Hormones Kill

Hormones Heal

Disclaimer

This book is intended for educational and informational purposes only. It does not constitute medical advice, diagnosis, or treatment. Readers should consult qualified healthcare professionals before making any health-related decisions or starting any hormone, supplement, dietary or lifestyle intervention.

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Prologue

The most profound journeys often begin with heartbreak.

Mine started in 1997, when my wife and I lost our third baby in a row. Each pregnancy ended around sixteen weeks, and each time, we were told the same thing:

“These things happen.”
“Sometimes there’s no explanation.”

As a Certified Public Accountant, I was trained to believe that problems have causes—and solutions.
When things don’t add up, you investigate. I could not accept that there was no answer.

What followed was a seven-year journey into medicine.

I attended conferences, including those by the American Academy of Anti-Aging Medicine, and later pursued a Diploma in Integrative Medicine at Swinburne University. Along the way, I had the privilege of learning from medical professionals across the United States, Germany, Australia, India and Belgium.

Eventually, I found an answer.

In our case, the miscarriages were likely linked to hormonal imbalance—specifically low progesterone, contributing to an incompetent cervix.

Today, our three sons are now thriving young adults.

Over the past three decades, I have continued learning—particularly in the area of bio-identical hormones.

But one thing has become clear:

Hormones are critical—but they are not the only factor. Hormones are one of the 12 body systems. Each has direct and indirect actions.

Health must be viewed in totality:

- Hormones
- Nutrition
- Movement
- Stress
- Environment

If you are facing hormonal issues, seek guidance from qualified professionals—especially those trained in hormonal and bio-identical therapies, with a holistic perspective.

This book is not a replacement for medical advice.

It is meant to help you understand how the body works as a system—so you can ask better questions and make more informed decisions.

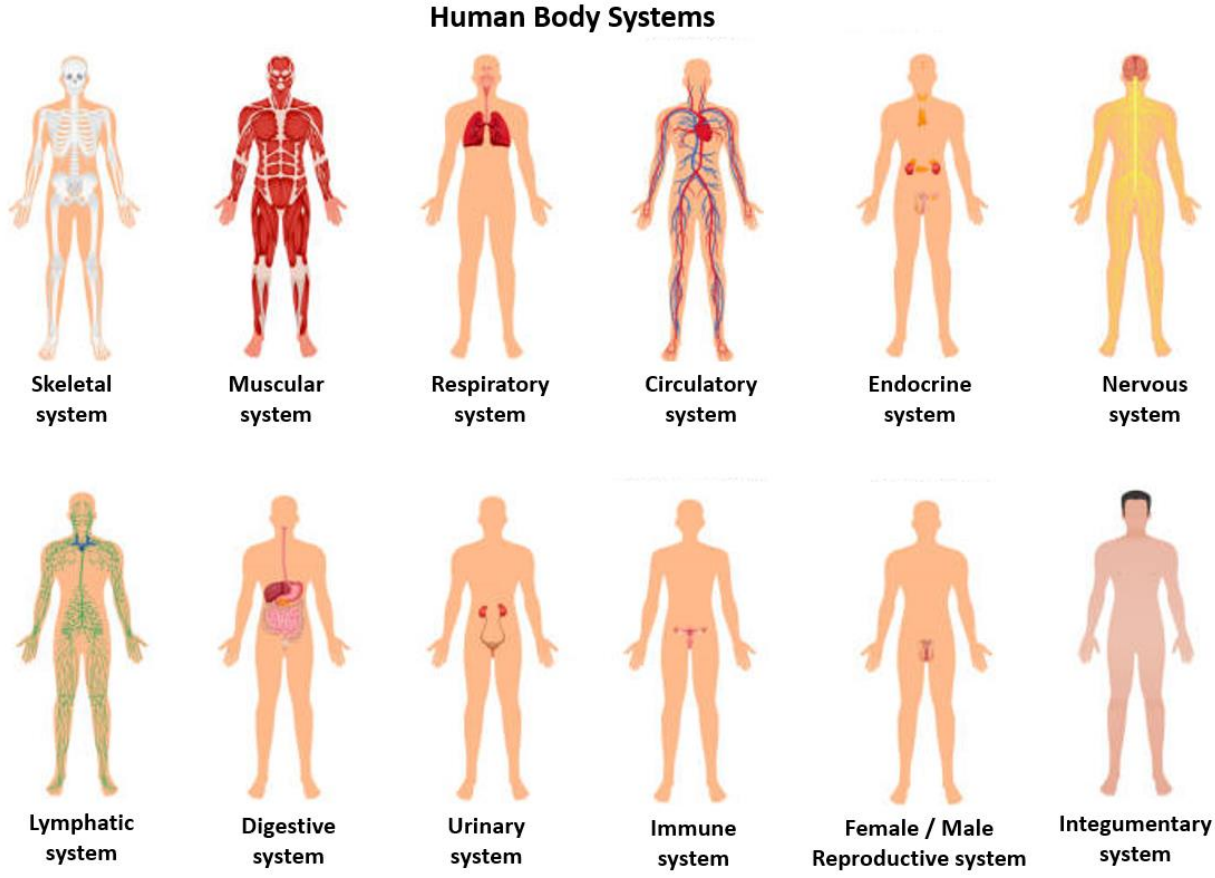
This journey began with loss.

But it led to understanding.

And it is that understanding I now share with you.

Note: Much of hormonal research is based on Western populations. While valuable, these findings may not always fully reflect non-Western contexts, where differences in genetics, diet, and environment can influence outcomes.

This makes it important to approach hormonal health with context, interpretation, and a more individualized perspective (personalised prescription with medical supervision and approval).



Foreword

Why Hormones Matter More Than You Think

Most people believe they understand their body.

They believe:

- Fat gain is about eating too much
- Fatigue is about not resting enough
- Mood is about mindset
- Aging is inevitable

But beneath all of these lies a deeper layer of control.

A system that is:

- Invisible
- Constantly active
- Quietly shaping every function in your body

That system is your hormones.

Hormones are not just part of your biology.

They are:

- The signals that regulate your energy
- The drivers of your metabolism
- The regulators of your mood and thoughts
- The architects of your physical structure

They influence:

- How you feel when you wake up
- How you respond to stress
- How your body stores fat
- How quickly you age

And yet, most people rarely think about them.

Instead, we focus on:

- Symptoms
- Quick fixes
- Surface-level solutions

We treat:

- The skin, but not the system
- The weight, but not the metabolism
- The stress, but not the hormonal response

And as a result:

We manage problems — but we do not resolve them.

This book is written to change that.

It introduces a different way of understanding the body:

Not as isolated parts,
But as a **connected hormonal system**.

You will begin to see that:

- A problem in one area often starts somewhere else
- A symptom is often not the cause
- The body operates through chains, not single events

You will learn that hormones can:

- Support healing
- Or accelerate decline

Depending on how they are regulated.

This is where the central idea of this book comes from:

Hormones can either kill or heal.

This is not an exaggeration.

When hormones are imbalanced:

- Systems begin to break down
- Recovery slows
- Aging accelerates

When hormones are optimized:

- The body repairs
- Energy improves
- Function is restored

This book is not about:

- Quick fixes
- Extreme interventions
- Isolated solutions

It is about:

- Understanding the system
- Seeing the connections
- Addressing the root

You will not just learn:

- What hormones do

You will understand:

- How they interact
- How they cascade across systems
- How they shape your daily experience

More importantly, you will begin to see:

That your body is not failing randomly.

It is responding:

- To signals
- To stress
- To environment
- To behavior

And this leads to the most important realization:

You are not just experiencing your body —
You have the capability to influence it.

Every choice you make:

- Sleep
- Movement
- Nutrition
- Stress

Sends signals into your hormonal system.

And over time, these signals determine:

- Your health
- Your function
- Your longevity

This is not about perfection.

It is about awareness and where appropriate take corrective measures.

Because once you understand:

- How hormones work
- How systems connect

You gain something powerful:

The ability to influence the direction of your health.

At its core, this book presents a simple but critical truth:

Your body is not just aging —
It is adapting to the signals it receives.

And ultimately:

Your hormones will determine whether your body breaks down — or rebuilds.

Welcome to a different way of understanding health.

PART I — HORMONES THAT KILL

What Hormones Mean To You

- Regulates breathing
- Regulates heartbeat
- Maintain optimum sugar level
- Control blood pressure
- Put you to sleep at night
- Wake you up in the morning
- Governs growth
- Build bones
- Maintain muscle tone
- Lubricate joints
- Make body produce energy
- Make body produce heat
- Regulates energy consumption
- Burn fat
- Make men – a man
- Make women – a woman
- Governs menstrual cycle
- Allows pregnancy
- Birth control
- Control sex drive
- Virility
- Fertility
- Fight stress
- Prevent fatigue
- Calm anxiety
- Relieve depression
- Soothes pain
- Reduce allergic reactions
- Minimize infections
- Store and retrieve memories
- Stimulate brain activities
- Stimulate immune system

When Balance Is Lost

In balance, they sustain and heal.

When disrupted, they do the opposite.

Hormones support life — or leads to its decline.

Hormonal harm does not happen randomly.

It follows patterns.

In most cases, dysfunction arises from four key conditions:

1. Structural Mismatch – Synthetic vs Bio-identical Hormones

Some hormones introduced into the body are **synthetic in nature**.

While designed to mimic natural hormones, they often differ in:

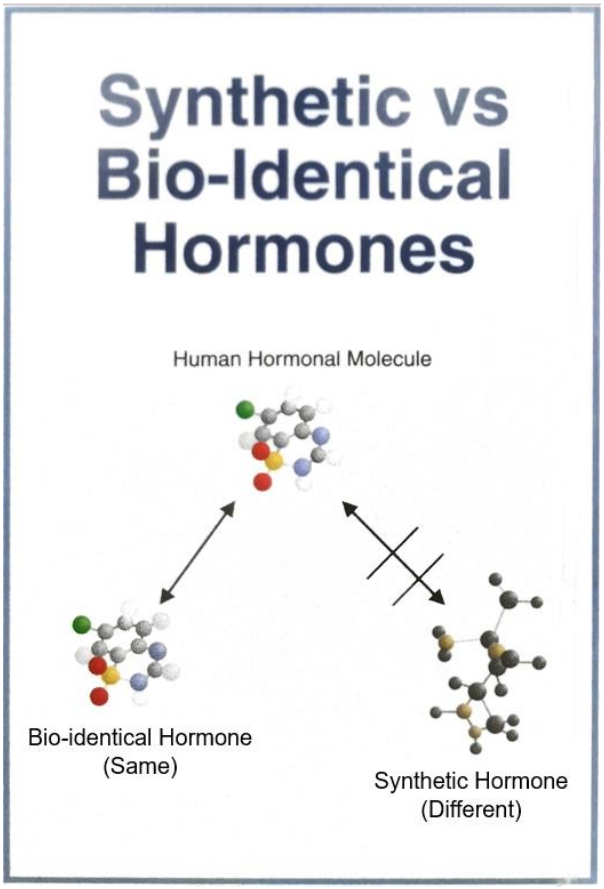
- Molecular structure
- Receptor interaction
- Metabolic pathways

Even small structural differences can lead to:

- Altered biological responses
- Unintended long-term effects

This highlights an important principle:

The body responds not just to the presence of a hormone—but to its structure.



Source: Aalsum Pharmas Sdn Bhd

2. Overdose (Even with Bio-Identical Hormones)

More is not better.

Even hormones that are **bio-identical**—structurally similar to those produced by the body—can become harmful when levels are too high.

Excess exposure can lead to:

- Overstimulation of receptors
- System imbalance
- Downstream disruption

3. Underdose (Deficiency States)

Too little can be just as harmful as too much.

When hormone levels are insufficient:

- Systems slow down
- Repair mechanisms weaken
- Function declines

Deficiency often presents subtly:

- Fatigue
- Reduced resilience
- Gradual deterioration

4. Imbalance (Relative Disruption)

Hormones do not act in isolation.

They exist in:

Relationships

An imbalance occurs when:

- One hormone dominates
- Another is insufficient

Examples include:

- Estrogen without adequate progesterone
- Cortisol overriding reproductive hormones
- Insulin disrupting metabolic balance

This is often the most overlooked factor.

Because: Normal levels do not always mean balanced systems.

A System, Not a Single Variable

These four factors rarely occur alone.

They often interact:

- A synthetic hormone may alter balance
- An overdose may create secondary deficiencies
- An imbalance may lead to compensatory excess elsewhere

The result is not a single issue—But a **network of disruption**

Hormonal harm is rarely about one hormone.
It is about how hormones interact, in the wrong amount, over time.

Understanding how hormones can harm is not about fear.

It is about clarity.

Because once you recognize these four patterns:

- Structural mismatch
- Excess
- Deficiency
- Imbalance

You begin to see:

Why symptoms appear
Why systems break down
And why simple fixes often fail

This section explores how key hormones—when disrupted—can contribute to:

- Chronic stress
- Metabolic dysfunction
- System-wide decline

We begin with two of the most powerful:

Thyroid — the metabolic driver that, when disrupted, slows or destabilizes the entire system

Cortisol — the survival hormone that, when chronically elevated, becomes destructive

Chapter 1: Thyroid Dysfunction: Slow Death by Metabolism

When the Body Loses Its Rhythm

Role of Thyroid

The thyroid regulates the **speed and intensity of life processes**.

It influences:

- Blood flow, heart rate, and heat production
- Metabolism and energy production
- Cognitive speed and mental clarity
- Intestinal movement
- Cholesterol balance
- Immune defense

It also helps:

- Reduce LDL (bad cholesterol)
- Maintain fluid balance
- Clear metabolic waste

Thyroid determines how fast the body operates

When disrupted, the body does not fail immediately.

It either:

- Slows down
- Speeds up
- Or becomes unstable

Thyroid Dysfunction Patterns

Thyroid issues are not limited to “high” or “low”.

They exist across multiple patterns.

1. Hypothyroidism (Primary Thyroid Deficiency)

When the System Slows Down

The thyroid gland itself is underactive.

Effects:

- Fatigue
- Weight gain
- Cold intolerance
- Dry skin and hair
- Brain fog

The body conserves energy at the expense of function

2. Hyperthyroidism (Thyroid Excess)

When the System Runs Too Fast

The thyroid is overactive.

Effects:

- Rapid heart rate
- Anxiety
- Weight loss
- Heat intolerance
- Sleep disturbance

The system becomes overdriven and unstable

3. Secondary Hypothyroidism (Pituitary-Related)

When the Signal Is Weak

The issue is not the thyroid gland itself,
but the **pituitary gland** failing to signal properly.

Effects:

- Similar to hypothyroidism
- Often missed due to “normal” thyroid gland

The problem lies in communication, not production

4. Autoimmune Thyroid Disorders

When the Body Attacks Itself

The immune system targets the thyroid.

Hashimoto's Thyroiditis (Hypothyroid pattern)

- Gradual destruction of thyroid tissue
- Leads to long-term deficiency

Other autoimmune patterns

- May fluctuate between high and low states

Inflammation becomes the driver of dysfunction

5. Thyroid Underconversion (T4 → T3 Impairment)

When Hormones Are Not Activated

The body produces T4,
but fails to convert it into active T3.

Common causes:

- Stress (high cortisol)
- Nutritional deficiencies
- Liver dysfunction

Effects:

- Hypothyroid symptoms despite "normal labs"

The hormone is present — but not usable

6. Thyroid Overconversion

When Conversion Is Excessive or Dysregulated

Excessive conversion into active or alternative pathways.

May lead to:

- Overstimulation
- Imbalance between T3 forms

Effects:

- Mixed symptoms (both high and low patterns)

Too much activation can be as disruptive as too little

7. Thyroid Binding Hormone Elevation

When Hormones Are Locked Away

Thyroid hormones are bound to proteins and become unavailable.

Effects:

- Normal total hormone levels
- Low active (free) hormone

Common influences:

- Estrogen
- Liver function

Hormones exist — but cannot act

8. Thyroid Resistance

When Cells Stop Responding

The body has thyroid hormone,
but cells do not respond effectively.

Effects:

- Persistent symptoms despite normal labs

The issue is not supply — but sensitivity

9. Thyroid Imbalance (System Dysregulation)

When Everything Is Out of Sync

Many individuals do not fit a single category.

They experience:

- Fluctuating symptoms
- Mixed patterns
- Inconsistent energy

Contributing factors:

- Cortisol imbalance
- Insulin resistance
- Estrogen dominance
- Chronic inflammation

The thyroid is part of a larger hormonal network

Thyroid as a Central Regulator

Thyroid interacts with:

- Cortisol (stress)
- Insulin (metabolism)
- DHEA
- Reproductive hormones

Thyroid dysfunction is rarely isolated

Thyroid determines how fast the body lives —
too slow leads to stagnation, too fast leads to strain

Call to Action: What to Do

If Thyroid Is Low (Deficiency)

- Optimize nutrition (iodine, selenium)
- Reduce stress (cortisol impact)
- Improve sleep (circadian rhythm)
- Consider thyroid support (T3 + T4 or desiccated thyroid)

If Thyroid Is High (Excess)

- Reduce stress and stimulation
- Avoid overtraining and excess caffeine
- Support recovery
- Consider calming strategies (e.g., sleep optimization)

If Thyroid Is Imbalanced

- Assess full hormonal system
- Address root causes
- Do not rely on labs alone

Treat the system — not just the thyroid

Thyroid Hormone Support Types

1. Synthetic (T4-only)

- Requires conversion to T3

2. Combination (T4 + T3)

- Provides active hormone directly

3. Desiccated Thyroid (Animal Source)

- Contains T4, T3, and cofactors
- Closer to natural profile

Desiccated thyroid preferred (where appropriate),
with T4 + T3 combination as an alternative

Route and Timing

Oral (Most Common)

- Taken daily
- Best on empty stomach
- Usually morning dosing

Effectiveness depends not only on the hormone —
but on absorption, conversion, and cellular response

Health is not about maximizing thyroid function.

It is about:

- Stability
- Consistency
- Balance

When thyroid function is:

- **Adequate → efficient**
- Deficient → slowed
- Excessive → overdriven

Adequate thyroid is a central regulator of energy, function, and long-term health.

Author’s Insight: Thyroid Awareness

The author likely experienced signs of hypothyroidism from a young age, though they were not recognized at the time.

It was only in his 40s that these patterns became clearer.

Looking back, several long-standing features were present:

- Hyperlax joints (fingers)
- Elbow keratosis
- Tendency to bloat easily
- Weight gain with relative ease
- Flat feet

Individually, these signs appeared minor.

Together, they pointed toward an underlying thyroid imbalance.

Thyroid dysfunction can be subtle and long-standing — often overlooked for years

Many individuals may carry mild or undiagnosed thyroid dysfunction without realizing it.

Early recognition comes not from a single symptom,
but from seeing patterns over time

Footnote: **Thyroid function should not be treated in isolation.**
Other key hormones—particularly **cortisol** and **DHEA**—must be considered, as they interact closely with thyroid regulation and overall metabolic balance.

Chapter 2: Cortisol:
Survival Hormone That Destroys

When Protection Becomes Damage

Cortisol is essential for survival.

It helps you:

- Wake up in the morning
- Respond to stress
- Stay alert in challenging situations

In the right amount, at the right time:

Cortisol keeps you alive.

But in the modern world, stress is no longer:

- Short-term
- Occasional
- Physical

It is:

- Chronic
- Psychological
- Constant

And when cortisol remains elevated for too long:

It shifts from protection → to destruction.

Role of Cortisol

Cortisol prepares the body for action:

- Increases blood sugar
- Suppresses non-essential functions
- Redirects energy toward survival

This is useful in short bursts.

But harmful when prolonged.

Adrenaline and Cortisol: Two Phases of Stress

Stress is not controlled by a single hormone.
It is a coordinated response involving multiple signals—primarily:

- Adrenaline
- Cortisol

Although often grouped together, they serve different roles.

Adrenaline — Immediate Response

Adrenaline (epinephrine) is released rapidly in response to stress. It:

- Increases heart rate
- Raises blood pressure
- Sharpens focus
- Mobilizes immediate energy

This response happens within seconds.
It prepares the body for:
Immediate action — fight or flight

Cortisol — Sustained Response

Cortisol is released more gradually. It:

- Maintains energy supply
- Regulates metabolism
- Supports prolonged stress response

This response unfolds over minutes to about 4 hours.
It allows the body to:
Sustain function under ongoing demand

Two Systems, One Purpose

These hormones are produced through different pathways:

- Adrenaline → nervous system (fast)
- Cortisol → endocrine system (slower, longer-lasting)

They are not dependent on each other.
But they are:
Functionally coordinated

In a typical stress event:

1. Adrenaline rises first → immediate response
2. Cortisol follows → sustained adaptation

Modern Stress: The Problem

In the past:

- Stress was short-lived
- Both hormones returned to baseline

In modern life:

- Stress is prolonged
- Cortisol remains elevated

Adrenaline spikes may come and go.

But cortisol often:

Stays elevated for extended periods

This is where damage begins.

Adrenaline initiates the stress response.
Cortisol sustains it.

Why This Matters

You do not need constant adrenaline spikes to experience damage.

Chronic, low-to-moderate stress can:

- Continuously activate cortisol
- Gradually disrupt multiple systems

This makes **Cortisol** the primary driver of long-term stress-related damage

Chronic Stress: Turning Point

When stress becomes constant:

- Cortisol stays elevated
- The body never fully recovers

This leads to:

- Fatigue
- Anxiety
- Sleep disruption
- Hormonal imbalance

Cortisol Imbalance: Both Excess and Deficiency

Cortisol is often discussed as a problem of excess.

But this is only part of the picture.

Cortisol dysfunction exists on a spectrum:

Too much → damage

Too little → dysfunction

Both states disrupt the body.

Cortisol Excess (Overexposure)

When the System Is Constantly Activated

Chronic elevation of cortisol is one of the most common patterns in modern life.

It is driven by:

- Ongoing stress
- Poor sleep
- Constant stimulation

Effects of Excess Cortisol

1. Structural Breakdown

- Collagen degradation → skin aging
- Muscle breakdown → loss of strength
- Bone loss → reduced density

2. Metabolic Disruption

- Increased blood sugar
- Insulin resistance
- Fat accumulation (especially abdominal)

3. Brain and Mood Effects

- Anxiety
- Irritability
- Impaired memory

4. Suppression of Other Hormones

- Reduced reproductive hormones
- Disrupted thyroid function

Long-Term Outcome

When cortisol remains elevated:

The body prioritizes survival over repair.

This leads to:

- Accelerated aging
- System-wide imbalance
- Progressive decline

Cortisol Deficiency (Undersupply)

When the System Can No Longer Respond

After prolonged stress, the body may shift in the opposite direction.

Cortisol output becomes insufficient.

This is sometimes described as:

- Exhaustion
- Burnout
- Reduced stress tolerance

Effects of Low Cortisol

1. Low Energy and Fatigue

- Persistent tiredness
- Poor resilience

2. Impaired Stress Response

- Difficulty handling pressure
- Slower recovery

3. Blood Pressure and Stability Issues

- Dizziness
- Weakness

4. Reduced Alertness

- Brain fog
- Low motivation

5. Changes in Character and Emotional State

- Increased irritability
- Heightened sensitivity to stress
- A tendency to feel overwhelmed or victimized
- Suspicion or paranoid-like reactions

These may present as:

- Accusatory behavior
- Increased defensiveness
- Quarrelsome or conflict-prone responses

6. Behavioral and Emotional Dysregulation

When cortisol is insufficient to regulate stress effectively, emotional control may weaken.

This can manifest as:

- Sudden outbursts of anger or anxiety
- Panic episodes
- Frequent shouting or raised voice
- Sharp verbal reactions
- Use of exaggerated or highly emotional language

These patterns are often misunderstood as purely psychological.

But in many cases:

They reflect a reduced physiological capacity to regulate stress

When cortisol is too low, the body does not become calm —
it becomes less capable of managing stress.

Burnout Transition

A common pattern:

1. Chronic stress → high cortisol
2. Prolonged overload → system strain
3. Adaptive decline → lower cortisol output

This creates:
A shift from overactivation → to underperformance

Route & Timing of Administration

- Oral – most common; follow natural rhythm (highest in the morning, followed by afternoon)
- Transdermal
- Injectable – acute use, medical supervision

Balance Point

Cortisol is not meant to be:
- Constantly high
- Chronically low

It is meant to follow a rhythm:
- Highest in the morning
- Lower towards the evening

This rhythm supports:
- Energy during the day
- Recovery at night

Cortisol becomes harmful not only when it is too high—
but also when it is no longer sufficient to support function.

Health is not about eliminating cortisol.
It is about:
- Proper timing
- Appropriate levels
- Balanced response

When **cortisol** is:
- **Balanced → the body adapts**
- Excessive → the body breaks down
- Deficient → the body cannot respond

This makes **Cortisol** one of the most powerful regulators and disruptors of human health

System-Wide Effects of Cortisol

Skin and Hair

- Collagen breakdown
- Accelerated aging
- Hair thinning

Muscles and Bones

- Muscle breakdown
- Reduced bone density

Brain and Mood

- Anxiety
- Memory impairment
- Emotional instability

Metabolism

- Increased fat storage
- Insulin resistance

Burnout Cycle

1. High stress → high cortisol
2. Prolonged exposure → system overload
3. Collapse → fatigue and dysfunction

Burnout is not just mental.

It is:

Hormonal exhaustion

Cortisol protects you in the short term — but destroys you when it becomes chronic.

Stress is unavoidable.

But chronic stress is not neutral.

It is one of the most powerful drivers of:

- Aging
- Disease
- System breakdown

Author’s Insight: Cortisol Balance

The author experienced prolonged adrenal dysfunction beginning in his 20s, driven by chronic stress during his early corporate years while striving to climb the corporate ladder.

At the time, this stress went largely unrecognized.

In the early 2000s, treatment approaches were limited, and support focused primarily on **cortisol replacement alone**.

Over time, this led to unintended consequences, including:

- Tissue wasting
- Decline in bone density
- Loss of structural integrity

This experience led to a critical realization:

Cortisol does not function in isolation

True hormonal balance requires coordination between:

- Cortisol (stress response)
- DHEA (recovery and repair)
- Thyroid (metabolic regulation)

Focusing on a single hormone without addressing the broader system can:

- Create imbalance
- Lead to long-term consequences

Cortisol supports survival — but without balance, it can drive breakdown

Hormonal health is not about replacing one hormone.

It is about:

- Restoring balance
- Supporting recovery
- Managing stress sustainably

The body is not designed for constant pressure —
it is designed for cycles of stress and recovery

Chapter 3: Estrogen Deficiency, Dominance & Imbalance

Estrogen Deficiency

When Support and Structure Decline

Estrogen is often discussed in the context of excess.
But insufficient estrogen can be equally disruptive.
Estrogen supports:

- Tissue integrity
- Reproductive function
- Bone density
- Skin health

When estrogen levels decline:
The body begins to lose structural and regulatory support

Common Causes of Estrogen Deficiency

- Aging (perimenopause and menopause)
- Chronic stress (cortisol suppression of reproductive hormones)
- Low body fat
- Nutritional deficiencies
- Hormonal imbalance (e.g., low progesterone interplay)

System-Wide Effects of Estrogen Deficiency

1. Skin and Hair Changes

- Reduced collagen
- Thinner, drier skin
- Loss of elasticity
- Hair thinning

2. Bone and Structural

- Small and/or droopy breasts
- Reduced bone density
- Increased risk of osteoporosis
- Joint discomfort

3. Reproductive and Hormonal Effects

- Irregular or absent menstrual cycles
- Vaginal dryness
- Reduced fertility

4. Brain and Mood

- Mood fluctuations
- Irritability
- Reduced mental clarity

5. Metabolic and Systemic Changes

- Increased fat accumulation (especially central)
- Reduced metabolic efficiency

What Is Estrogen Dominance

Not just high estrogen.

But: **Estrogen relative to progesterone deficiency / imbalance.**

Causes

- Environmental toxins (xenoestrogens)
- Poor detoxification
- Stress
- Excess body fat
- Genetics

Effects

- Fat gain
- Mood instability
- Increased cancer risk
- Hormonal disruption

Environmental Influence

Modern exposure includes:

- Plastics
- Chemicals
- Microplastics

These mimic estrogen in the body.

Hormonal imbalance is often about ratios — not just absolute levels.

The modern environment pushes the body toward imbalance.

Without awareness:

- Disruption becomes the norm

Estrogen and Progesterone Balance

Estrogen does not act alone.

Estrogen must be paired with progesterone

When estrogen is low:

- Progesterone may also be affected
- Hormonal balance becomes unstable

This reinforces an important principle:

Deficiency is not just about low levels — it is about disrupted relationships between hormones

Aging Pattern

With age:

- Estrogen declines
- Repair capacity reduces
- Structural integrity weakens

This contributes to:

- Visible aging
- Reduced resilience
- Slower recovery

Estrogen deficiency is not just a reproductive issue — it is a whole-body structural decline

Health is not achieved by eliminating estrogen.

It is maintained by:

- Adequate levels
- Proper balance
- System-wide regulation

When **estrogen** is:

- **Balanced → the body is supported**
- Excessive → the system is overstimulated
- Deficient → the system loses stability

Estrogen and the Onset of Puberty

Estrogen plays a central role in initiating and shaping female reproductive development.

At puberty, rising estrogen levels trigger:

- Breast development
- Widening of the pelvis
- Maturation of reproductive organs
- Onset of the menstrual cycle

These changes mark the body's transition into reproductive readiness.

Estrogen's roles:

- Activates the reproductive system
- Regulates menstrual cycles
- Supports tissue development

Hormonal Balance

Estrogen should not be viewed in isolation.

In females:

Estrogen should not be used alone — it must be balanced with progesterone

Unopposed estrogen may lead to:

- Hormonal imbalance
- Increased risk of tissue overgrowth → cancers

Balance, not dominance, **is key**.

Route & Timing of Administration

- Estrogen – transdermal in the morning
- Progesterone – oral / transdermal before sleep

Note on Cyclical Use:

- Estrogen: ideally used from Day 5 to Day 25 of a normal menstrual cycle

- Progesterone: ideally used from Day 15 to Day 25

Balance is not about maximizing one hormone,
but **aligning both** in the **right proportion for the individual**.

Author's Insight: Estrogen–Progesterone Balance

Estrogen and progesterone must be in balance.

Progesterone plays a stabilizing role against estrogen's effects.

From observation, progesterone is generally well tolerated, while unopposed estrogen is more likely to create imbalance.

A practical approach is to:

- Start with an adequate level of progesterone
- Gradually adjust estrogen (cyclically or progressively)
- Monitor response until optimal balance is reached

Once balance is achieved:

Hormones can be titrated down to the lowest effective level (financial savings).

Chapter 4: Testosterone Decline: Modern Epidemic

Loss of Drive, Strength, and Vitality

Testosterone is often associated with men.

But it is essential for both:

- Men
- Women

It influences:

- Muscle
- Energy
- Motivation
- Libido

Role of Testosterone

- Builds muscle
- Supports bone strength
- Enhances confidence and drive

Decline in Modern Life

Caused by:

- Sedentary lifestyle
- Chronic stress
- Poor sleep
- Environmental toxins

Effects of Low Testosterone

- Muscle loss
- Fat gain
- Low sex drive
- Reduced motivation

Systemic Impact

Low testosterone affects:

- Physical performance
- Mental state
- Metabolic health

Testosterone is not just a sex hormone — it is a vitality hormone.

Decline is common.

But it is not inevitable.

It is influenced by:

- Lifestyle
- Hormonal environment

Route Administration

- Transdermal
- Injectable

Author’s Insight: Exhaustion of Bodily Produced Testosterone

Hormonal balance is not only influenced by deficiency or excess,
but also by **chronic overuse and sustained physiological demand**.

Endurance athletes, such as marathon and long-distance runners, may place prolonged stress on the body.

Over time, this can:

- Suppress anabolic hormones, including testosterone
- Shift the body toward a catabolic state

This may contribute to the common observation:

“Fit, but not necessarily healthy”

Similarly, individuals exposed to **repeated physiological or hormonal strain** may experience:

- Hormonal depletion
- Accelerated aging
- Reduced structural integrity (e.g., skin, muscle tone)

Hormones are not only depleted by deficiency —
they can also be **exhausted through chronic demand**

Optimal health is not achieved through extremes.

It requires:

- Balance
- Recovery
- Sustainability

The body must not only perform —
it must also be allowed to restore

Chapter 5: Insulin:
Silent Accelerator of Disease

The Hormone That Determines Storage or Survival

Insulin is often misunderstood.

It is not just about diabetes.

It is: **The primary regulator of energy storage**

Role of Insulin

Insulin:

- Stores excess energy
- Moves glucose and fatty acids into fat cells

In a healthy state:

- Energy is used efficiently

In a dysfunctional state:

- Energy is stored excessively as fat

Insulin Resistance

When cells stop responding to insulin:

- The body produces more insulin
- Blood sugar remains unstable

This leads to:

- Fat gain
- Energy crashes
- Increased disease risk

Modern Diet Problem

Frequent intake of:

- Sugar
- Processed foods

Leads to:

- Constant insulin spikes

Over time:

The system becomes resistant.

System-Wide Effects

- Fat accumulation
- Inflammation
- Cardiovascular risk
- Metabolic dysfunction

Hidden Nature of Insulin

Unlike cortisol:

- Insulin imbalance is silent

It develops gradually:

- Without obvious symptoms early on

Insulin determines whether your body stores energy or burns it.

Insulin imbalance is one of the most powerful drivers of:

- Modern disease
- Aging
- Metabolic dysfunction

Author's Insight: Insulin and Testosterone

The author comes from a family of nine siblings, most of whom developed diabetes around the age of 50.

Approaching that age, he decided to assess his own metabolic health.

The results showed:

- Fasting insulin: **22 µIU/mL** *(elevated; optimal ~4–7)*
- Total testosterone: **~2 nmol/L** *(very low; optimal >20)*
- HbA1c: **6.0%** *(borderline diabetic)*
- Estradiol: **~70 pg/mL** *(elevated; optimal <30)*

Recognizing the pattern, he initiated hormone support under guidance, including

transdermal testosterone applied after showering, along with support to address estrogen dominance.

After approximately three months:

- Insulin reduced from **22 → 12 µIU/mL**
- Testosterone increased from **2 → 16 nmol/L**, and later to **20+ nmol/L**
- HbA1c improved from **6.0% → 5.4%** *(non-diabetic range)*
- Estradiol decreased from **70 → 28 pg/mL**

This experience highlights an important relationship:

Testosterone and insulin are closely linked

Low testosterone is often associated with:

- Insulin resistance
- Poor metabolic control

Improving testosterone levels may:

- Enhance insulin sensitivity
- Support better glucose regulation

Testosterone and insulin often move in opposite directions —
as one improves, the other may normalize

Footnote: This is an individual experience and should not be generalized as a standalone treatment approach.

Hormonal interventions should always be:

- Individually assessed
- Medically supervised
- Considered within the broader metabolic context

Metabolic health is not driven by a single factor.

It reflects:

- Hormonal balance
- Lifestyle
- System-wide interactions

Addressing underlying hormonal imbalance may influence metabolic outcomes —
but must be done thoughtfully and holistically.

PART II — HORMONES THAT HEAL

Introduction: From Breakdown to Recovery

In the previous section, we explored how hormones—when imbalanced—can contribute to:

- Stress
- Dysfunction
- Decline

But the body is not designed only for survival.

It is also designed to:

Repair, restore, and rebuild

Healing is not a passive process.

It is actively regulated by hormones.

There are hormones that:

- Promote recovery
- Support regeneration
- Restore balance after stress

These are not emergency hormones.

They are:

Recovery hormones

In modern life, many people live in a constant state of:

- Stress
- Stimulation
- Overactivation

This favors:

- Cortisol (breakdown)

And suppresses:

- Recovery hormones

Over time, the body loses its ability to:

- Repair damage
- Restore balance
- Maintain resilience

The problem is not just that stress exists —
it is that recovery is insufficient

This section focuses on the hormones that support:

- Healing
- Resilience
- Longevity

Because true health is not defined by:

- The absence of stress

But by:

The ability to recover from it

We begin with one of the most important:

DHEA — the hormone of resilience

Chapter 6: DHEA: The Resilience Hormone

Restoring Balance After Stress

If cortisol represents survival,

DHEA represents recovery

DHEA (Dehydroepiandrosterone) is produced by the adrenal glands.

It plays a central role in:

- Repair
- Resilience
- Hormonal balance

The Role of DHEA

DHEA acts as a natural counterbalance to cortisol.

While cortisol:

- Breaks down tissue
- Mobilizes energy

DHEA:

- Supports tissue repair
- Promotes regeneration
- Buffers the effects of stress

Cortisol breaks down.
DHEA rebuilds.

A Precursor Hormone

DHEA is a foundational hormone.

It can be converted into:

- Testosterone
- Estrogen

Which means:

It supports the broader hormonal system

DHEA and Aging

DHEA levels:

- Peak in early adulthood
- Decline with age

This decline is associated with:

- Reduced resilience
- Slower recovery
- Hormonal imbalance

Aging reflects a loss of repair capacity

DHEA Deficiency

When Recovery Is Compromised

Low DHEA is associated with:

- Chronic stress
- Adrenal strain
- Aging

Effects

- Fatigue
- Low stress tolerance
- Reduced motivation
- Decreased muscle mass
- Low libido

System Impact

- Poor recovery
- Increased vulnerability to stress
- Hormonal imbalance

The body loses its ability to rebuild

DHEA Excess

When Balance Is Disrupted

Excess DHEA may occur due to:

- Dysregulation
- Inappropriate supplementation

Effects

- Acne
- Increased hair growth (in women)
- Mood changes
- Hormonal imbalance

System Impact

- Overconversion into androgens or estrogens

More is not better — balance is key

DHEA and Cortisol Balance

DHEA and cortisol function together.

In a balanced system:

- Cortisol responds to stress
- DHEA supports recovery

In chronic stress:

- Cortisol remains elevated
- DHEA declines

This creates:

A state of breakdown without recovery

More important than individual levels is:

The balance between DHEA and cortisol

- High cortisol + low DHEA → breakdown
- Balanced levels → resilience

DHEA determines how well your body recovers from stress

Call to Action

If DHEA Is Low

- Improve sleep
- Reduce chronic stress
- Support nutrition
- Avoid overtraining

If Imbalanced

- Assess cortisol levels
- Address adrenal health

If Considering Supplementation

- Seek professional guidance
- Monitor response carefully

Support the system — do not override it

Route of Administration (preferably morning)

- Oral
- Sublingual
- Transdermal

DHEA is not a survival hormone.

It is a recovery hormone.

Without it:

- Stress accumulates
- Repair declines

With it:

- The body rebuilds
- Resilience improves

Healing begins when recovery is restored

Chapter 7: Growth Hormone: Repair, Regenerate, Rebuild

The Hormone of Recovery and Renewal

If cortisol represents breakdown,
Growth hormone represents repair.

Growth hormone (GH) is one of the most important hormones for:

- Tissue regeneration
- Muscle growth
- Cellular repair

It determines how well your body:

Recovers from damage and rebuilds itself

The Role of Growth Hormone

Growth hormone:

- Stimulates protein synthesis
- Promotes fat utilization
- Supports tissue repair

It is essential not just for growth in youth,
But for:

- Maintenance
- Recovery
- Longevity

When Growth Hormone Declines

With age and lifestyle factors:

- GH levels decrease

This leads to:

- Slower recovery
- Muscle loss
- Reduced skin quality
- Increased fat accumulation

Sleep: The Primary Trigger

Growth hormone is released during:

- Deep sleep

Poor sleep results in:

- Reduced GH release
- Impaired recovery

Ideal Sleep Timing

- 10PM to 2AM allows maximum GH production

Exercise and GH

High-intensity and resistance training:

- Stimulate GH production

Fasting and GH

Periods without food:

- Increase GH levels
- Promote fat utilization

Route & Timing of Administration

- Injectable, preferably before sleep

Growth hormone determines how well your body repairs and regenerates.

Aging is often seen as unavoidable decline.

But much of that decline is:

Reduced ability to repair

When GH is supported:

- Recovery improves
- Aging slows

Chapter 8: Melatonin:
Sleep and Longevity Hormone

Regulator of Time and Restoration

Melatonin is commonly associated with sleep.

But it is far more than a sleep aid.

It is: **The regulator of your internal clock**

Role of Melatonin

- Signals when to sleep
- Supports immune function
- Regulates circadian rhythm

It coordinates:

- Hormone timing
- Repair cycles
- Recovery processes

Sleep as a Biological Process

Sleep is not passive.

It is when:

- Repair happens
- Hormones reset
- Systems recover

Disruption of Melatonin

Modern factors:

- Artificial light
- Screen exposure
- Irregular schedules

Lead to:

- Reduced melatonin production
- Poor sleep quality

Consequences of Poor Sleep

- Reduced growth hormone
- Increased cortisol
- Impaired metabolism

Route of Administration, before sleep

- Sublingual
- Oral

Sleep is one of the most powerful hormonal interventions available.

Melatonin does not just help you sleep.

It helps your body:

Restore itself

Chapter 9: Oxytocin: Bonding Hormone

Biology of Trust and Connection

Oxytocin is often called:

- The “love hormone”

But its role is deeper.

It regulates:

- Trust
- Social bonding
- Emotional connection

Role of Oxytocin

- Reduces stress
- Promotes relaxation
- Enhances connection

It counterbalances:

The effects of cortisol

Social Connection as Biology

Human connection is not optional.

It is:

Biologically required

Lack of connection leads to:

- Increased stress
- Emotional instability
- Reduced well-being

Oxytocin and Health

Higher oxytocin levels:

- Improve cardiovascular health
- Reduce inflammation
- Support mental well-being

Route of Administration

- Sublingual
- Oral

Connection is not just emotional — it is hormonal.

Healing is not only physical.

It is also:

- Social
- Emotional

Chapter 10: Dopamine & Serotonin: Mind Regulators

Chemistry of Motivation and Stability

Your mental state is not random.

It is influenced by:

Neurochemistry shaped by hormones

Dopamine — Drive System

Dopamine:

- Drives motivation
- Reinforces behavior
- Creates reward

Balanced dopamine:

- Focus
- Productivity

Imbalance leads to:

- Addiction
- Lack of motivation

Serotonin — Stability System

Serotonin:

- Regulates mood
- Supports emotional balance

Low serotonin:

- Anxiety
- Depression

Modern Disruption

Constant stimulation:

- Overloads dopamine pathways

Result:

- Reduced sensitivity
- Loss of motivation

Balance Between Systems

- Dopamine → action
- Serotonin → stability

Both are needed.

Mental health is deeply connected to hormonal and neurochemical balance.

You do not just “feel” your emotions.

You experience:

Biological signals shaped by your internal state

PART III — HEALING PROTOCOLS

Chapter 11: Fasting and Hormonal Reset

Reprogramming the Body Through Periods of Absence

In a world of constant consumption,
The body rarely experiences absence.

But biologically, the body is designed for cycles:

- Feeding
- Fasting

Fasting is not deprivation.

It is: **A signal that triggers repair, adaptation, and efficiency**

Hormonal Effects of Fasting

1. Insulin Reduction

- Fasting lowers insulin levels
- Allows the body to shift from storage → to utilization

2. Growth Hormone Increase

- Fasting increases GH
- Supports fat breakdown and tissue repair

3. Metabolic Switching

- Body shifts from glucose → fat utilization

Autophagy: Cellular Cleanup

Fasting activates: **Autophagy**

This process:

- Removes damaged cells
- Recycles components
- Improves cellular efficiency

Modern Problem: Constant Feeding

Frequent eating:

- Keeps insulin elevated
- Prevents metabolic flexibility

Fasting restores hormonal balance by reintroducing natural cycles.

Healing is not always about adding.

Sometimes: It is about removing.

Chapter 12: Exercise as Hormonal Therapy

Movement as a Signal for Growth and Function

Exercise is often viewed as:

- Fitness
- Weight control

But at a deeper level, it is:

A hormonal intervention

Hormonal Effects of Exercise

1. Testosterone Increase

- Strength training stimulates testosterone
- Supports muscle and strength

2. Growth Hormone Release

- Intensity triggers repair pathways

3. Insulin Sensitivity Improvement

- Muscles become more efficient at using glucose

Types of Movement

Strength Training

- Builds muscle
- Improves metabolic health

Cardiovascular Activity

- Improves circulation
- Enhances oxygen delivery

Sedentary Reversal

Movement reverses:

- Hormonal stagnation
- Metabolic decline

Exercise is not optional — it is a biological requirement for hormonal balance.

Movement is not just activity.

It is:

A signal that tells your body to stay functional

Chapter 13: Nutrition for Hormonal Balance

Fueling the System That Regulates Everything

Nutrition is not just about Calories and Diet Plans.

It is: **The input that shapes hormonal responses**

Macronutrients and Hormones

Carbohydrates

- Influence insulin
- Provide energy

Proteins

- Support tissue repair
- Build muscle

Fats

- Essential for hormone production

Micronutrients Matter

Deficiencies affect:

- Hormone production
- Cellular function

Inflammation and Diet

Poor nutrition leads to:

- Chronic inflammation
- Hormonal disruption

Nutrition provides the building blocks for hormonal balance.

Food is not just fuel.

It is: **Biological instruction**

Chapter 14: Stress Mastery

Regulating the Most Powerful Disruptor

Stress is unavoidable.

But chronic stress is:

One of the most damaging hormonal states

Cortisol Regulation

The goal is not zero stress.

It is:

Controlled, recoverable stress

Strategies

- Breathing techniques
- Recovery periods
- Mental regulation

Breaking the Stress Cycle

- Reduce constant activation
- Increase recovery

Managing stress is managing hormones.

The body can handle stress.

But it must also be allowed to recover.

Chapter 15: Sleep Optimization

The Foundation of Hormonal Recovery

Sleep is the most powerful recovery tool.

During sleep:

- Growth hormone is released
- Cortisol is regulated
- Systems repair

Disruption Factors

- Artificial light
- Irregular schedules
- Stress

Consequences

- Hormonal imbalance
- Reduced recovery
- Increased aging

Sleep is the foundation upon which all hormonal health is built.

Without sleep:

No intervention can fully compensate.

Chapter 16: Personalized Medicine

From General Advice to Individual Precision

For decades, health has been approached with:

- General guidelines
- Population averages
- Standard protocols

But the human body is not average.

Each individual differs in:

- Genetics
- Environment
- Lifestyle
- Hormonal patterns

This is where the future is heading:

From generalization → to personalization

The Limits of Standard Approaches

General advice can:

- Provide direction

But often fails to:

- Address individual variation

Two people may:

- Eat the same diet
- Follow the same routine

Yet experience:

- Completely different results

Because their hormonal responses, sensitivities and baselines are different.

Hormone Testing and Data

Modern tools allow:

- Measurement of hormone levels
- Tracking of patterns over time

This provides:

- Insight into imbalances
- Direction for intervention

Beyond Numbers

Data alone is not enough.

It must be interpreted within:

- Context
- Symptoms
- Lifestyle

Because:

Numbers without understanding can mislead.

Individualized Protocols

The future of health involves:

- Tailored nutrition
- Personalized training
- Targeted interventions

Based on:

- Individual biology
- Hormonal profile

There is no one-size-fits-all solution — only context-specific balance.

Understanding your body is not about fitting into a system.

It is about:

Building a system that fits you

You may start with the suggested hormones triads below:

First Triad:

- Thyroid
- DHEA
- Cortisol

Second Triad (Female):

- Progesterone
- Estrogen
- Testosterone

Second Triad (Male):

- Clearing Estrogen Dominance
- Sex Hormones Binding Globulin (SHBG)
- Testosterone

Optional:

- Melatonin
- Oxytocin
- Growth Hormones

Conclusion

Your Choice: Destruction (Kill) or Heal

Throughout this book, one idea has remained constant:

The body responds to signals.

Not randomly.
Not unpredictably.

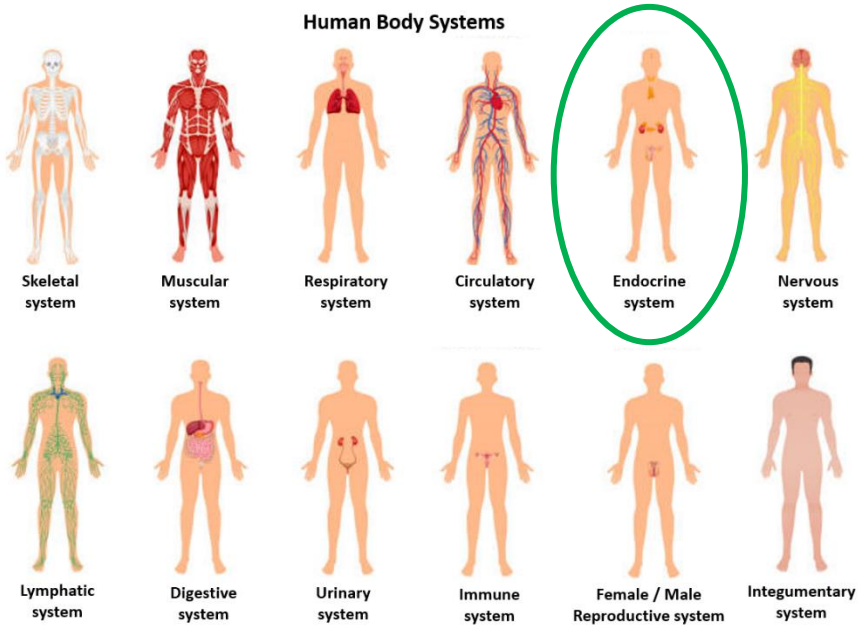
But consistently.

Hormones are one of those signals.

They influence:

- Energy
- Structure
- Mood
- Recovery
- Aging

They are not the only factor.



But they are:

One of the foundations of life

And they operate continuously.

Every day:

- Your body is receiving signals
- Your hormones are responding
- Your systems are adapting

The question is not whether this is happening.

The question is: **In which direction?**

Two Possible Paths

1. Hormonal Destruction

When signals are:

- Chronic stress
- Poor nutrition
- Sleep deprivation
- Sedentary behavior

The result is:

- Breakdown
- Imbalance
- Gradual decline

Not immediate.

But progressive.

2. Hormonal Healing

When signals are:

- Balanced nutrition
- Quality sleep
- Movement
- Recovery

The result is:

- Repair
- Stability
- Improved function

Also not immediate.

But progressive.

Accumulation Effect

Health is not decided in a moment.

It is shaped by:

Repeated signals over time

Small choices:

- Compound

Daily patterns:

- Become long-term outcomes

You Are Not Passive

You are not just experiencing your body.

You are influencing it.

Through:

- What you eat
- How you move
- How you rest
- How you respond to stress

Each action sends a signal.

And over time:

Those signals shape your biology

Final Insight

Your body is not just aging —
It is adapting to the signals it receives.

And hormones are one of the primary ways that adaptation occurs.

Your Choice

You cannot eliminate:

- Stress
- Aging
- External factors

But you can influence:

- Your responses
- Your patterns
- Your direction

And ultimately:

Your Choice: Kill or Heal

Closing Remarks

This book is not about perfection.

It is about awareness.

Because once you understand:

- The signals
- The systems
- The connections

You gain something powerful:

The ability to change direction

And that is where transformation begins.

P/S: Knowledge and understanding are continually evolving. For example, early beliefs once held that the Earth was flat, but we now know it is spherical and orbits the Sun as part of a vast galaxy.

In the same spirit, I share this content with the awareness that my knowledge is limited and always open to refinement.

We welcome any updates, insights, or advancements on hormones.

Please feel free to share your thoughts with us at sumrui@gmail.com.

Sincerely,
TOH SEK CHEONG
May 2026

UNDERSTAND THE SIGNALS. RESTORE THE BALANCE. RECLAIM YOUR HEALTH.

In a world overwhelmed by stress, poor sleep, toxic food, and constant stimulation, our hormones are silently signaling survival—but at a cost. When these chemical messengers are out of balance, they can contribute to fatigue, weight gain, mood disturbances, disease, and accelerated aging. But the same hormones that can destroy, can also heal—when understood and supported.

Hormones Kill, Hormones Heal offers a clear, science-based roadmap to help you understand how hormones shape your body, mind, and long-term health—and how to take control through evidence-based strategies.

> This book conveys very important information about the importance of hormones to our health, illustrated by the experiences of the author and his wife. It is very readable and easy to understand. Highly recommended!
>
> **– Dr. Amir Farid**
> Gynaecologist

> A powerful and refreshing read. Hormones Kill, Hormones Heal bridges science and daily life, making bioidentical hormones clear, practical, and relevant to all. A compelling reminder that hormonal balance shapes our energy, performance, and longevity—while also serving as a valuable guide for doctors seeking to integrate hormone therapy into clinical practice.
>
> **– Dr. Razin Jaafar**
> Author of Fat Fasting 72 and Founder of Restorative Medicine Malaysia

> Hormones Kill, Hormones Heal offers a thought-provoking perspective on the role hormones play in overall well-being. Written in a clear and engaging manner, the book encourages readers to rethink conventional understanding and explore the importance of hormonal balance in daily life. An insightful and eye-opening read for both healthcare professionals and general readers alike.
>
> **– Dr. Ahmad Hassan**
> Founder of Oxy Healing Sdn. Bhd.

> An excellent and well-structured book written in simple, easy-to-understand language without medical jargon. Each topic is presented clearly with balanced explanations of hormonal functions, benefits, and risks.
> Readers can easily explore the chapters most relevant to their personal health concerns. Its informative, concise, and highly readable, this book serves as a valuable reference for anyone seeking to understand the basic functions and impact of hormones on overall well-being.
>
> **– Mr Ronnie Tan**
> Founder of Tenco Group

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