. Heart rate variability is the closest thing we have to a readout of vagal tone. When your HRV goes up, that nerve is talking.

Which means everything in this chapter can soon be tested. Not believed. Tested.

Your voice is doing this right now

Here is something you can check on yourself before we go any further, and it costs nothing because you already own the equipment.

The vagus nerve does not simply pass near your voice box on its way south. It is wired into it. It controls the tension in your vocal cords and the muscles that open and close them. Which means your voice is not just something you use to order coffee or argue with the television. It is a live readout of what that nerve is doing right now.

Think about how your voice changes when you are rattled. It goes up. It goes thinner. It gets that slightly strangled quality that makes you sound like you have swallowed a kazoo. That is not nerves in the everyday sense of the word, or not only that. That is the vagus nerve failing to keep the tension in your larynx where it should be, because the throttle crew member currently has the wheel.

And think about how it changes when you are properly relaxed, talking to an old friend with nowhere to be. Lower. Slower. Rounder. That is the friendly branch we just met, doing exactly what it was built to do.

You have been carrying a vagal tone monitor in your own throat the whole time, and nobody thought to point it out.

Try this. Next time you notice your voice has gone thin and tight, in traffic, on a difficult phone call, waiting for test results, do not try to fix the mood directly. Try softening the voice instead. Drop the pitch half a note. Slow down. Let the sentence finish lower than it started.

You are not performing calm. You are sending the same signal downward that a hum sends, through the same wiring, and the nerve does not much care whether the sound was a word or a note.

Medicine takes this seriously

Before anyone dismisses this as wellness nonsense, it is worth knowing what conventional medicine already does with this nerve.

Surgeons implant devices to stimulate it. A small generator goes under the skin near the collarbone, with a wire wrapped around the vagus nerve in the neck, sending regular electrical pulses. It is approved for epilepsy that has not responded to drugs, and for depression that has not responded to anything else.

That is real surgery, real money, and real results for some people.

So, the nerve is not folklore. It is a recognised route into the nervous system, and medicine is willing to open a neck to get at it.

Now hold that image, because the alternative I am about to describe involves closing your mouth and going mmmmm.

Why humming matters

Everybody has favourite ways of stimulating this nerve. Cold water. Gargling loudly. Singing. Chanting. Some people are very committed to the cold water, and will tell you about it whether or not you have asked, usually while you are trying to eat.

Humming is the one that interests me, for three reasons. It is free. It is fast. And unlike a cold shower in a New Zealand winter, you will have no excuse for not doing it next month.

Here is why it works, and it is worth going slowly because there are three separate things happening at once and most explanations only mention one.

There is also a reason humming beats ordinary talking for this particular job, and it is not just that people give you funny looks less often for talking to yourself in the car.

Speech is choppy by design. Consonants stop the airflow dead, several times a second. Pitch jumps around from word to word. Every sentence is really a string of short bursts of vibration separated by small silences, which is fine for getting your point across and hopeless for leaning on a nerve. The vagus nerve gets a nudge, then nothing, then another nudge.

A hum has no consonants and no gaps. One note, held, for as long as the breath lasts. Where speech taps the nerve, a hum leans on it, steadily, for the whole length of the note. That is the entire advantage in one sentence, and it is why the fridge noise beats the phone call.

Why vibration matters

When you hum, your vocal cords vibrate. That vibration does not stay politely in your throat. It travels. Through the soft tissue of your neck, up into the bones of your face and skull and sinuses, and down into your chest.

Put your fingers on your throat and hum. Then on your breastbone. Then on the bridge of your nose. It is all moving. Feel it, become aware where the humming is vibrating.

The vagus nerve runs right through that territory. It passes through the neck alongside the major blood vessels, and it supplies the muscles of the voice box itself. Which means when you hum, you are producing mechanical vibration in the immediate neighbourhood of the nerve, using equipment the nerve is directly wired into.

The nerve notices.

There is a second route the vibration takes, and it explains why your own hum always sounds louder and deeper to you than it does to anybody standing next to you.

Sound from a hum does not only travel through the soft tissue of your neck. It also travels through bone, considerably faster than it travels through air, straight through the skull. The vagus nerve runs close to the temporal bone for part of its journey, so in theory it gets the vibration delivered twice over, once locally at the throat and once remotely through the bone.

I want to flag that second part honestly, because this book promised you it would. It is anatomically sensible, and nobody I have read disputes that the pathway exists. Whether it adds a meaningfully bigger effect than the throat vibration on its own, nobody has actually measured. Call it plausible, not proven, and file it under interesting rather than essential. The throat vibration and the long exhale are doing the confirmed part of the work.

There is a second thing the vibration does, up in your head, which involves the sinuses and that molecule that gets an entire chapter to itself next. I am not going to spoil it here. I will only say that the numbers on that one surprised me.

Why timing matters

Now the part that I think is the cleverest thing about humming, and almost nobody mentions it.

Remember the golden rule from Chapter 8. The out-breath is where the brake lives. A long slow exhale is what settles the system, and every breathing method ever invented is essentially a scheme for making your exhale longer than your inhale.

Box breathing. Four seven eight. Resonance breathing. All of them are counting exercises designed to lengthen the way out.

And they all have the same problem. You have to remember to do them. You have to count. You have to concentrate on counting while also trying to relax, which is a bit like being told to fall asleep faster.

Now hum a long note and watch what happens without any effort at all.

The hum is the exhale. It carries on for eight, ten, twelve seconds, because that is simply how long a comfortable hum lasts. More on this soon.

Every breathing protocol in the literature is trying to reach that ratio through discipline. Humming gets there through physics.

And that long exhale does something else. The pressure sensors we met in the resonance breathing chapter, the ones in your neck and chest that watch your blood pressure, register the change during a sustained out-breath and signal the heart to slow.

You now have two entirely separate routes into the same nerve, running at the same time. Mechanical vibration from one direction. Pressure sensors from the other. Neither requires you to believe anything, and neither requires you to count.

That is why humming punches above its weight. It is not doing one thing well. It is doing several things at once, by accident, because of the way a human voice box happens to be built.

A few notes. Lower and steadier tend to work better than loud and impressive. You want the vibration, not the volume. You should feel it in your face and your chest, not just hear it. If you want a rough target, aim for a note low enough to feel as a buzz in your chest rather than a whistle in your sinuses. Nobody has nailed down an exact pitch that applies to everybody, and I am suspicious of anyone who tells you they have.

Then measure again.

The bee in the room

If plain humming becomes easy and you fancy taking it further, yogis have been doing a fancier version of this for a very long time. It is called Bhramari, Sanskrit for the black bee, because of the sound it makes.

Same hum, with your ears gently covered. Thumbs resting in your ears, not jammed in, just resting there. Hum as before.

With the outside world muted, the sound has nowhere to go but inward, and most people notice it immediately, a fuller, rounder buzz that seems to fill the whole head rather than just the throat and chest.

I have seen claims online that this multiplies the effect by a specific percentage. I have not found anything that actually measured that number, so I am not going to hand it to you as though it were established. What I will say is that blocking outside sound removes one source of distraction while you are trying to notice a subtle internal vibration, and that alone would explain why people report a stronger sensation, whether or not the vagus nerve itself is getting extra input.

Worth a try. Not worth building your entire practice around a number nobody can show me the source for.

A word about where to do this

Humming at your desk in an open plan office will generate questions. Humming in a lift will generate silence of a very particular quality. And humming in bed beside a sleeping partner is, I can report from experience, a conversation you will only need to have once.

The car is ideal. Nobody can hear you, you are usually sitting still, and if anyone glances over, they will assume you are enjoying the radio.

Next, we deal with the molecule that gets released while you are doing all this. It was named molecule of the year in 1992, it won somebody a Nobel Prize, and your nose has been quietly manufacturing it your entire life without ever mentioning it.

Have a play with the position of your tongue in your mouth, changes tone and vibration of your hummmmm. Choose what is relaxed and effective.

YouTubes on Steroids

There are other YouTube videos to watch scattered through this book, but here are three tools that will make your YouTube watching feel like it is on steroids. These will save you time and learning, and probably return the cost of this book in time ten thousand times over. They will also make YouTubing a lot more fun.

Enhancer for YouTube

Enhancer for YouTube is a free Chrome extension; this is like your dashboard. It bolts a proper set of controls onto YouTube that Google never gave you:
playback speeds all the way up to sixteen times normal
a volume booster that goes well past YouTube's own ceiling,
a cinema mode that dims everything else on the page
a screenshot tool for grabbing the slide or the quote before it vanishes.
And a whole lot of other stuff.
Getting it takes about ninety seconds.
Open Chrome, click the three dots in the top right corner
go to Extensions
Visit Chrome Web Store
Search for Enhancer for YouTube, click Add to Chrome
and it is done.

It works in Edge as well as Chrome, since both run on the same engine underneath.

Once it is installed, open any YouTube video and you will see a small gear icon sitting under the player alongside the usual controls. Click it and have a proper poke around. You will not use every setting on offer, nobody does, but we are looking at speed

Turn on your YouTube subtitles and speed up the little controller with your mouse wheel and away you go. You will be amazed at what your brain can do at high-speed reading subtitles and watching the video and of course listening!

Glasp, Your YouTube Time Traveller

Glasp is a free browser extension that turns YouTube videos into text, it transcribes the whole video. Yes, hours of video into text, then you can use that text for all sorts of personal uses.

If you are like my wife and struggle with video and audio then you get the transcript into a word doc or google doc then get your favourite AI and say without summarizing, make it easy to read or turn it into a book format. Then you can turn it into a PDF or even print it or ask Ai to coach you using this and the internet. It is very cool.

or
Summarise it into 10 or 20 bullet points with Ai, a two-hour video you can read in 5 minutes.

It transcribes everything spoken in a video to text, generates a bullet-point summary of the key ideas, anywhere from ten to twenty bullets depending on how you set it up, and lets you copy any of that straight into your notes or your second brain document.

Think of it as a very attentive friend who watches the video for you and reports back on whether it deserves your full attention. It supports several AI models for the summarising, including ChatGPT, Claude, Mistral AI and Gemini, so you can pick whichever one you already use.

To install it, open Chrome, click the three dots in the top right corner, go to Extensions
Visit Chrome Web Store.
Search for Glasp
or if that does not turn it up straight away
search for YouTube Summary by Glasp instead
since that is its full name on the store
Click Add to Chrome and you are done

The whole process takes about ninety seconds, roughly one per cent of the time you will save on your very first long video. If it does not appear where you expect it, go to a fresh browser page,

click the three dots again, go to Extensions, then Extension Manager, find it in the list, click Details, then Extension Options.

That is where you choose which AI does the summarising and how many bullet points you want, and where you should check the

YouTube Summary Widget setting is switched to visible, since that is what makes the summary panel appear when you open a video.

Once it is installed, open any YouTube video and look for the Glasp icon sitting next to a YouTube Summary button. Click that before you commit to anything over ten minutes long. Within moments you get a full transcript, plus a short bullet summary you can read in three or four minutes to decide whether the video earns your time.

You can also paste the transcript into Claude or ChatGPT and ask follow-up questions, or ask it to strip the timestamps and reformat the whole thing into a clean, readable document, which is a handy trick if you would rather read than watch.

Ad Blockers, the Gift That Keeps Giving
The last of your three steroid shots is the one that removes the single most annoying thing about YouTube: the adverts. Not the odd one you can skip after five seconds. All of them.

Pre-roll, mid-roll, the ones that interrupt an expert mid-sentence just as they are about to say the useful bit.
On your computer, the one to get is called uBlock Origin Lite and there are others you can investigate.

Open Chrome, click the three dots in the top right corner,
go to Extensions,
then Visit Chrome Web Store.
Search for uBlock Origin Lite or ad block,
click Add to Chrome,
and it starts working immediately, no settings to fiddle with.

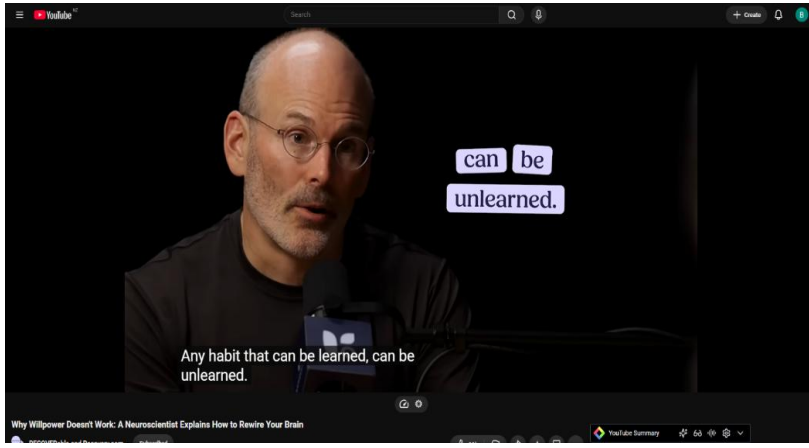
It is free, open source, and does not sell your browsing data to anyone, which is more than can be said for some of the other ad blockers out there. Pick one ad blocker and stick with it. You do not need four.

Your phone is a different story, and the honest answer is a slightly annoying one. The YouTube app itself, and most mobile browsers, simply do not allow extensions, so there is no button to press that fixes it the way Chrome does on your laptop.

The workaround is to use a mobile browser that does support them. Firefox for Android is the reliable one: install Firefox from the Play Store, then inside Firefox install uBlock Origin the same way you would on a desktop, through its own Add-ons menu.

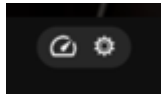
Open YouTube inside Firefox instead of the YouTube app, and the ads disappear there too. Brave is a simpler one-tap alternative, since it blocks ads by default with nothing to install afterwards.

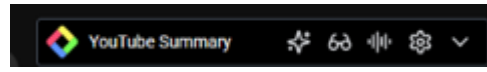
Do this once, on both your computer and your phone, and you will get years of your life back that would otherwise have been spent



watching a mattress advert you did not ask for.

Enhancer for YouTube Glasp





Watch this YouTube to really get what I have been talking about.

YouTube:
What Happens to YOUR BRAIN When You Hum for 60 Seconds

And a must listen without all the fancy stuff above
YouTube:
Why Deep Breathing Actually Changes Your Brain

Vagus Nerve Stimulation, benefits
Autonomic and cardiovascular
Slows heart rate
Lowers blood pressure
Increases heart rate variability
Improves recovery speed after a stressor
Inflammation and immune function
Activates the cholinergic anti-inflammatory pathway
Reduces systemic inflammatory load
Under investigation for rheumatoid arthritis with encouraging trial data

Digestive
Increases gastric motility
Supports gut-brain axis signalling
Reduces symptoms in functional gastrointestinal disorders
Mood and mental health
Approved treatment for treatment-resistant depression
Reduces anxiety
Improves emotional regulation
Increases feelings of safety and social connection

Neurological
Approved treatment for drug-resistant epilepsy, reducing seizure frequency
Under investigation for stroke rehabilitation, with promising motor recovery data
Investigated for tinnitus when paired with tone therapy

Pain
Reduces chronic pain intensity
Reduces headache frequency

Sleep and recovery
Improves sleep quality
Speeds recovery from physical exertion

Ways to reach the nerve
Surgical implantation with an electrode on the cervical vagus, approved for epilepsy and depression
Transcutaneous auricular stimulation at the ear, non-invasive and widely researched
Humming, which vibrates the tissue surrounding the nerve in the throat, face and chest
Slow exhalation, particularly with the out-breath longer than the in-breath
Resonance breathing at around six breaths per minute
Singing and chanting
Cold water exposure to the face

Practical advantages of the non-invasive routes
Free or very low cost
Immediately available at any time of day
The effect can be verified by measuring heart rate variability
Compatible with any other treatment, including medication
Medicine's willingness to implant a device to reach this nerve indicates the value of reaching it at all

Chapter 11
Nitric Oxide, the Miracle Molecule

In 1896, the inventor of dynamite was dying of a bad heart.

Alfred Nobel had spent his life building an explosives empire, nitroglycerin, blasting caps, the whole loud business. Now his own heart was failing, and his doctors prescribed him nitroglycerin for the chest pain.

He refused, finding it ironic that he was being told to swallow the very substance he had spent his life blowing things up with.

Nobody at the time knew why nitroglycerin helped angina. It simply did, and doctors had been prescribing it for decades without the faintest idea what it was doing inside a human chest.

A Wow

A century later, we found out. Nitroglycerin works because your body converts it into a gas called nitric oxide, which relaxes the blood vessels feeding the heart. In 1998, the Nobel Prize, funded by Alfred Nobel's own explosives fortune, was awarded for explaining exactly why his own medicine worked.

Here is the part that should really get your attention. You are not relying on a pharmacy for this molecule. You are manufacturing it right now, in your face, for free, and there is a very good chance you are routing most of it straight down the drain.

Your Nose Is a Drug Factory

Let me introduce you properly to the most important molecule you probably do not know about. Nitric oxide.

It is a gas. It is made of exactly two atoms, one nitrogen and one oxygen, which makes it about as simple as a molecule can get without giving up entirely. It survives for a few seconds and then it is gone. And no, it is not the dentist stuff. That is nitrous oxide, laughing gas, a different molecule entirely with one more nitrogen and a much better reputation at parties.

So, on paper, this magic stuff is not so promising. Simple. Unstable. Gone in seconds.

In 1992, the journal Science named it Molecule of the Year. In 1998, three researchers, Robert Furchgott, Louis Ignarro and Ferid Murad, shared the Nobel Prize in Physiology or Medicine for working out what it does inside the human body. And your nose has been quietly manufacturing the stuff every minute of your life without once bringing it up in conversation.

Nitric oxide is a messenger. It is made in one cell, drifts to a neighbouring cell, delivers an instruction. That is its entire career. The instruction it delivers most often is: relax. Specifically, it tells the smooth muscle in the walls of your blood vessels to loosen. The vessel widens. More blood gets through. Pressure comes down.

That sounds modest until you consider that every organ you own depends entirely on how much blood reaches it. Your brain, your heart, your kidneys, your muscles, your skin, your eyes. All of them are downstream of a plumbing decision, and nitric oxide is the thing making that decision, everywhere in your body, all the time.

Before the late 1980s, nobody believed a gas could carry a message. It was thought far too simple and far too short-lived to signal anything. The discovery that your body deliberately manufactures a gas in order to talk to itself was, at the time, quietly outrageous.

It does not stop at plumbing, either. Nitric oxide is part of how your immune system kills bacteria and fungi. It is involved in how nerve cells talk to each other, and it plays a role in memory formation.

Another Wow

There is a second story with the same shape as Alfred Nobel’s, and it belongs here too. A drug company was developing a treatment for angina, working on the same pathway. The trial results for chest pain were disappointing. What was not disappointing, and what the male volunteers were notably reluctant to hand back at the end of the study, was a side effect nobody had planned for. That drug became Viagra. It works by keeping the nitric oxide

signal switched on a little longer, in one particular set of blood vessels. A multi-billion-dollar industry, built on a molecule relaxing a pipe.

Viagra comes with an actual medical warning, printed in black and white: if it lasts more than four hours, seek emergency treatment. Read that twice. This is a drug whose official instruction manual includes the words go to hospital if it works too well. Nitric oxide, ladies and gentlemen, the gas so effective you might need supervision to switch it back off.

We are not promising you anything, but the effect might work all the same. It just will not last for hours, like Viagra.

Here is a fact that catches most people off guard. Nitric oxide does not check anyone's gender before it gets to work. The same vasodilation that gives Viagra its reputation with men happens in women too, opening up blood flow to exactly the same kind of tissue.

Drug companies noticed this decades ago and ran trials giving women sildenafil, the active ingredient in Viagra, hoping for a matching windfall. The blood flow increased right on cue. The desired result, rather more stubbornly, did not follow nearly as reliably, and Viagra has never been approved for women as a result. Female arousal, it turns out, was never just a plumbing problem. The gas gets the pipes working. The rest of the wiring is considerably more complicated, and no drug company has cracked it yet.

Now the part that matters to you personally. The lining of your sinuses, those hollow chambers in the bones of your face, produces nitric oxide continuously. Not occasionally. Continuously, every minute, whether you are awake, asleep or watching television.

Nobody teaches you this. You go through school learning that your nose is for smelling and, if you are unlucky, for getting punched. Nobody mentions that it is also a small chemical works running a permanent production line.

Which raises an obvious question. If the sinuses are constantly making this stuff, where does it go? Into your nasal airway, and then down into your lungs, on the air you breathe in. But only if you breathe through your nose.

Breathe in through your mouth and the air goes straight to your lungs having missed the factory entirely. Breathe in through your nose and the same air arrives carrying a molecule that helps open the blood vessels in the lungs, which improves how efficiently oxygen gets picked up.

Your nose is not an inferior mouth. It is a different piece of equipment doing a job your mouth cannot do. And most of us, particularly when stressed, tired, congested or asleep, breathe through our mouths anyway. We have taken a beautifully engineered system and routed around it.

The Sinuses Are Sitting on a Reserve

There is a catch in the design, and it is the catch that makes the rest of this chapter interesting.

Each sinus connects to the nasal airway through a small opening. And gas escapes through a small opening slowly. The sinuses are producing nitric oxide steadily, but only a trickle of it is getting out into the air you actually breathe. The rest sits there in the chamber, accumulating, waiting for something to happen.

Something did happen, in a laboratory in Sweden. Researchers at the Karolinska Institute, Eddie Weitzberg and Jon Lundberg, measured the nitric oxide in exhaled nasal air during quiet breathing. Then they had people hum, and measured again. The level went up roughly fifteen-fold. Not fifteen per cent. Fifteen times. That is roughly 1,500 per cent of the normal level.

The mechanism is not mystical. It is acoustics. Humming creates rapid oscillations in air pressure. Those oscillations act as a pump, flushing the accumulated gas out through those small openings and drawing fresh air in behind it. The chamber that was sitting there quietly filling up gets emptied into your airway, where it can be inhaled. You are not making more nitric oxide by humming.

Why Almost Nobody Gets the Benefit

And yet almost nobody gets any of this. Here is where it goes wrong.

They breathe through their mouths. All the sinus production in the world is wasted if the air is not travelling past it. This is the biggest and most boring failure, and it costs the most.

They hum a few times, or keep it up for a few weeks, decide nothing happened, and stop. Which is the meditation problem all over again from Chapter 4. The change is imperceptible from the inside, so without measurement it feels like nothing, and anything that feels like nothing gets abandoned.

They go shopping instead. There is a whole industry selling nitric oxide boosters, beetroot powders, supplements, capsules with lightning bolts on the packaging. Some of it has reasonable science behind it. All of it costs money and arrives in the post. Meanwhile there is a factory in your face, running for free, that most people have never once deliberately used.

A bit of breathing on Monday. A cold shower on Wednesday because somebody at work will not shut up about it. Some humming when they remember. Each one done alone, each one producing a small effect, none of them measured, and none of them lined up with each other.

What Switches Your Nitric Oxide Off

You have a factory in your face and a second production line involving bacteria on your tongue. Both free. Both running since birth. Now let me tell you all the ways modern life has quietly sabotaged them, because it is an impressive list and most of it is stuff you have been actively encouraged to do. Here are your turn-off triggers.

- **Ageing.** The nitric oxide enzyme system gets less efficient over time. You cannot turn off ageing, but you can still influence the nitric oxide you produce, which is why everything else on this list is worth knowing.
- **Breathing through your mouth.** The single biggest own goal. Bypasses the sinus factory completely, whether from habit, snoring or a blocked nose, eight hours a night if you sleep with your jaw open. A dry mouth on waking is the giveaway.
- **Antiseptic mouthwash.** Kills, in about thirty seconds flat, the tongue bacteria that turn the nitrate in your food into nitric oxide, and measurably nudges blood pressure up within days. Stop using it and the bacteria repopulate within days.
- **Long-term antacids.** Proton pump inhibitors for reflux suppress the stomach acid this process needs. The heart-risk evidence is contested, so worth a chat with your doctor rather than stopping on your own.
- **Skipping vegetables.** No nitrate, no raw material for the tongue bacteria to work with. Rocket, spinach, celery and beetroot are the best sources.
- **A sedentary life.** Exercise drives nitric oxide production directly, and mouthwash can wipe out some of the blood pressure benefit you just earned from it.
- **Staying indoors.** Sunlight on skin releases a separate stored reserve of nitric oxide, so twenty minutes outdoors does more than top up vitamin D.
- **Smoking, high blood sugar, insulin resistance and chronic inflammation.** All damage the delicate blood vessel lining where nitric oxide is actually made.

- **Fluoride, maybe.** Sometimes blamed for the same tongue-bacteria damage as mouthwash, but the evidence is thin and usually overstated.

You now know what this molecule is, why your nose is making it, and how humming gets more of it out of the reserve sitting behind your face. What you do not yet know is how to line all of this up with everything else in this book, breathing, humming, the vagus nerve, into one routine rather than these separate habits. That is next.

Chapter 12
Measuring Most of It

You have now felt several things.

Your shoulders dropping on a long slow out-breath. The buzz in your face when you hum. The odd difference between breathing through your nose and breathing through your mouth. Possibly a night or two with your mouth taped shut and a morning without a dry mouth.

All of which is lovely, and all of which you could reasonably put down to imagination, suggestion, or the simple fact that you sat still for five minutes, which almost anybody would find pleasant.

This is the chapter where we stop imagining.

Time to spend some money, or not

Here is the fork in the road I promised you at the beginning.

Everything so far has been free. The breathing is free. Your nose was included at birth. Humming has never been billed to anybody. The tape costs less than a cup of coffee and lasts months.

You could stop here, do this every day, and get a real result. I said at the start that the free version sits somewhere around meditation on vitamins, and I meant it. It is a perfectly respectable place to stand, and if money is tight, stand there with my blessing.

What money buys you is not a better result.

It is the ability to see the result, and measure.

And I want to be honest about how much difference that makes, because it is considerably more than it sounds.

Remember the problem this whole book keeps circling back to. These changes are imperceptible. Too gradual and too subtle to feel from the inside. That is not a failure of the practice, it is a limitation of your senses, and it is exactly why most people abandon this sort of thing by the second Thursday.

A number solves that. You stop believing and start knowing.

Nobody has ever needed willpower to check a score they were curious about.

The choice is real rather than a sales technique. Free version, no equipment, genuine benefit, but you take my word for a good deal of it. Or measure it, and take nobody's word for anything ever again.

What you would be buying

Forget the marketing. Here is the entire specification.

It takes a very sensitive reading on demand, the moment you ask for it.
It gives you the result immediately, not later, not having to look it up on your phone. I can't emphasise how important the on-the-spot reading is.

Taking the reading does not disturb you
It is comfortable enough to forget you are wearing it
You can get a huge amount of your own data out of it
Notice what is not on that list. Accuracy is not on it, for reasons we covered back in Chapter 7. Nor is anything about sleep scores, readiness scores, body batteries or little cartoon faces telling you how you slept. Those are little more than entertainment for what we are about to do.

The third point is the one that catches people out.

If taking the reading requires you to sit up, press hard, hold your arm out at an angle or perform a small ritual for the machine, then the act of measuring has just destroyed the state you were trying to measure.

The three kinds

Chest straps. The most accurate by a distance, because they read the electrical signal from the heart directly rather than shining a light through your skin. They are also a strap around your chest, which is fine for a workout and considerably less appealing at six in the morning in bed. Excellent for finding your rate. Poor for a daily habit.

Wrist devices. The usual compromise, and for most people the right one. Comfortable enough to wear all night, and the better ones will give you a spot reading in a couple of minutes without you moving a muscle. Check before you buy that yours does spot readings rather than only overnight averages, because a great many do not, however confidently the box implies otherwise.

Rings. Comfortable, discreet, and generally strong on overnight data. Weaker on the thing we actually want, which is a reading right now, while you are lying still with your eyes shut. Some have improved. Check.

What it will cost

Maybe less than you think, and a bit more than you were hoping.

You are buying consistency, and a mid-range device is consistently wrong in exactly the same helpful way that an expensive one is.

Do not buy the top of the range assuming more money means better data for our purposes. It usually means more features you will never open.

And do not buy three in the hope that one of them works. I have done that so you do not have to. The drawer is still there, and everything in it once seemed like a perfectly reasonable idea at the time.

How to measure it all

One thing to clear up before we start, because people ask.

You do not need a separate device for the breathing, another for the humming and a third for the vagus nerve. There is no vagus meter. Heart rate variability is the readout for all of it. Every single thing in this book, the resonance breathing, the humming, the nasal work, the tape, shows up in the same number.

One measurement. Everything you have learned so far.

Now the practical part, which I found frustrating. With luck I can save you some of that.

Why Garmin, and why this one

I have been through a great many devices, and I have told you what happened in the technology store.

Here is what I ended up with, and more importantly, why.

Garmin has a feature called Health Snapshot. Two minutes, sitting or lying still, and it gives you a heart rate variability figure there and then, on your wrist, without syncing to anything or waiting for a server in another country to think about it.

That is the whole reason. Not brand loyalty. Not accuracy. It is the only thing I found that does exactly the four things on our specification. It was really a fluke that I found this.

On demand, when you ask. Immediately. Without disturbing you. And with your data downloadable afterwards.

Plenty of other devices report heart rate variability. Most of them give you an overnight average in the morning, which tells you how last night went and nothing at all about what you just did. Some make you wait for the result. Others require enough fiddling that the reading itself becomes the thing you are measuring.

None of that is any use to us.

If you already own something else, before you spend a penny, go and find out whether it will give you a spot reading on demand and show you the result immediately. If it will, use it. I would rather you kept your money.

Which model





Garmin Forerunner 165
Mist grey/Whitestone, Black/Slate grey with or without music.

The Forerunner 165 is the least expensive Garmin with Health Snapshot, which is why I use it. The more expensive models have it too, along with a great many things you will never touch.

That is the position as I write this. Models come and go, so by the time you read it the numbers may have changed. The thing to look for is not the model name. It is Health Snapshot, and the ability to get your data out. I will try to keep this book up to date.

About the links

If you are buying one, we would appreciate it if you went through the links on our website.www.project30.org. We earn a small commission, which costs you nothing and helps keep this going. Say no and buy it anywhere you like, with no hard feelings whatsoever but we would love to know what you buy so we can keep track of what is going on through our connections. Please email us info@project30.org.

Codes and links change, so rather than print one here that will be dead in a year, you will find the current ones at project30.org.

Setting It Up

I am reasonably comfortable with technology, and I still found this fiddly. Half an hour with ChatGPT sorted it out, and I would recommend that route to anybody.

The essential part is to set Health Snapshot as a favourite.









Do that and you can press the top right button three times to start it. No menus, no hunting about, no waking yourself up properly just to find the thing.

Then sit or lie comfortably, and hold still for two minutes.

Garmin says make sure your watch is fairly tight for best results.

Your first reading



After two minutes and a bit, you will get a beep or a buzz on your wrist. If you are doing Resonance breathing with headphones in you will probably miss the beep. Do not worry you will get a real vibration and Autosave ring and a white ring, see above.

Hit the top right button once and….wait for it the most important results that these watches give you! HRV

Just look at your reading and don't try to make it mean anything. After many months it will mean something but at the moment just look.

Several numbers come up. Heart rate, oxygen saturation, breathing rate, a stress score, and heart rate variability.

Ignore all of them except the last one. HRV is the only one we want.

The trap nobody warns you about

If you are lying down with your eyes shut, or in the middle of resonance breathing, you will feel the buzz but you will not be looking at the screen.

Don't leave it, or the watch saves the reading by itself. Here is the annoying part. Once it has auto-saved, it will not show you the number.

When you feel the buzz, press the top right button. That brings up your HRV. Time to have a quick look at your HRV. Press it again to save. Just a quick look a second or two.

Two presses. That is the difference between having a reading and having a reading you can actually see. You see a high score wonderful, you see a low score ignore it, remember the inaccuracy bit.

If you saved it without seeing the results you can manually see the results on the watch after you have finished, or look online.

Save the lot

Keep every reading, including the rubbish ones.

Later in the book I will show you how to get all of it into a spreadsheet and hand the whole lot to artificial intelligence, which will find patterns in your own numbers that you would never spot by looking at yesterday's.

That only works if the numbers are there. Four months from now you cannot go back and collect the ones you could not be bothered saving. I have been collecting all my data for over 5 years, yes pretty much every morning.

Have a play with it

For the next week or two, treat this as a toy rather than a test.

Take a reading whenever it occurs to you. Before coffee. After an argument. Halfway through a dull afternoon, driving the car or sitting on the train or ferry. After twenty minutes of resonance breathing. Late at night with the lights off.

See what moves it and what does not.

Higher generally means your system is in the calm, recovering state rather than the wound-up, ready-for-anything one. Within a single session, seeing how high a score you can get is a perfectly good game, and it will teach you more about your own nervous system in a fortnight than I can in a chapter.

And now the important bit

Playing with it is fun. Judging yourself by it is not.

Some days you will check your HRV and the number will be rubbish. Lower than yesterday. Lower than last week. That is OK. It is not a fail. It is information.

A single reading is unreliable in both directions. A low one does not mean you are broken. A high one does not mean you have arrived, but it's good. Do not measure your worth against them.

We can nudge the nervous system. Humming helps. Breathing through your nose helps. Nosebuds and the nitric oxide they help you make may help too. But your nervous system is still the boss. Had a row? Low score. Slept badly? Low score. Unwell, in pain, run down or carrying something heavy? Low score. Coming down with a cold you do not know about yet? Your watch often spots it before you do.

Those low scores are not a verdict on you. They are a starting point, and the starting point is the least interesting number in this book. What matters is the direction, over months. Not today.

I recently had a minor hand surgery again with general anaesthetic. If my Garmin is anything to go by, it was not that minor. I was in Sympathetic state, fight or flight, run like hell from the sabretooth lion.

How did I know this? Very low HRV for several weeks. Even doing all this good stuff. When your HRV drops for whatever reason, keep doing the good stuff even more.

When a score drops, it can trigger stress. Then you are in a spiral. Stress drops the score, the dropped score creates more stress, round and round it goes.

So let the low scores go, whatever caused them, and enjoy the good ones.

Things will change. They usually do, and usually just after the point where you nearly gave up.

If you are going through hell, keep going (Winston Churchill). Whatever you do, do not stop and unpack.

Give Stress a Time Limit

A while ago I took a company worth several billion dollars to the Disputes Tribunal, which is New Zealand's small claims court. Me and a folder of paperwork, against a company with more money than some small countries.

On the day, I glanced at my Garmin. The stress score was off the scale. My heart was thumping, my mouth was dry, and my brain was rehearsing every argument I was about to make, and a few I was sure to lose.

Here is what I have learned since. That is fine.

Stress is not the enemy

Your stress response is built for short bursts. A zebra chased by a lion goes flat out, escapes, and a few minutes later is back grazing as if nothing happened. The neuroscientist Robert Sapolsky wrote a whole book on this, called Why Zebras Don't Get Ulcers. The answer is that zebras switch it off. We do not. We carry the lion home, lie in bed with it, and take it to work in the morning.

How you see the spike matters too. In 2013 Alia Crum and her colleagues at Yale showed staff at a large financial company short videos. One group was told stress is harmful. The other was told stress can sharpen you up. About a week later, the second group reported fewer health complaints and said they were working better. Same stress. Different story about it.

The problem is never the spike. It is the spike that never comes down.

The five-minute rule

So now, when I see that number go through the roof, I do four things.

Look. Check the watch. It is a number, not a verdict. It is simply telling you the throttle is wide open.

Allow. Say to yourself, fine, I am going to be in this for five minutes. Or ten, or whatever the moment needs. Giving it a time limit takes away half its power, because it is no longer in charge of the clock. You are.

Move. When the time is up, get up and do something physical. Something that needs your hands and a bit of your attention. Walk round the block. Pull some weeds. Wash the car. Sweep the deck. The aim is to give your brain something else to chew on, and give your body somewhere to put all that fuel it just dumped into your blood.

Check. Look at the watch again. Nine times out of ten, the number has already started coming down. You did that.

Why moving works

Researchers have a name for chewing over a problem long after it has happened. They call it perseverative cognition, which is a posh way of saying worrying on repeat. Studies led by Jos Brosschot found it keeps your heart rate and stress hormones up long after the actual event is over. The lion has gone home. Your body is still running.

Physical activity breaks the loop in two ways. It burns off the fuel, and it pulls your attention somewhere else. Sitting still and trying not to think about it rarely works. Try not thinking about a pink elephant and see how you go.

And the Tribunal? I will spare you the details. But these days my stress gets its five minutes, and then it gets handed a broom.

One word of care. If the number stays high for days, not minutes, that is not a spike. That is a pattern, and it is worth talking to your doctor or someone you trust about it.

Measuring, benefits
Replacing guesswork with data
Converts a vague subjective impression into a number
Establishes a personal baseline against which everything else is compared
Distinguishes what actually works from what merely feels like it works
Makes the invisible autonomic nervous system visible
Corrects for the mind being the least reliable instrument you own

Testing interventions
Any practice can be tested rather than believed
Different techniques can be compared directly on the same person
Ineffective practices can be abandoned on evidence rather than boredom
Parameters such as breathing rate can be tuned to the individual

Detecting what is acting on you
Reveals the effect of alcohol, often the day after
Reveals the cost of poor or short sleep
Detects accumulated work stress before it is consciously noticed
Detects illness in the days before symptoms appear
Shows the physiological cost of unresolved conflict or worry

Knowing whether it is working while you are doing it
Immediate physiological feedback during the session rather than afterwards
Grounds to continue when the response is satisfactory
Grounds to modify when the response is insufficient

Behaviour and motivation
Visible progress sustains a practice that would otherwise be abandoned
Turns an act of faith into an experiment
Breaks the wellness cycle of trying something for a fortnight and moving on
Curiosity replaces willpower as the thing that keeps you going

Training and recovery management
Indicates readiness to train on a given day
Guides when to push and when to rest

Clinical and prognostic value
Reduced HRV is an independent predictor of cardiovascular mortality
Used in cardiac rehabilitation to track autonomic recovery
Correlates with depression and anxiety severity

Practical advantages
A useful reading takes only two minutes
Trend over weeks matters more than any single reading
Consistency matters more than accuracy, so a mid-range device is sufficient
Years of readings become an asset that cannot be recreated later

Nitric Oxide, benefits
Vascular
Relaxes vascular smooth muscle and dilates blood vessels
Lowers blood pressure
Improves blood flow to all tissues

Reduces arterial stiffness
Improves cerebral blood flow
Protects against endothelial dysfunction, an early marker of cardiovascular disease

Respiratory and airway
Dilates the airways
Increases arterial oxygen uptake, with nasal breathing improving oxygenation over mouth breathing
Reduces nasal congestion
Sterilises inspired air before it reaches the lungs

Antimicrobial and immune
Kills bacteria, viruses and fungi in the nasal passages and sinuses
Provides a first-line defence barrier in the upper airway
Reduces chronic rhinosinusitis symptoms

Exercise and performance
Reduces the oxygen cost of exercise
Improves recovery between efforts
Underpins the performance effect of dietary nitrate such as beetroot juice

Neurological and cognitive
Involved in memory formation and long-term potentiation
Associated with better cognitive performance in older adults

Metabolic
Improves insulin sensitivity
Declines with age, which parallels the age-related rise in metabolic and vascular disease

Other physiological roles
Mediates penile erection, the mechanism targeted by sildenafil
Involved in wound healing

Where it comes from, and how to get more
Produced continuously in the paranasal sinuses at concentrations far above those elsewhere in the body
Nasal breathing carries sinus nitric oxide into the lungs on every inhalation
Humming increases nasal nitric oxide output by roughly fifteen-fold compared with quiet exhalation
Mouth breathing bypasses the sinus supply entirely

Rocket, spinach, celery and beetroot are the strongest dietary sources
Exercise stimulates endothelial production through shear stress
Sunlight on skin releases a separate stored reserve
Antiseptic mouthwash destroys the tongue bacteria that drive the dietary pathway

Chapter 13
Connecting the Dots

By now I have handed you a pile of parts.

Slow breathing at around six a minute. Nasal breathing. Humming. A nerve that wanders through half your body. A gas your face manufactures for free. And a number on a screen that tells you whether any of it is working.

Six components, spread across six chapters, each one interesting on its own and none of them assembled into anything.

It is a bit like opening a flat-pack box and finding the panels, the dowels, the little bag of screws and no instructions. Everything you need is in the room. What you actually have is a pile.

This chapter is about what happens when the pieces go together, and why that is a different proposition entirely from doing each of them separately on alternate Tuesdays.

The wellness pick and mix

Here is how most people approach this material, and I include my younger self at the front of the queue.

You read something about cold showers. You do cold showers for eleven days. Then you read something about breathwork, so you do that for a fortnight, usually while still telling people about the cold showers. Then somebody mentions gratitude journalling and off you go again.

Each thing gets a short run. Each thing produces a small, unmeasured, largely imaginary result. Then it gets quietly replaced by the next thing, and the whole cycle takes about eighteen months before you conclude that none of it works and buy a bicycle instead.

I have a drawer full of devices. I am not throwing stones.

The problem is not that any of these things are useless. Most of them do something. The problem is that they are being treated as competitors, when they are actually colleagues.

What happens when you combine known physiology

Nothing in this book is a secret by itself. Let me be plain about that.

Slow breathing has been studied for decades. The vagus nerve has its own conferences. Humming and nasal nitric oxide were measured in Sweden and published where anyone can read it. None of it is hidden, none of it is mine, and none of it required me to invent anything.

Every component is public. What is not public is what happens when you put them together properly.

Because look at what these separate things have in common.

Slow breathing at the resonance rate works on the pressure sensors, and through them the vagus nerve. Nasal breathing delivers nitric oxide, which relaxes blood vessels, which changes what those same pressure sensors are reading. Humming vibrates the tissue around the vagus nerve, enforces a long exhale which again works the pressure sensors, and simultaneously flushes the sinuses of the nitric oxide that nasal breathing is about to deliver.

Read that again and notice something.

They are not four different techniques doing four different things. They are four different doors into the same room.

Every one of them arrives at the same nerve, from a different direction, using a different mechanism. And that changes the arithmetic completely.

Why the whole is greater than the sum of its parts

There is a reason soldiers are ordered to break step when crossing a bridge.

In 1831, a column of troops marched across the Broughton Suspension Bridge near Manchester. Their rhythm happened to match the natural frequency of the structure. Each footfall was small. Each footfall arrived at exactly the right moment to add to the swing already there.

The bridge came down.

Nobody hit it with a hammer. Nobody applied enormous force. A group of men walking in time did something no individual man walking could have done, because the timing lined up.

That is resonance, and we met it in the breathing chapter with a much friendlier example, a child on a swing.

Now apply it to your body.

Do one of these things on its own and you get a push. Small, real, and easy to miss.

Do several of them in the same session, aimed at the same system, arriving in time with each other, and you are no longer adding pushes together. You are amplifying a swing that is already moving.

That is why the effect is not four times bigger. It is bigger than that, and considerably more consistent, and it happens faster.

This is also why measurement matters so much. Without a number, all of this is a nice theory and a warm feeling. With a number, you can see the swing getting bigger, in real time, and there is no arguing with it.

The ingredients and the recipe

Here is the distinction that took me longest to understand, and it is the one that matters most.

Everybody has the ingredients.

Flour, butter, sugar and eggs are not a secret. They are in every kitchen in the country and they have been for centuries. Nobody has ever patented flour.

But sitting in a bowl together, unmixed, in the wrong proportions, added in the wrong order, at the wrong temperature, they are not a cake. They are a mess with potential.

The recipe is the thing. What goes in, in what order, for how long, and at what point you stop stirring.

That is exactly the position we are in. The physiology is public. The components are free. What is not obvious, and what took me a very great many mornings with a device in my hand, is the order and the timing.

Do these things in one order and you get a modest, pleasant result. Do them in another, with the right spacing, and something else happens.

I am not going to explain the sequence here, and I know that is annoying. There is a chapter for it at the end of this book, and there are sound reasons for holding it until then, which we have already covered.

What I will say is that when I first put the pieces together in the right order and looked at the screen, I sat there for a while, did it again to make sure the device was not having a moment, and then rang somebody.

The orchestra begins to play

Think about an orchestra tuning up.

Every instrument in the room is capable of extraordinary things. Individually, before the conductor arrives, they produce a noise somewhere between a cat fight and a fire drill. Same instruments. Same players. Same skill.

The only difference between that noise and a symphony is coordination.

Nobody has to buy better violins. Nobody has to practise harder. Somebody simply has to bring them into the same time and the same key.

Your body is the orchestra, and it has been tuning up for years.

Your heart, your lungs, your blood vessels, your nervous system, your sinuses. All of them working. All of them capable. Most of them, in most people, playing to their own private tempo while the throttle jams open and nobody hands the brake a part.

What we are doing is not adding an instrument. It is coordination.

One rhythm. Several systems. All in time.

And once that starts happening, you can watch it happen, which is the part that still gets me after all these years.

What this is not

Before we go on, some honesty, because this is the chapter where a lesser book would start promising the earth.

This is not a cure for anything. It does not replace your medication, your doctor, your therapist or your surgeon. I have had a great deal of all four and I am here because of them.

It will not make you a monk. It will not deliver enlightenment, a flat stomach or a better relationship with your brother.

What it does do is give you deliberate access to a system that has been running your life without your input. That is a smaller claim than the wellness industry would make and, I think, a considerably more interesting one.

Try this

You cannot do the full sequence yet. You can do a rough version of it, and rough is enough to see the principle.

Take a reading first.

Now, for five minutes, put three of the pieces together at once.

Breathe in through your nose, gently, for about four seconds. Then hum the breath out, low and steady, until it runs out comfortably. Then in through the nose again.

That is it. Nose in, hum out. Keep it unhurried and let the hum do the timing for you.

You are now doing three things simultaneously. Nasal breathing, so the nitric oxide is in play. Humming, so the sinuses are being flushed and the tissue around the nerve is vibrating. And a long exhale, so the pressure sensors are getting a steady, unhurried signal.

Take another reading afterwards.

Compare it to the reading you got from humming alone in Chapter 10, and from slow breathing alone in Chapter 8.

Most people find the combination moves the number further than either did on its own. That is the whole argument of this chapter, sitting on a screen in your hand, in five minutes, for nothing.

Chapter 14
Watching the Impossible Happen

The first time I saw the number move, I did not believe it.

I sat in a chair, took a reading, did the thing, took another reading, and watched a figure that was supposed to be a fixed property of my body do something a fixed property of my body should not do.

I took the reading again. Then I took it a third time, because twice could be a coincidence and three times is science, apparently. Then I took the watch off, put it back on, and did the whole thing again in case my wrist had been holding it wrong.

The number kept moving up.

That was the beginning of about five years of measuring, and this chapter is what came out of it.

What objective actually means

Every wellness practice on earth asks you the same question afterwards. How do you feel?

And you answer it, honestly, with the most unreliable instrument ever built.

You feel good because it is sunny. You feel bad because somebody was short with you at the shops. You feel like it worked because you have just spent forty dollars on it, and nobody enjoys admitting they wasted forty dollars.

Your feelings are not a measurement. They are a weather report from an organ that also believes everything it thinks at three in the morning.

The number does not know what you paid. It does not know what you were hoping for. It has no interest in your commitment to the process or your beautifully purchased cushion. It simply reports

what your nervous system is doing, and if what you did had no effect, it says so, flatly, in milliseconds.

That is what makes it useful. Not because the number is precious, but because it is indifferent.

The measurements

Here is roughly what five years of this looked like, and I warn you it is less glamorous than it sounds.

A reading first thing every morning. Same time, same chair, same position, before coffee and before anything had a chance to happen to me.

A reading before doing something and another one straight after. Breathing. Humming. Nasal versus mouth. Different rates, different ratios, different orders. Small changes, one at a time, like a man slowly ruining his own dinner to find out which ingredient mattered.

Then the same again, but after a bad night. After a good night. After a drink. After a difficult phone call. After surgery, on more than one occasion, which I do not recommend as a research method but which does produce interesting data.

Alongside it, blood pressure, because that has been my other ongoing project, and because the two turn out to have opinions about each other.

Thousands of readings. Written down, mostly, in the way a man writes things down when he does not yet know what he is looking for.

My wife’s view of this period is that I became slightly difficult to live with. I would describe it as thorough.

The experiences

The first thing that surprised me was how badly my feelings tracked my physiology.

There were mornings I woke up feeling flat, grey, and generally unimpressed with the day, and the number was excellent. There were mornings I felt perfectly cheerful and the number was on the floor.

That mismatch is not a fault in the measurement. It is the whole point.

Because the number was frequently right and I was frequently wrong. On the flat-but-good-number days, I would get going and find the day was fine. On the cheerful-but-low-number days, I would push on regardless and be flattened by three in the afternoon, wondering what had happened.

My body knew before I did. It always had. The difference was that now it had a way of telling me that I would actually listen to.

The second thing was how fast it responded.

I had assumed, like everyone does, that this sort of thing takes weeks. That you commit to a practice, you do it faithfully, and somewhere around the eight-week mark a scientist confirms your amygdala is slightly different.

It does not take weeks. It takes minutes.

Sit down, do the right thing for five minutes, and the number is different when you stand up. Not always dramatically. Not every time. But often enough, and reliably enough, that you stop treating your nervous system as a fixed feature of your personality and start treating it as something with a dial on it.

The surprises

Some of what came out of those years was expected. Some of it was not.

Alcohol is brutally honest. You may believe two glasses of wine relaxed you. Your nervous system files a very different report, usually for the next day and a half. Nothing I have measured produces a clearer or more depressing signal.

The number sees illness coming. More than once the reading dropped away sharply before I had any symptoms at all. Then, a day or two later, the cold arrived. Your immune system starts work well before it bothers telling you about it, and apparently it borrows resources from somewhere while it does.

Doing nothing is not the same as resting. Sitting on the sofa watching something tense does not settle your system. It is rest in the sense that a car idling in traffic is parked.

Blood pressure and heart rate variability are in conversation. My blood pressure has been an ongoing negotiation for years, and the readings do not move independently. There were afternoons when the pressure was behaving nicely and the variability was high, and the pattern between the two told me more than either number alone.

And the baseline moves. This one took years to see, and it is the most important thing in this chapter.

Not the before-and-after within a session. That happens in minutes and it is lovely to watch, but it is a demonstration rather than a change.

What I am not claiming

Let me be careful here, because this is exactly the point in a book like this where the author starts writing cheques the evidence cannot cash.

This is one man's data. It is not a trial. There have now been trials done and scientific data recorded. When you participate you will be ahead of the rest of the world, because this programme was developed in New Zealand and I was the guinea pig years ago.

I also cannot separate every variable. Over five years I have changed how I sleep, what I eat, how much I drink and a great deal about how I live. Any of that could be doing some of the work.

And I have had a body doing extremely unusual things throughout, which makes me a poor representative of anybody.

So, what I have is not proof. It is a large, careful, consistent set of observations from one very well-measured individual, all pointing in the same direction and the guidance of a creative genius in this field.

What I would very much like is for tens of thousands of you to go and measure yourselves and I am confident, based on the scientific testing that has been done, that you will get some interesting results.

Try this, for seven days

Each morning for seven days, take a reading, play with resonance breathing and humming, then take a second reading. Look for two things. Whether the second number tends to be higher than the first, which tells you the practice does something. And whether the first number is drifting anywhere across the week, which tells you rather more.

Some days nothing will happen. Some days the numbers will do something odd and you will blame the device, which is a rite of passage and occasionally even correct.

Do not judge any single day. Seven days is barely a signal. But it is enough to show you that the dial exists, and that your hand is on it.

Now Go and Look at All of It

It is time to go and have a look at all those readings, online or on your phone.

This is where it stops being a health routine and turns into a hobby, which is a far better basis for doing something every day for five years.

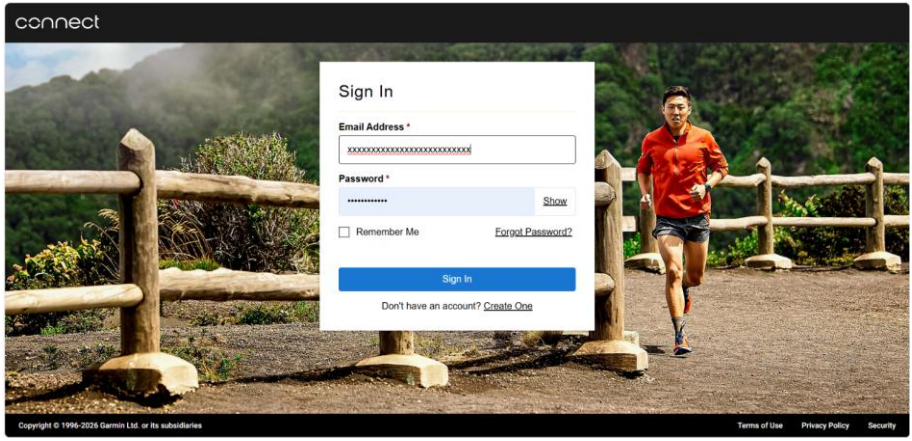
Your readings do not just sit on your wrist. They upload, usually for nothing, and you can pull the whole lot down into a spreadsheet whenever you feel like it.

That is when it gets interesting.

Because a single reading tells you almost nothing. A week tells you a little. Four hundred mornings tells you things you would never have guessed.

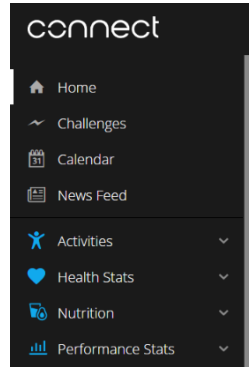
Getting Your Data

Open Garmin Connect, I prefer on my laptop or PC and sign up or in



Getting Your HRV Data Out of Garmin

The good news first



The good news is that it is very easy to download your data. Once you have signed in to Garmin Connect click on Home in the black menu on the left.

Now come back to the main page and scroll down to the



Click on the Last 7 Days 774 Snapshots

Then you get to here



Date	Time	Avg HR	Avg SpO_2	Avg Resp	Avg Stress	HRV (RMSSD)
21/03/2025	6:42 am	57 bpm	98%	12 brpm	30	50ms
21/03/2025	6:38 am	57 bpm	99%	15 brpm	30	50ms
21/03/2025	6:34 am	57 bpm	99%	14 brpm	30	50ms
21/03/2025	6:28 am	55 bpm	98%	15 brpm	30	50ms
21/03/2025	6:23 am	56 bpm	98%	14 brpm	30	50ms
21/03/2025	6:20 am	57 bpm	98%	15 brpm	30	50ms
21/03/2025	6:12 am	50 bpm	98%	14 brpm	30	50ms
21/03/2025	6:04 am	49 bpm	97%	15 brpm	30	50ms
21/03/2025	5:58 am	50 bpm	97%	14 brpm	30	50ms
21/03/2025	5:55 am	52 bpm	99%	14 brpm	30	50ms
20/03/2025	9:24 pm	59 bpm	97%	14 brpm	30	50ms
20/03/2025	9:22 pm	59 bpm	97%	15 brpm	30	50ms
20/03/2025	9:16 pm	64 bpm	96%	13 brpm	30	50ms
20/03/2025	6:47 am	60 bpm	95%	16 brpm	30	50ms
20/03/2025	6:32 am	53 bpm	97%	15 brpm	30	50ms
20/03/2025	6:25 am	57 bpm	97%	15 brpm	30	50ms
20/03/2025	6:18 am	58 bpm	96%	15 brpm	30	50ms
20/03/2025	6:05 am	60 bpm	95%	15 brpm	30	50ms
20/03/2025	6:02 am	58 bpm	96%	14 brpm	30	50ms
20/03/2025	5:50 am	56 bpm	94%	16 brpm	30	50ms
20/03/2025	9:31 pm	58 bpm	96%	15 brpm	30	50ms
20/03/2025	9:29 pm	58 bpm	97%	14 brpm	30	50ms
20/03/2025	9:20 pm	62 bpm	97%	15 brpm	30	50ms
20/03/2025	9:13 pm	63 bpm	97%	14 brpm	30	50ms

With a little manipulation here is an example of a spreadsheet of the data I used. Obviously my HRVs were not all 50ms. I just wanted to show you what my results were like. This sort of thing you can put into Ai. Not sure what the blue bits are?

Click on the data and start scrolling down and down and down and down, you just keep going it takes a while but I had to go back years. Be patient keep scrolling.

You can go back to where you started. The data keeps flicking over at the bottom

Once you have got to where you want to be, left click and scroll over data to the top. You have selected everything, right click and copy and you have just grabbed all your data

Go and paste in Excel or Google sheets and save. You have done it. Have a look at your figures, you can ask ChatGPT to analyse it. We will show you what we do soon.

Upload the spreadsheet to ChatGPT and tell it what to do.

Once you have your spreadsheet you can just select and add new data to your previous data.

Now I have a situation, whether to include this or not? Now everyone's level of HRV is very personal and we are talking about milliseconds.

If I give you some results you will probably compare and Carl Jung said do not compare with others. So here we go these are my results. Resting HRV measured. Using Project30 process results have shown to increase by 20%. 50%, 80% and over 100%. Do not expect this but they may well be possible after years of this stuff or sometimes weeks.

Getting Your HRV Data Out, benefits
What the export gives you
Turns hundreds of scattered readings into one file you can actually look at
Shows the trend across months, which no single reading can
Separates a genuine shift from ordinary daily bounce
Lets you see how long a low patch actually lasted, rather than how long it felt.

What you can do with it once it is out
Hand years of your own data to artificial intelligence for pattern analysis
Match dips and rises against what was happening in your life at the time
Test a specific question, such as what alcohol actually costs you
Work out your own best breathing rate from measured response rather than a rule of thumb

Practical and long term
Keeps your history if you change device, or the app changes, or the company disappears
Costs nothing and takes one session to set up
Builds an asset that cannot be recreated later, since you cannot go back and collect the days you did not save
Gives you something concrete to show a clinician instead of a description

Chapter 15
Where This Could Lead

This is the chapter where books like this one traditionally go mad.

You know the shape of it. Fourteen chapters of reasonable material, and then somewhere near the back the author gets excited, and suddenly the thing that helped with sleep is also reversing ageing, curing loneliness, fixing the economy and possibly improving your golf swing.

I have read a lot of those chapters. I have thrown a few of those books across a few rooms.

I am going to do this differently, and I am going to be strict about it, because I want you to still believe me on the last page.

Everything in this chapter goes into one of three boxes.

Known. There is proper evidence for it and I am on solid ground.

Plausible. The physiology points that way, some early work supports it, and I would put money on it without betting the house.

Wishful. I think it, I hope it, and I have nothing to hand you but my own enthusiasm.

I will tell you which box I am standing in each time. If I fail to, throw the book.

Performance

Known. Slow breathing improves attention and reduces the physical signs of pressure. This is not new and it is not controversial. Musicians, shooters, surgeons and pilots have been taught versions of it for decades, usually without anybody explaining why it works.

Plausible. If you can raise your variability on demand, in under five minutes, then you have a tool for the thirty minutes before something that matters. The job interview. The difficult conversation. The presentation to people who frighten you slightly.

Not to make you calm, incidentally. Calm is overrated and occasionally useless. What you want before a big moment is a system that can go up when required and come back down afterwards, rather than one that goes up on Tuesday and is still up on Friday.

Wishful. That schools might teach this. Five minutes before an exam, taught properly, measured, so that a sixteen-year-old learns at sixteen what I worked out at seventy. I would very much like to be around for that.

Flow the Ultimate Experience

I have not mentioned this before about getting into Flow where time disappears. It's not a big deal and it's not about trying to get into Flow, it's just about seeing if it happens.

There is not enough book to tell you about the Flow one but it is a very special thing that happens when You get into the Flow. And the Project30 Process will probably get you there, which may be a new experience for you.

A brief summary of the Flow

You have been there. The hour that vanished while you were fishing. The afternoon in the workshop where you looked up and it was dark. A Hungarian psychologist called Mihaly Csikszentmihalyi spent his career studying it, called it flow, and interviewed thousands of people who all described the same thing.

Time goes odd. Effort disappears. And the voice in your head stops, not because you silenced it, but because you were too absorbed to keep it running.

Which is exactly what everybody hopes meditation will do, and exactly what most people never get from it. Here is the catch. You cannot decide to enter Flow.

What you can do is create the conditions and then get out of the way, which, if you have been paying attention for the last fourteen chapters, is precisely what we have been doing all along.

The benefits of being in flow

People in flow report higher satisfaction and wellbeing, both during the experience and afterwards. Performance improves, in sport, in music, in work that demands skill, because the self-critical chatter that normally interrupts you has gone quiet.

Stress hormones drop. Creativity rises, because the part of your brain that edits and judges every idea before it is finished has, for a while, clocked off. And people who get into flow regularly report more life satisfaction overall, not just on the days it happens.

Flow for the Famous, and Geniuses

You do not need to be an Olympic athlete or a Nobel laureate to get into flow, but it turns out most of the people at the very top of their fields have been getting into it their entire careers, often without a name for what was happening to them. Here is where some of the most recognisable names in sport, music, art, writing and science have described exactly the state this chapter is about.

Sport

Michael Jordan, basketball, has talked about games where the basket seemed to grow and everything felt automatic, most famously the 1992 Finals game where he hit six three-pointers in a row and shrugged at the crowd, as if even he was not entirely sure how he was doing it.

Kobe Bryant, basketball, built his entire Mamba Mentality philosophy around total absorption in the moment, present enough that nothing else got a look in.

Serena Williams, tennis, has described matches where the game just flows and thinking stops helping.

Roger Federer, tennis, has spoken about points where time seems to slow down and the ball looks bigger than it actually is.

Muhammad Ali, boxing, described fights where he felt untouchable.

Music

Jazz improvisation generally is the classic flow domain. Mihaly Csikszentmihalyi, the psychologist who first properly studied flow, interviewed working musicians as part of his original research, because live improvisation is one of the purest examples of flow there is, no time to think, only to play.

Yo-Yo Ma, cellist, has spoken in interviews about performances where technique disappears and only the music is left.

Mozart, composer, according to popular legend could hear an entire symphony complete in his head before writing a single note down, needing only to transcribe what he had already composed in full. That is the version as it usually gets told, and it is worth knowing the story comes from a forged letter rather than anything Mozart actually wrote about himself. Even geniuses get a bit of embellishment.

Paul McCartney, songwriter, woke up one morning in the mid-sixties at a house on Wimpole Street in London with a complete melody already playing in his head. Not a fragment. The whole tune, start to finish. He got straight out of bed, found a piano, and played it out before it could disappear the way dreams usually do.

Then the doubt set in. It felt too complete, too polished, like something he must have heard before and simply forgotten he had stolen. For weeks afterwards he played the melody to anyone in the music business who would listen, John Lennon included, asking the same question each time. Does this remind you of anything? Nobody recognised it. Eventually he accepted that his own head had written it while the rest of him was asleep.

He did not have lyrics yet, so he sang it for weeks with placeholder words, "Scrambled eggs, oh my baby how I love your legs," which is either the least romantic working title in music history or the most honest one. The proper lyrics came later. The tune never changed from the morning he woke up with it. That song became Yesterday, one of the most covered songs ever written, over two thousand versions and counting, and it arrived complete while its writer was doing precisely nothing except lying still with his eyes shut.

Art

Michelangelo

In 1508 the Pope handed Michelangelo the ceiling of the Sistine Chapel. He saw himself as a sculptor and did not want the job. He spent four years on the scaffolding anyway, painting above his head. He did not lie on his back, whatever the pictures say. He stood, neck craned, paint dripping onto his face. He wrote a comic poem grumbling that his belly was up under his chin and his beard pointed at heaven. When it was done, his eyes had forgotten how to look down. For months he held letters above his head to read them. That is commitment. It is also a strong case for a stepladder.

Vincent van Gogh

In fifteen months in Arles, van Gogh produced around two hundred paintings. That is one every two days, while broke, often hungry and falling out with half the town. In a letter to his brother Theo, he described moments when nature looked so beautiful that he lost all awareness of himself, and the pictures came to him as if in a dream. That is flow, described by a man who never heard the word. He was not forcing the paintings out. He was getting out of their way.

Jackson Pollock

Pollock laid his canvases on the floor of a barn and walked around them, dripping paint from sticks and hardened brushes. It looked like chaos. To him it was the opposite. In 1947 he wrote, "When I am in my painting, I'm not aware of what I'm doing." Only afterwards did he step back to see what he had done. Plenty of people look at a Pollock and think a five-year-old could do that. The difference is the five-year-old stops for a snack.

Pablo Picasso

In 1937 German bombers flattened the Basque town of Guernica. Picasso started a painting nearly eight metres wide and finished it in around five weeks. His partner Dora Maar photographed it as it went. Figures appear, move and vanish almost daily as he chased something he could not name until he found it. Nearly twenty years later, a film crew caught the same thing in The Mystery of Picasso: a man in his seventies painting, scraping off and starting again, completely ignoring the camera.

Writing

Charles Dickens

In autumn 1843 Dickens was short of money and needed a hit. He wrote A Christmas Carol in about six weeks. He told an American friend he had wept, laughed and wept again while writing it, and walked the black streets of London at night, fifteen or twenty miles at a time, long after sensible people had gone to bed. The book came out a week before Christmas and sold out by Christmas Eve. Every Scrooge since started with a man too absorbed to go home.

Robert Louis Stevenson

In 1885 Stevenson woke from a nightmare with the bones of a story in his head. He shut himself away and wrote a full draft in about three days. His wife did not like it. According to his stepson, Stevenson threw it on the fire, then wrote the whole thing again in another three days. That book was The Strange Case of Dr Jekyll and Mr Hyde. Most of us would need three days just to get over the criticism.

Jack Kerouac

Kerouac hated changing the paper in his typewriter because it broke his rhythm. So in April 1951 he taped sheets into one roll about thirty-six metres long and typed On the Road in roughly three weeks, as one enormous paragraph, fuelled mostly by coffee. In 2001 the roll sold at auction for well over two million dollars. Not bad for a man who simply did not want to stop.

Stephen King

Stephen King sits down at quarter past eight in the morning and writes until quarter to twelve. He told Neil Gaiman in 2012 that for those hours everything is real, the characters, the places, the lot. Then at lunchtime it just clicks off. Whenever he needed something for a story, he said, it was already there waiting. In On Writing he describes stories as things you dig up, like fossils, rather than invent. That is flow in a sentence. You stop forcing and start uncovering.

Science and Invention

Albert Einstein, in a letter, quoted in Jacques Hadamard's 1945 book on mathematical invention, described his own creative process as combinatory play, a loose, playful, half-conscious state that came before logical thinking took over.

None of these people were doing anything mystical. They were doing the very ordinary human thing of getting so absorbed in something that matched their skill that the noise in their head switched off for a while. The only difference between them and you is that they got there through decades of practice in their field. You are about to get there through twenty minutes on your back before your alarm goes off.

A list of just a few of the flow experiences, the list is infinite.

Mixed across sport, creative work, everyday tasks and hobbies, so most readers spot themselves somewhere on the list:

1. Fishing, when the world narrows down to the line and the water.

2. The workshop or shed, looking up to find it has gone dark outside.

3. Cooking a proper meal from scratch, chopping and stirring on autopilot.

4. Playing an instrument, you know well, not thinking about the notes at all.

5. Gardening, weeding a bed and losing two hours without noticing.

6. Painting or drawing, absorbed in getting one detail right.

7. Rock climbing or bouldering, where one wrong thought means one wrong move.

8. Surfing, waiting for and then riding a wave.

9. A video game you are properly good at, everything else falling away.

10. Writing, when the sentences arrive faster than you can type them.

11. Running or cycling long distance, past the point where it feels like effort.

12. Knitting, sewing or any repetitive handwork with a rhythm to it.

13. Building or fixing something with your hands, DIY, carpentry, mending an engine.

14. Team sport, the moments when the game just clicks and you stop overthinking it.

15. Dancing, when you stop counting steps and just move.

16. A crossword, sudoku or jigsaw that has properly hooked you.

17. Coding, deep in a bug, not noticing your tea has gone cold.

18. Driving a long, familiar road and arriving with no memory of the middle bit.

19. Playing chess or any strategy game against a decent opponent.

20. Reading a book so completely that you miss your stop on the train.

Go and explore flow on YouTube. In a funny sort of way, flow is what started me on this whole journey.

Talking of flow, I found this out by accident one morning. I was deep in the Project30 Process when my 6.30 alarm went off. I didn't hear it. According to my wife, it rang for several minutes. I heard nothing. I wasn't trying to get into flow. I was just lying there breathing.

Stress

Known. This is the strongest ground in the whole book. Slow breathing shifts the balance towards the recovery side of the nervous system, and it does it quickly. Blood pressure comes down modestly. The physical signature of stress reduces.

What I would add, from my own long and undistinguished career in the field, is that the important word is recovery, not avoidance.

You are not going to have a stress-free life. Nobody gets one, and the people who appear to have one are usually hiding something or extremely boring. Life will keep producing mortgages, diagnoses, teenagers and messages from your boss at nine on a Sunday.

The question was never how to have no stress. The question is how fast you come back down afterwards.

That is the thing that wrecks people. Not the event. The failure to recover from the event before the next one arrives.

Plausible. That deliberately practising recovery makes recovery quicker, in the same way that deliberately practising anything makes it quicker. My own numbers say yes. My own numbers are one man in a chair.

Sleep

Known. Nasal breathing at night is better for you than mouth breathing, and a nervous system that is still braced at bedtime does not sleep well. Neither of those statements will get an argument from anybody.

Plausible, and this is the one I care most about, having spent a considerable portion of my life awake at times when I would rather not have been.

The usual advice for sleep is behavioural. Darken the room, lose the phone, no coffee after two, get up at the same time. All sensible. All of it aimed at the circumstances rather than the person.

None of it addresses the actual problem, which is that you are lying in a dark quiet room with a nervous system that has not yet been told the day is over.

If you can shift that system deliberately, at will, in five minutes, then you have something the sleep hygiene checklist cannot offer. Not a sedative. A signal.

Wishful. That this eventually reduces how many people need medication to sleep. I say that as a man who takes medication to sleep, has done for years, and would dearly love that to change.

Mental wellbeing

Now I need to be careful, and I am going to be, because this is where I live and am in the process of writing on this as well.

Known. Slow breathing reduces anxiety. There is decent evidence and I have no hesitation about it. Practices of this kind are used alongside treatment for depression and they help some people.

Alongside. Not instead of.

I have carried the black dog for over thirty years. I have had the medication, the professionals, the hospital admissions and the three months in a dark bedroom. Nothing in this book would have got me through that, and anybody who tells you breathing exercises cure depression is either selling something or has never met it.

What I do think, and I am now firmly in the plausible box, is this.

Depression is insidious. That is the word I keep coming back to. It arrives so gradually that neither you nor the people who love you notice until it has moved in and put its feet on the furniture.

But if it arrives imperceptibly, then something must be changing before you notice it. And if something is changing, something might be measurable.

I am not claiming a number predicts depression. Nobody has shown that and I am not going to pretend otherwise. What I am saying is that a man who had been measuring his own nervous system every morning for years might have seen the dog coming up the drive, rather than discovering it already asleep in the good chair.

That is worth somebody investigating properly. It would not have taken thirty years off my life, but it might have taken a few months off several of them.

Wishful. That people who have never once been asked to fill in a wellbeing questionnaire, despite years of appointments, might one day be handed something objective instead.

Longevity

Here is where I apply the brakes hardest.

Known. Low heart rate variability is associated with poorer health outcomes. That is a real and repeatedly observed finding.

Now the trap, and it is an enormous one that half the wellness industry has cheerfully fallen into.

Associated with is not caused by. Low variability may be the smoke rather than the fire. Raising your number does not necessarily mean you have put the fire out. It might mean you have opened a window.

Plausible. That the things which raise variability are also, independently, good for you. Slower breathing. Nasal breathing. Better recovery. Lower blood pressure. Those have their own evidence and their own reasons, quite apart from what any number does.

Wishful, and I am labelling this clearly. That deliberately training this system over decades adds healthy years. I believe it. I have no business asserting it. Ask me again in twenty years, if I am still here to be asked, which would itself be weak evidence and I would probably use it anyway.

Human potential

The last one, and the whole thing is wishful. I am not going to pretend otherwise.

Here is what interests me.

Everything in this book is about the same discovery arriving from different directions. That the automatic parts of you are not sealed off. There is a way in, it is available to everybody, and almost nobody uses it.

We spent the twentieth century assuming the body was mostly fixed and the mind was where the action was. Then we found out the immune system takes phone calls from the brain. Then we found out the nerve traffic mostly runs upwards. Then we found out a gas made in your face changes what your blood vessels do.

Each of those was impossible until it was ordinary.

My honest position is that we are early. Not at the end of understanding this, but somewhere near the beginning, holding a few pieces and squinting at them.

What could a person do with deliberate access to their own nervous system, trained daily from childhood, measured properly, for fifty years?

I have absolutely no idea. Nobody does, because nobody has done it.

That is not a claim. It is a question, and I think it is the most interesting one in this book.

Pain, the Next Experiment

Someone very close to me lives with fibromyalgia. Pain most days, in muscles that scans say are perfectly fine. Doctors who are kind but running out of ideas. And on top of the pain, the stress of wondering what tomorrow will feel like. If you read the list at the start of this book, you will know why I put pain at the top.

So here is a question I cannot stop asking. If pain runs through the nervous system, and this whole book is about changing the

nervous system, what happens to pain when you do the Project30 Process?

I do not know yet. That is the honest answer. But the question is not as daft as it sounds.

Pain lives in the brain

We tend to think of pain like a doorbell. Something presses the button in your knee, and the bell rings in your head. Simple.

It is not that simple. Back in 1965 two scientists, Ronald Melzack and Patrick Wall, showed that pain signals pass through a kind of gate in the spinal cord, and the brain has a hand on that gate. It can open it wider or push it nearly shut. That is why a footballer can finish a match on a broken ankle, and why a paper cut can ruin your whole afternoon when you are already having a bad day.

Modern pain science goes further. Your brain decides how much something hurts, using everything it knows. How safe you feel. How tired you are. How stressed you are. The pain is completely real. But the volume is set upstairs.

In 2017 the world's pain scientists gave a name to pain where the volume knob itself seems stuck on high. They call it nociplastic pain, and fibromyalgia is the classic example. Nothing is broken where it hurts. The alarm system has become too sensitive.

Where the brakes come in

Remember the two halves of your nervous system from Chapter 5. The throttle and the brake. When the throttle stays open, your whole body stays on guard, and a body on guard is quicker to sound the alarm.

Here is the part that made me sit up. In 2016 a team led by Lauren Tracy pulled together the research on heart rate variability in people with chronic pain. Across the studies, people living with long term pain tended to have lower HRV. In plain English, their brakes were weaker. That is the very number this book teaches you to measure, and the very number resonance breathing is designed to lift.

There is even a little early evidence. In 2007 Afton Hassett and her colleagues taught twelve women with fibromyalgia to breathe at their resonance rate while watching their heart, twice a day, for ten weeks. Three months later, on average, their pain was lower, their mood was better and they were coping better with daily life. Twelve people and no comparison group proves nothing on its own. But it points in the same direction.

What we are going to do

So Project30 is going to explore it, carefully, starting with one person, and a very stubborn one at that.

The plan is simple. A week or two of ordinary life first, scoring pain every day out of ten, so we know where we started. Then the full morning routine from this book. Resonance breathing, the Nosebuds, the humming, the fixed wake time. Pain scores every day, HRV every morning, and an honest look at the numbers after thirty days.

If the pain drops, wonderful. If it does not, we will say so. Either way you will hear about it at project30.org.

Please do not stop anything your doctor has you on to try this. The Project30 Process sits beside proper medical care, not instead of it. And if a pain is new, sudden or severe, that is not a job for breathing. That is a job for a doctor, today.

But if you live with pain that has outstayed its welcome, and your doctor is happy for you to try, you already have everything you need in this book. The worst thing that can happen is a calmer morning. I can live with that risk.

What would actually settle this

Everything above needs the same thing, and it is not more enthusiasm.

It needs numbers from more than one man in a chair in New Zealand.

Proper studies with control groups. Long-running data from ordinary people rather than volunteers who are already interested. Somebody with a laboratory and no financial stake in the answer.

Some of that is happening. Most of it is not, largely because nobody makes much money proving that a free thing works.

Which brings me to you. If a few thousand readers measure themselves properly and honestly, including the times it does nothing, that is a considerably better dataset than mine.

Next, the last of the story chapters, and then the one you have been waiting for.

Chapter 16
Your Real Adventure is about to Happen

Let us go back to the beginning.

A man of seventy plus, sitting in an expensive chair, asking a straightforward question about his sleeping tablets. A specialist who said that almost none of his patients keep meditating. A conversation that wandered somewhere neither of us expected. And a drive home that turned into a book.

That was not the end of anything. That was the moment I realised I had been collecting pieces for years without knowing they were pieces.

If you have read this far, you now have those pieces too. Which puts you in a slightly odd position, and I want to be honest with you about what it is.

You are not at the end of a book. You are at the beginning of a personal experiment, experience, with a sample size of one, and you are the one.

Where science goes next

The next bit has been laboratory tested.

Follow people for years, not weeks. The eight-week study is the standard unit of research in this field, largely because eight weeks fits a funding cycle. But the thing I care about most, the baseline moving, took me years to see. Nobody finds that in eight weeks. You would need to follow ordinary people for a decade, and almost nobody does.

Look at whether it predicts anything. Especially in mood. If the black dog arrives imperceptibly, does anything measurable shift before the person notices? I would give a great deal to know the answer. So would several million other people.

Work out who it does not work for. This matters more than the success stories. Every intervention has people it does nothing for,

and the honest research reports them. I would rather know the limits than read another paper confirming what we already hoped.

And somebody needs to fund it, which is the difficult bit. There is not much money in proving that breathing works. Nobody can patent a nose. The research that gets funded is the research somebody can sell afterwards, and free things are a poor business model.

Which is exactly why the next section matters.

Where readers go next

You are now, whether you intended it or not, a potential data point.

Not in a sinister way. Nobody is coming for your wrist. But if you do the seven-day experiment from Chapter 14, and then keep going, you will have something most people never have, which is an honest record of your own nervous system responding to things you did on purpose.

Multiply that by a few thousand readers and you have something considerably better than my drawer of notebooks.

So here is what I would ask.

Measure honestly, including the failures. The days it did nothing are more useful than the days it worked beautifully. Anybody can collect the good days. A wellness industry has been built on collecting only the good days.

Be suspicious of me. I have every reason to want this to be true. I have spent years on it, I have a name on a cover, and I am the least objective person in this conversation. Treat what I have told you as a hypothesis you are testing, not a truth you are receiving.

Do not tell everybody. Not yet. There is a particular kind of person who discovers something and immediately becomes insufferable about it at dinner parties, and I have been that person about at least four separate things. Get your own numbers first. They are much more persuasive than your enthusiasm, and considerably less irritating.

You will find the quizzes and questionnaires at project30.org, along with a way to get in touch.

Your own journey starts today

Now the part I have been building towards, and I am going to keep it short because long endings are the literary equivalent of a guest who will not leave.

I told you at the start about a night I was not supposed to survive. Forty-two years old, in a hospital bed, with my wife called in because I probably would not see morning.

I went down the tunnel. I was told to go back. I was told I had more work to do.

I did not know what that meant. I was forty-two, frightened, and full of morphine, and for a long time afterwards I assumed it meant something grand that I had not got round to yet.

I am nearly seventy-four now. I have had the bowel cancer, the superbug, the black dog for thirty years, the jelly in the abdomen, the surgeries I have lost count of, and a diagnosis at nearly seventy that finally explained why I could not read aloud in a Geography class in 1970.

And I have spent five years measuring my own nervous system in a chair.

I think this might be the work.

Not the measuring. The telling you about it. A dyslexic man who did not read his first book until he was thirty-two, sitting down every day to write books for people who are struggling with things he happens to have struggled with first.

If somebody had told the fifteen-year-old who walked out of that classroom that he would end up doing this, he would have laughed and gone to find a rugby ball.

Here is what I actually want for you, and it is smaller than the wellness industry would promise.

I do not expect this to fix your life. Mine is not fixed. I still take medication to sleep. The black dog still knows my address and occasionally lets itself in. I am still overweight, still arguing with my blood pressure, and still, on a bad morning, capable of talking to myself in a way I would never talk to anybody else.

What changed is that I stopped being a passenger.

That is the whole of it. Not perfect health. Not permanent calm. Just the knowledge that when the system goes up, I have a way of bringing it back down, and I can watch myself do it.

That is not nothing. When you have spent thirty years feeling that your own body was happening to you rather than with you, it is a very long way from nothing.

You have the same equipment I have. A nose that manufactures a Nobel Prize winning molecule. A nerve that wanders through half of you carrying messages upwards. A heart that speeds up and slows down on every breath you take. And a rhythm, at about six breaths a minute, that brings the whole lot into time.

None of it costs anything. All of it has been there your entire life.

Remember the monkey on the pole. You do not force it down. You tether it to something steady and you wait, and eventually it comes down on its own and sits at the base.

Your breath is the pole.

Now turn the page, because the next chapter is the one that tells you exactly what to do with all of this, in what order, and why.

That one took me five years and a drawer full of expensive disappointments.

You get it in about twenty minutes.

Chapter 17
The Last Piece

Now the part of the jigsaw I have been holding back.

Remember standing in a queue at a conference I had gate-crashed, and the man in front of me who turned out to be the person I needed to meet. Remember the name sitting in the back of my diary for two years, doing nothing.

Now that you are this far through, I am fairly confident that you finding this book is another one of those.

Life seems to be made of coincidences. Some people think they are rather more than that. I have stopped arguing about it and started paying attention to them.

So here is where a long run of my coincidences turns into one of your important coincidences.

A small plastic thing You Stick Up …



Years after that conference, I was in the Biotech Lab at Auckland University of Technology, where David White worked for more than twenty-five years.

He showed me a device. A little 3D-printed thing, small enough to sit in his palm, that he had been working on for a very long time.

Then he told me what he believed it would do.

I said, that sounds amazing. Can I have one?

He said yes. I could be the first guinea pig. The first person to use it outside the laboratory.

There were only a handful in existence at the time, so I was extremely lucky, and I did not know how lucky at that time.

What I did not know was that saying yes to that would set off the years of measuring, pretty much every day for about four years at six in the morning, that produced everything in this book.

What it actually does

That little plastic thing became Goodair Nosebuds.



Let me explain what they do, because I can do it better than any product description can, for one simple reason. You have already read Chapter 9.

Remember what is sitting in behind your face. Four pairs of chambers, the big ones in your cheekbones about the size of a ping pong ball each, manufacturing nitric oxide.

And remember the catch. Each chamber connects to your airway through an opening about as wide as a drinking straw, in fact around 3-5mm, so smaller than a drinking straw!. A factory running flat out, with a tiny loading bay for the magic gas.

Remember also what happens when you hum. The vibration acts as a pump, flushing that accumulated magic gas, nitric oxide out of

the chambers and into the air you are about to breathe. Fifteen times more nitric oxide, measured in a laboratory in Sweden.

Nosebuds do the humming for you.

They sit in your nostrils. As you breathe in, tiny rotors and magnets spin and generate a hum. Not a noise you make, a hum generated in exactly the right place, on every single breath, without you having to think about it or do anything at all.

Now here is the most important paragraph. When you hum, you can only hum on the exhale, the breath out. So what happens to the nitric oxide? It is flushed out on the out-breath, fifteen times the normal amount, and most of it leaves with that breath. You are only left with what remains in the sinuses. So now, do you know what I am going to say about the Nosebuds?

The Nosebuds do the humming in both directions, so you are getting nitric oxide on the in-breath.

The engineering is the part that gets me. Miniature fans and magnets, with tolerances small enough that I do not entirely understand how they build them. They look faintly space-age.

In their own words

Rather than paraphrase, here is how the people who made them describe the work. This is reproduced from the Goodair Nosebuds website with permission.

From the Goodair Nosebuds website

We believe in the power of nasal breathing as a drug-free solution to better health. https://goodairnosebuds.com/

Our mission is simple; empower everyone to breathe better by unlocking the body's natural ability to enhance both physical and mental health. Goodair Nosebuds (the company) is made up of a small group of passionate people.

The science behind Nosebuds

While studying the effects of nasal breathing, David White recognised the potential for a revolutionary device that could help 30% of the population affected by nasal congestion.

01 The idea

As an Associate Professor at the Auckland University of Technology, David spent over 25 years of applied research focusing on augmented nasal breathing as a new way to deliver physiological and neurological treatments.

His work focused on increasing inhaled nitric oxide, a powerful gas produced naturally within the body and released when we breathe through our nose.

While away on a family vacation, David couldn't shake the idea of being able to augment the release of nitric oxide while simultaneously aiding to clear congestion for chronic sufferers.

This would mean people would be able to experience the benefits of this powerful, natural gas to a fuller extent, and the debilitating symptoms of nasal congestion could be eased.

02 The research

Through further research, development, and testing, David and his team invented what we now know as Goodair Nosebuds. They achieved their goal of harnessing the body's natural abilities to breathe better with the aid of a small, rechargeable, non-invasive device.

Goodair Nosebuds modulate airflow when the wearer inhales through their nose.

Small rotors spin and generate a soothing hum that simultaneously aids in the release of nitric oxide and accelerates mucociliary transport, resulting in relief from congestion symptoms.

03 Nitric Oxide

Vasodilator. Relaxes blood vessels, improving circulation and oxygen delivery.

Bronchodilator. Relaxes airways, making it easier to breathe. Destroys inhaled pathogens, acting as a first line of respiratory defence.

Neurotransmitter. Supports the body's nervous systems, aiding in regulating stress, sleep, heart rate, and breathing.

Low nitric oxide levels are associated with serious health issues, including insomnia, anxiety and depression, hypertension, cardiovascular disease, heart attack, stroke, and neurological decline and disease.

From me: Recharge your Nosebuds every time you use them.

Where I came in

David set out to solve congestion. That was the problem in front of him, and it is a real one. Three people in ten are affected by it, and a blocked nose means a mouth breather, which means losing every one of the thirty jobs we went through earlier.

With David's help, I arrived from a completely different direction, which was the nervous system.

Same device. Different question.

What happened to my numbers

Here is what I can tell you.

David's research and development of the Nosebuds has been tested extensively.

You have spent this book learning that humming does three things at once. Vibration near the nerve. A long automatic exhale. And a sinus flush.

Now imagine that happening on every breath you take, for twenty minutes, without you doing anything except lying there and following a pacer.

That is what it is like. And it shows up on the screen.

And here is the part nobody else can offer you

Every other person selling you something for your health asks you to take it on faith.

I am not going to, because I have spent sixteen chapters teaching you the steps in the Project30 Process™

You have a device on your wrist. You know how to take a spot reading. You know what your baseline looks like and how much it bounces about on an ordinary week.

So do this. Take your morning readings for a week without the Nosebuds, then for a week with them, and compare the two.

Nobody selling breathing products can say that to you, because nobody else has spent a book teaching you to measure.

Full disclosure, because you deserve it

Three things you should know before you decide anything.

David White is a friend. Has been for years, since that queue at the conference.

I was the first person outside his laboratory to use this device, which is why I have such a long history with it and why I am not a neutral party.

And we are an approved affiliate. If you buy through our link, we earn a very small commission. It costs you nothing extra and it helps keep this going.

You can buy them anywhere you like and I will not think less of you. The links are at project30.org, where I can keep them current. The same goes for the Project30 Connect. It is my business too, and you should know that before you join it.

I have told you all three because a book that spends sixteen chapters telling you not to trust marketing should probably say when it is doing some.

One honest caution before you order any of these. Nitric oxide is a vasodilator, you already know that from Chapter 11, it relaxes blood vessels. That is exactly why it helps so many people, and exactly why there is one group who should pause before diving in.

If your blood pressure runs low, or you are on medication that needs careful monitoring, have that conversation with whoever manages it before you start. Not because anything dramatic is likely, but when something is already working on your blood vessels, it is worth knowing what else is working on them too.

Keeping Your Nosebuds Working

Occasionally, your Nosebuds may stop working. I suspect the culprit is nasal mucus, or snot. As it dries, it can become rather like glue and stop the rotors from turning.

Here is how to get them going again.
Step 1: Give them a warm-water rinse.
Rinse the Nosebuds in very warm water, but not hot water. Swish them vigorously back and forwards, then shake them vigorously to remove as much water as possible. A hard blow through the silicone tips. Dry them with a towel. Leave to dry.

Step 2: Try the toothpick trick.
If they are still stuck, use a fine sharp toothpick to gently move the rotor until it becomes visible sort of almost blocking off the hole where you look through. Rinse again, blow firmly down the silicone tips, and check whether the rotor is turning.

Step 3: Make monthly maintenance a habit.
Put a reminder in your calendar for the 1st of every month. On that day, rinse the Nosebuds under very warm water for a couple of seconds with the rotors running. This regular maintenance will help prevent dried mucus from building up and stopping the rotors.

A little regular maintenance may save you the frustration of discovering that your Nosebuds have mucused up decided to take an unexpected holiday!

So where does that leave you

You now have almost everything apart from the methodology.

The nervous system that runs your life and the two crew members arguing over the controls. The nerve that carries it all upwards. The rhythm at around six breaths a minute. The molecule your face has been making since the day you were born. The thirty jobs of your nose, thirty-one if you count mine. And a number that lets you watch every bit of it happening.

The free version costs you nothing and works, but you will need to have faith and believe what I am saying.

The full version puts your humming, your nitric oxide and your heart rate variability on steroids.

Either way, you are no longer taking anybody's word for anything.

Next, and last, the sequence/process itself. What to do, in what order, and why.

Chapter 18

The Final Methodology

Are you ready for what a lot of people think is impossible? Quietening the mind. Yes, it is possible, and you may have already had a taste of it with a Coherence or Resonance breathing app.

Right. You have been patient, and here it is.

When and how do we suggest you do it, and what do you want to achieve?

Sleep opportunity

Remember the thing that is just a little bit less important than breathing. Sleep, and something you may not have heard of, sleep opportunity.

Yes, there is evidence that the Nosebuds will help you sleep, but sleep properly is a whole other book.

You need to establish sleep opportunity before your alarm goes off. Eight hours is the popular figure, and I know, I know, I know, you can't, you haven't, or you never will. Just try it. Sleep opportunity, eight hours before your alarm goes off.

I would actually push you towards nine. I can hear the objection already. I am a night owl, I don't go to bed until midnight, there is no way I am going to bed earlier.

These are often lifelong habits, and lifelong habits are hard to break. One of the leading sleep experts says that if there is only one thing people should do, it is this: set the alarm, or get up, at exactly the same time every day, seven days a week, even after a late night out. This is about building a habit and resetting your circadian rhythm.

Sleep is seriously important. Here are the basics, and if you have sleep problems, come and join us at the Project30 Connect. First month free, and the details are at project30.org.

You already have Enhancer and Glasp from earlier in the book, so put them to work here too. Speed through a few sleep videos properly rather than skimming forty titles, and you can make yourself a reasonable expert on your own sleep in an evening.

Two good ones to search for:

Start with this one, the best sleep documentary I have ever watched:

Mysteries of Sleep, NOVA, PBS (2020)
https://www.youtube.com/watch?v=Fui9YW4JYMg

Fifty minutes, and you will never call sleep a waste of time again.

How Habits Are Formed, and A Neuroscientist Explains the Science of Addiction.

We are creating new habits and breaking addictions here. If you want to change what you have got, you have to change what you have been doing, and sleep is a very good place to start. Go and read one of my other books on sleep for the rest of it.

My methodology

This is what I do every morning, and at other random times of the day. You will have different objectives, so you will probably end up with a different sequence, but here is mine, in full, so you can see what it actually looks like.

What you need. Three things, two of them cheap or free.

A Coherence or Resonance breathing app.

A Garmin Forerunner 165 or similar.

Your Nosebuds.

Goodair, the Nosebuds team, suggest twenty minutes a day for nasal decongestion and better breathing. That is a sensible place to start. Work up towards thirty minutes with the Nosebuds in, plus about five minutes of humming without them afterwards. Some people prefer to keep the whole thing to thirty minutes overall, twenty-five with the Nosebuds and five humming unassisted. Either way works. Set your own split.

Here is why you finish on humming without the Nosebuds, in case the previous chapters have not already given it away. It stimulates the vagus nerve directly, and it is worth doing deliberately rather than as an afterthought.

Set your alarm thirty to forty minutes early. Not to get up. To not get up. You are going to spend that time lying exactly where you already are, doing something useful, then get on with your day as normal. This is the only self-improvement programme I know of that begins with staying in bed.

Another leading sleep therapist told me that if you wake early and spend an hour with your HRV high, it is like getting another hour of good sleep.

Do it before you go for a pee if you possibly can. I know. Bear with me. Most mornings the urge is more nervous system than bladder, and once you settle into this, the drive quietly switches itself off. You will not believe that until it happens to you. Try it five times before you decide I am wrong, then try it again.

Set up the night before. Phone or tablet on the bedside table with the pacer ready to go, headphones within reach or on charge, your HRV device on your wrist already configured so a spot reading takes a couple of taps, and your Nosebuds where you can reach them without sitting up. Nothing to find. Nothing to set up. Nothing to remember.

Here is what mine actually looks like. I have three alarms set on my Garmin watch, 6.14, 6.30 and 6.40am. You could do the same on your phone. Whatever you pick, keep it the same time every single day of the year.

6.14am, my alarm goes off. Strangely, I usually wake up just before it most days. I put in my wireless in-ear headphones, so as not to disturb my sleeping partner too much, and start my breathing app on loop, the one marked 4.4 to 6.6, or whichever resonance breathing app you prefer, so it keeps going for more than twenty minutes without me touching anything.

I turn on the Nosebuds, put them where they need to go, lie on my back and simply follow the pacer, in through the nose, out through the nose, at that specific rate, without effort and without trying to do it well. If your mind wanders off to the bins, bring it back. This

bit is a little freaky the first few times, I am almost reluctant to tell you, but it is very good once you have been doing it a while.

Time seems to disappear, and that monkey quietens down, or on most days goes away altogether. The mind goes quiet. Do not try to force this or make it happen. Just observe if it does.

6.14 am I randomly take my Garmin Health Snapshot, to get my HRV, pressing the top right-hand button three times, then relaxing and listening to the waves, or whatever breathing app you have on. When you feel the buzz on your wrist, press the top right button again. That brings up your HRV. Have a quick look, then press it once more to save. A second or two is plenty.

I set the 6.30am alarm as a reminder to take a few more random Health Snapshots, because by this point you will likely be somewhere you won't remember to do it yourself and you might miss the alarm altogether.

At 6.40am it is time to change over to humming, for five minutes or so. Taking care of your Vagus nerves. That's it. You will be amazed at what this process does to the rest of your day.

That is the whole thing. Lying on your back in the dark, breathing in time with something, for half an hour, before the day starts. I told you it would look underwhelming.

Which brings back the rule from chapter 7, and it matters more here than anywhere. Your device does not need to be accurate. It needs to be consistent. Same device, same time, same position, most days. Then the comparisons are real even if the absolute numbers are not.

One important thing about all these smart devices. It is very easy to get obsessed with your own scores. That is a real thing, not me being dramatic. People who track their sleep can properly become obsessed with it, and sleep researchers even have a word for it, orthosomnia, obsessing over the score until the obsession itself becomes the problem.

When a score drops, for all sorts of reasons, physical or psychological, it can trigger stress. Then you are in a spiral. Stress drops the score, the dropped score creates more stress, round and round it goes.

As we mentioned a while back, do not let low scores put you off. You will get them from time to time, from things happening in your body or your life that are entirely beyond your control. Who knows how long

a lower patch will last. Be patient. This is exactly the time it matters most to keep up your Project30 Process. Who knows how much lower your score could have gone if you had not been doing your breathing, your humming and your Nosebuds.

Remember what you already know about these devices. They are not accurate, they are consistently inaccurate, which is exactly what makes them useful for watching trends rather than something to obsess over on one bad night. Let the low scores go, whatever caused them, and enjoy the good ones.

First Light

Back to sleep for a moment, because I left something out.

Pick your wake-up time carefully. You'll be living with it seven days a week, weekends included for the rest of your life. You can change it later, but do it on purpose, not because the snooze button talked you into it.

If your life gives you the choice, aim for somewhere near sunrise. I know, I know. This book is about change. Trust me on this one.

Here's the catch. Sunrise wanders about through the year, and your wake time doesn't. In Auckland the sun turns up around six in December and nearer half past seven in June. So pick a time that works on a cold winter morning, not the one that looks heroic in January. Then stick to it.

Now count backwards eight or nine hours. That's your bedtime and your sleep opportunity. As you already know, the wake time matters more. Fix that one and the bedtime usually follows.

When you've finished your breathing and humming, get up and get some daylight into your eyes. Spend ten to twenty minutes outside without sunglasses, and without staring at the sun, obviously. Cloudy days still count. Even a grey sky is far brighter than your kitchen light. On dark winter mornings, or if you can't get outside, light glasses such as Re-Timer are an option.

Morning light is how your body clock knows what time it is. It's also free, which makes it one of the cheapest things in this book.

Other times worth trying it

There are heaps of other times you might like, or need, to use your Nosebuds for. Once the morning routine is bedded in, you will find yourself reaching for them at all sorts of moments.

Let me start the list with something weird, and something that annoys the hell out of my wife. I have sneezing fits that feel impossible to stop, just like my father did. They go on and on and on. Guess what seems to fix this most of the time.

Hay fever season. If congestion is the problem you are fighting anyway, this is exactly the job they were originally built for.

The three o'clock slump. Instead of the biscuit tin or the fourth coffee, twenty minutes with your feet up and the Nosebuds in.

Before something that rattles you. A big meeting, a difficult phone call, an exam, a first date at seventy. Same principle as the morning session, just compressed and aimed at one moment.

Three in the morning, wide awake and cannot get back to sleep. Just try them.

Stuck in traffic. Nobody else can see what you are doing, and it turns a wasted twenty minutes into a useful one.

An evening on the sofa. Swap one episode of mindless scrolling for the Nosebuds and something calming on in the background.

Ironing, the school run, the dishwasher stacking. Anything repetitive and slightly tedious, where your nose already has nothing better to do.

A blocked nose. If your nose is stuffy and you were not going to sleep well anyway, this is a better use of the next hour than lying there being annoyed about it.

On a plane. Cabin air is drier than a stand-up comedian's Monday crowd, and your nose usually gives up somewhere over the ocean.

Let me tell you about another weird thing my body does to me. Often when I am flying, even in business class, my sinuses put me through the most excruciating pain, and I have been through a fair bit of pain in my life. It turns out there is a name for it, aerosinusitis, sometimes called sinus barotrauma or sinus squeeze.

It happens when the air pressure in your sinuses cannot equalise with the changing cabin pressure, and it is particularly common if you already have a blocked nose, a cold, allergies or sinus congestion. The pain can show up around the forehead, between the eyes, the cheeks and upper teeth, or just one side of the face, and it can feel like someone driving a nail into your forehead for hours at a time. It takes a bloody lot of pain to make me cry, and this does it. Nosebuds are worth a try, but I would not give up on the pseudoephedrine until you have proven to yourself that they work for you.

None of these need the full half-hour ritual. Stick them in, breathe, get on with your day, and take an HRV reading for fun if you feel like it.

Tomorrow morning, before you start, take a little look at what is streaming through your head just before you get out of bed. Bob or Buster?

Note

This is not something that you do every now and then. It is a habit you create, every day, 30 minutes before you get up in the morning. Yes, for the rest of your life.

You, your body, brain, mind and soul will get to love it. And your Bob will dominate your Buster.

It's even better than coffeeee.

One more thing I forgot to tell you. Nosebuds are sold to help with congestion. A friend of mine had decades of congestion and regular medication, and says it has pretty much gone.

The jury is out on this, but over a month or so I have found my HRV readings seem to be higher when doing Nosebuds and resonance breathing lying on my left side. You might like to try this.

The Project30 Process™, benefits

What the combination does that the separate parts cannot

Four routes into the same nerve, each by a different mechanism, in one session

Resonance breathing works the pressure sensors

Nasal breathing delivers nitric oxide, which relaxes vessels and changes what those sensors read

Humming vibrates tissue near the nerve, enforces a long exhale and flushes the sinuses

Taping preserves the nasal pathway through the hours you cannot control

Each element improves the conditions the others depend on

A defined order, timing and duration rather than a pick and mix

Every component is free or close to it, and none of it is hidden

Cardiovascular

Lower resting heart rate

Reduced systolic and diastolic blood pressure

Reduced cardiac workload at rest

The nervous system itself

Greater flexibility in shifting between activation and recovery

Faster return to baseline after a stressor

Less time spent in sympathetic dominance

The throttle handed back rather than left stuck open

Stress and emotional regulation

Lower subjective anxiety

Reduced reactivity to provocation

Faster emotional recovery after upset

Reduced rumination

Better regulation of anger

Greater resilience to repeated stressors

Sleep

Shorter sleep onset latency

Fewer nocturnal awakenings

Fewer overnight bathroom trips

Waking with a clearer head

Less early-morning waking with a racing heart

Thinking, creativity and the inner voices

Improved executive function under load

Reduced mental fatigue

A reliable receptive window immediately after the session when ideas arrive

Problems solved overnight without conscious effort

A pause inserted between an appraisal and believing it

Reduced anticipatory catastrophising
Greater willingness to attempt previously avoided tasks
Self-explanation shifting from character flaw to mechanical problem

Mental quiet and flow

Quieting the mind becomes achievable, which most people believe is impossible
The state becomes reachable in twenty minutes lying down rather than through decades of practice
The question of whether you are doing it right disappears, because it can be measured

Immune and inflammatory

Activation of the cholinergic anti-inflammatory pathway
Fewer stress-related infections
Reduced systemic inflammatory load

Measurement and self-management

An objective daily readout of nervous system state
Feedback that distinguishes what works from what feels like it works
Early warning of illness before symptoms appear
The ability to test a practice rather than believe in it
Motivation sustained by visible progress

Practical advantages

Twenty to thirty minutes a day, lying down, before you were going to get up anyway
No diet, no gym and nothing to give up
A free version that works, and a full version that can be measured
No belief required at any point
Compatible with medication and with any other treatment

Chapter 19
Soul Food

So, to absolutely finish off this book

Here are a couple of what I think are two projects to have a play with. You don't have to do them now, just sometime maybe if you are having trouble sleeping

They are not Enhancer for YouTube videos, they are long relax or go back to sleep ones. They are not really for learning from the first time through. I listen to them often and just let them flow over me at night.

Videos for tomorrow, next week, or next whenever

How To Fall Asleep Fast | Sleep Science

Why You Make Better Decisions After Sleeping On It | The Science of Overnight Wisdom

12 Habits From The Carl Jung Will Completely Transform Your Life | Carl Jung

This might be more important than sleep, follow and read his books, then you will understand Project30's Connection.
YouTube:
Nicholas Christakis: The hidden influence of social networks

Or go find your own to Love to learn or what you most need to know. … this is not a video hehehehe

I really, really, really, really, hope you get as much as I have from my journey and experiences, oh, nearly forgot, and our coincidences

Wave and Big smile.

You need Soul Food

Forgiveness

There seem to be two kinds of people. Some trust everyone until the trust is broken. Others trust nobody until it is earned. I am not sure you can change which one you are. Have a think about which camp you sit in, and maybe play with trusting first.

If or when your trust is broken, then comes the line we all know.

"I will never trust them again."

This is where forgiveness needs to be, or should be, practised.

If you don't forgive, you carry the story and the pain around with you, often for years or for the rest of your life. It pops up every now and then, in all sorts of situations, often insidiously. You relive it again and again. And again.

That has a name. It is called rumination, chewing the same thought over and over like a cow with a grudge. The psychologist Stephen Ilardi puts stopping rumination on his short list of things that lift low mood. A grudge is just rumination with somebody's name on it.

Forgiveness can be really hard to do. I did a lot of forgiving years ago and have kind of forgotten how to do it, but I am sure I will get the practice again. So instead of me telling you how, go and YouTube it.

Get these:

"To be wronged is nothing, unless you continue to remember it." Attributed to Confucius.

"Before you embark on a journey of revenge, dig two graves." Japanese proverb.

"Do not do to others what you do not want done to yourself." Confucius.

The underlying message is that holding on to resentment always hurts us more than the person we haven't forgiven.

The message underneath is the same. Holding on to resentment usually hurts you far more than the person you haven't forgiven. They are out living their life. You are the one lying awake at two in the morning, replaying the whole thing for the four hundredth time.

A little Project30 wisdom.

Have you had, or do you have, the "I will never forgive them" thought?

Forgiveness doesn't mean what someone did was acceptable. It means you choose not to let it keep controlling your life.

Now here is an interesting finding. Whatever happened, when you deliberately bring it up, no emotion or feeling comes with it. You are at peace with it. It is not an issue.

"If you haven't forgiven someone, it eats you up inside."

Is there anyone you wouldn't cross the road to say hello to? They are the ones you can start your forgiveness with.

Connection, and why it outlives almost everything else

The people who study centenarians keep arriving at the same answer, and it is never the one anybody hopes for. We want it to be the olive oil. We want it to be the walking, or the fish, or the small glass of red that your doctor keeps wanting a word about.

Food matters. Movement matters. Neither one is the headline.

The finding that turns up again and again, across countries that eat nothing like each other, is how connected a person is to other people. Not how many people they know. Not how close those people live. How deep it goes. Whether anyone would notice if they stopped turning up on a Tuesday. Whether they are properly known by somebody, and whether they know somebody back.

Being needed seems to do something real to a body. Being surplus to requirements does something too, and it is not the good version.

When connection is the stressor

Here is the catch with everything I have just said. The thing that keeps you alive longest can also be the thing quietly wearing you out.

Emotional stressors are sneaky. A bad back tells you it hurts. A deadline tells you when it is due. A relationship that is slightly off just hums away in the background, and you can go months without noticing it. You feel tired, snappy and a bit flat, and you blame work, the weather or the dog.

I am not an expert in this field. I have, however, been with my wife for nearly sixty years, which I reckon counts as a very long study with a sample size of one.

The Love Languages

The road I went down came, coincidentally of course, through Kerry H, who put me onto The 5 Love Languages by Gary Chapman.

The idea is simple. It is about what you do to show someone you care. People show love, or care, in different ways, and they like to receive it in different ways. Chapman sorts these into five: kind words, time together, gifts, doing things for each other, and physical touch.

Trouble starts when you speak one language and the person you love listens in another. You wash her car to show you care. She wanted you to sit down and talk. You both end up feeling unappreciated, and neither of you can work out why.

A word of warning. My psychologist mate calls it a bit of psychobabble. After nearly twenty years of playing with it, my view is simple. Either it works, or it is fun.

My wife puts it best. When someone does her love language for her, it makes her feel good that someone understands her.

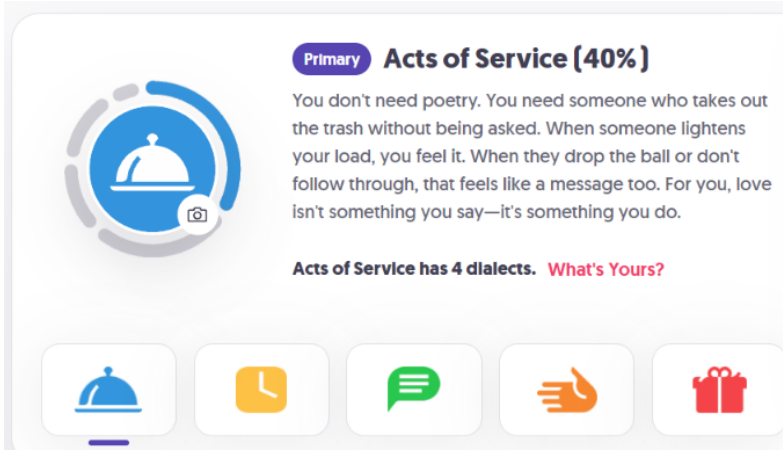
That is the whole point. Feeling understood is about as far from stress as you can get.

Try this

Do the free quiz, watch a YouTube or two, or buy the book. Copy to YouTube: The 5 Love Languages Gary Chapman. There are versions for children and teenagers too, which might explain a few things about your house.

You only need your top two results, and your partner's. My wife and I used to give each other brownie points whenever we felt our love languages being spoken. I gave 1 million points for my top one and 100,000 for my second. My wife gave 100 for her top one and 50 for her second. This is excellent training for your partner, just like training a puppy.

Get the people you care about or people you work with to do the quiz, then swap answers. This week, do one thing in their language, not yours. And practise, because sometimes it is really difficult to do.



When you do the online quiz you get this at the end, click on the icons at the bottom and write down your scores for eternity.

Awe, and the strange trick it plays on time

Awe is what happens when you meet something too big for your head. A sky with far too many stars in it. A coastline. A piece of music that arrives somewhere you were not braced for.

Dacher Keltner, a psychologist at Berkeley, has spent about twenty years studying it, which is a better job than most. His definition is a good one. Awe turns up when you are in the presence of something vast, and your head has to move the furniture around to make it fit.

Paul Piff and his colleagues at the same university ran the study I like best, published in 2015. They stood people in a grove of eucalyptus trees on the campus, sixty metres of them, and had them look up for one minute. Then somebody nearby dropped a handful of pens.

The people who had spent that minute looking at the trees picked up more pens than the people who had spent it looking at a building.

One minute of trees, and strangers became more helpful. They also came out less entitled and more generous on the other measures. Piff calls the reason the small self. Standing next to something enormous shrinks you a bit, and a smaller self has less to defend.

Now the finding that made me put my cup down.

In 2012 Melanie Rudd, Kathleen Vohs and Jennifer Aaker published a paper with a title that saves me a paragraph of explaining. Awe Expands People's Perception of Time.

People who had just felt awe reported that they had more time available. Nothing in the diary had changed. Same day ahead of them, same jobs on it, same traffic. The hurry had simply let go. They were less impatient, more willing to give their time away to somebody else, and they said they would rather have an experience than a thing.

Sit with that one, because it is close to what this whole book has been about. You cannot add an hour to Tuesday. You can change the state of the system that is experiencing Tuesday, and it turns out that changes how much time you feel you have.

A smaller self has less to defend and a good deal less to be late for.

Which is a long way round to a short invitation. Awe makes people better company, and better company is most of the point. Come and find some at a Project30 Connect.

Meaning, and the why that carries almost any how

Viktor Frankl was a psychiatrist in Vienna before the war. He was taken to the camps along with his wife and his parents. He came out of four of them, Auschwitz included. They did not come out of any. Afterwards he wrote Man's Search for Meaning, which has since been read by more people than almost any book of its century.

What he reported is not what you would expect, and it was not what I expected either.
It was not the strongest who lasted. Not the fittest, not the toughest, not the ones you would have put money on. It was the ones who still had something waiting for them. A person to get back to. A job half done. A manuscript, in his case, which he kept rewriting in his head because the paper version had been taken off him at the gate.

He built a whole branch of psychology out of that and called it logotherapy. The argument underneath it is simple enough to fit on a beer mat. We are not mainly chasing pleasure. We are looking for meaning, and we find it in three places. In work worth doing. In the people we love and the things we go out and experience. And when both of those have been taken away, in how we choose to stand while something we cannot fix is happening to us.

He carried one line of Nietzsche with him the whole way through. "He who has a why to live for can bear with almost any how."
He had a name for his own outlook too, and I like it more the older I get. Tragic optimism. That is a more honest phrase than hope, and it does not pretend that suffering makes any sense. It only says that you still get a vote on what you do with it.
Now, I am not about to compare anything in my life to what happened to that man, and you should be suspicious of anybody who does.
But I will tell you this. On the night I was not supposed to see morning, I was told I had more work to do. I did not know what that meant at forty-two, and I spent a long time assuming it was something grand I had not got round to yet. It was not. The work turned out to be this. Sitting down most days and writing things for people who are struggling with something I happen to have struggled with first.

That is my why. It does not look like much written down. It gets me out of bed, which is more than my blood pressure has ever managed.
So here is the last question this book is going to ask you, and it is not the one the wellness industry asks.

The question is not how you make the bad thing vanish. Sometimes you cannot, and I can tell you from a fair amount of practice that trying is exhausting.

The question is what you have got that is worth getting up for. Work that means something to you. People who would notice if you stopped turning up. Something in front of you that is not finished yet.

Find that and everything else in this book gets easier, because you will have a reason to bother with it.
That is soul food. The rest is garnish.

Sleep problems, go look at Retimer glasses on our website, sorry couldn't find space for this, and no I am not trying to sell you something else, just trying to help. You can do the sunlight habit, it is free but not that easy in today's busy world. Retimer glasses mimic sunlight when it suits you, in this very important part of your sleep regime.

I wish I could have put this early in the book but now that you have experienced what's in the book here is a little brain polish YouTube:
No.1 Neuroscientist: you can change who you are in 30 days

This book is the start, not the finish. The part that keeps it working is other people connections. Project30 Connect meetings are where like-minded people swap stories, do a little exercise and keep each other going. Just come along and see what it is like, free to look. And if there is not one near you yet, we will help you set one up. Find us at project30.org.

Chapter 20

Be Frigging Grateful

I had coffee with Roger Booth the other morning, remember he is the Associate Professor at Auckland University, and the immunologist you met in Chapter 4. We got talking about Dr Tony Fernando, the sleep doctor from earlier in this book, and one of New Zealand's leading sleep psychiatrists. Tony and Roger are good friends, and one day Tony showed him his gratitude diaries maybe more than ten years of them. And Tony said he goes back now and then and rereads some.

If it is good enough for our leading sleep doctor, it is good enough for us.

What gratitude does

Your brain is built to spot danger. That kept your ancestors alive. It also means that, left to itself, your brain files every problem in big red letters and lets the good stuff slide straight past. Buster loves this arrangement.

Gratitude is the counterweight. You are not pretending the bad stuff is not there. You are teaching your brain to notice the good stuff too.

And this one has some decent research behind it. In 2003, the psychologists Robert Emmons and Michael McCullough had people write down a few things they were grateful for. Compared with people who wrote down their hassles, they felt better about their lives and more hopeful about the week ahead. In 2005, Martin Seligman, the godfather of positive psychology you met in Chapter 12, tested a simple exercise called Three Good Things. People who did it every night for a week were happier, and less depressed, for months afterwards. Other researchers have found grateful people tend to sleep better, partly because they go to bed thinking kinder thoughts.

The honest small print. Gratitude is not a cure for depression, and later studies suggest the effect is real but modest. Think of it as one more small brick, not the whole wall. Free, takes two minutes, and nobody has ever been harmed by it.

Write it down

Is thinking it enough? It helps. But in the studies that showed the best results, people wrote it down. Writing slows you down. It makes you pick the actual thing, not a vague warm feeling. And, like Tony, you end up with something to reread on a dog day.

Two ways to do it

BF Grateful. Set a daily alarm on your phone and label it BF Grateful. Be Frigging Grateful. When it goes off, stop wherever you are, even in the middle of an important meeting, and think of one thing you are grateful for right now. Then write it down, even a few words in your phone. No one or thing is more important than YOU.

The bedtime notebook. Keep a notebook by your bed. Last thing at night, write down three things that went well today. Small is fine. A good coffee. A phone call. Sitting in the sun. Be specific, because your brain learns from the detail.

Then add one more line. One problem you need solving. Write it down, close the notebook, and go to sleep. You already know what happens next from the Castle of Truth in Chapter 1. Bob works on it all night, while you sleep.

Thank God it's The End

My body/brain always feels brand new after the Project30 Process ™ in the morning.

But Wait, there is More

Darn it, Bob keeps on telling me to add more stuff.

So that it does not stuff up my page numbers I can update the book here.

I asked David White how often and how long can people use the Nosebuds. As often and as long as people like. The battery runs for about an hour.

Morning, day or night, yes evening helps your sleep.

One more for your list. Thirty years ago, when I was battling depression, Dr Robert Sapolsky was part of my journey out. Here he is again, older and still brilliant.
Copy to YouTube: The Mind, Thoughts & Free Will, Dr Robert Sapolsky.
Watch the first ten minutes to hear why a zebra does not get ulcers and you do.

Now there is something I did this morning, I woke a little early and started listening copy to YouTube:
Recursive's $670M Bet on Self-Improving AI, Sonnet 5.5 Hits 70%, Elon Co-Leads Pentagon Push EP 299

Waking early Bob said, this is your learning time before the breathing Nosebud stuff. Trust me I will make you get enough sleep (another story in another book).

Keeping you optimistic about the future, it might be a bit heavy for some. But when I was listening HRV went up fairly constantly above 100% resting. You can listen to other stuff.

I was talking to Professor White about how Nosebuds influence the autonomic nervous system. He told me what they are finding is that it reaches further than that, into what scientists call the emotional brain, the part that handles feelings like fear and calm.

Now here is a little learning for wake up early times. It does not mean that you should not be paying attention to having good sleep.

YouTube:
Everything You Need to Know to Make YOU Smarter

Insane Facts About Sleep You've Never Heard

The Neuroscience of Chronic Stress: Amygdala, Prefrontal Cortex & Autonomic Nervous System

I really hope this is the last in this book, watch this over time. The magic in being human

100 Weird Psychology Facts to Fall Asleep to — No Adverts

Maybe we have kept the most important to last:
Why Willpower Doesn't Work: A Neuroscientist Explains How to Rewire Your Brain

Carl Jung on Healing the Subconscious While Sleeping
We have kept the most important to last:
Why Willpower Doesn't Work: A Neuroscientist Explains How to Rewire Your Brain

Carl Jung on Healing the Subconscious While Sleeping

The End again