It's Not Just A Case Of Eating Less and Doing More

THE BIOLOGY *Of* WEIGHT LOSS

10x Your Energy & Fast-Track Fat Loss:
A guide to realigning your weight loss hormones so that your body burns its own body fat for fuel.

Darren Tebbenham, BSc, MSc

Introduction

From Psychology to Biology - Why Both Matter

The Psychology of Weight Loss was written to remove shame and help you better understand:-

- How your mind works,
- How it can keep you stuck in your weight loss-regain cycle, and
- How to free yourself from this struggle.

It explained why motivation fades, why consistency breaks down, and why willpower collapses under pressure - not because people are weak, but because the human

mind responds predictably to stress, restriction, emotional load and modern life.

That book answered an essential question:

“Why do people keep falling off, even when they know what to do?”

This book answers the next one:

“Why does my body resist weight loss in the first place?”

Together, these books tell a single story.

Psychology explains behaviour.
Biology explains resistance.

You cannot think your way out of a biological block. And you cannot biologically optimise a body that is constantly stressed, shamed or fighting itself psychologically.

Most people believe their weight problem is behavioural. They assume they overeat because they lack discipline, struggle with consistency because they are unmotivated, or fail because they are somehow different from others who “just get on with it.”

> In reality, these behaviours are downstream effects.

Upstream are biological signals: insulin dysregulation, loss of metabolic flexibility, learned hunger, reward-driven eating, muscle

loss with age, and a nervous system under constant pressure.

When biology is misunderstood, people blame themselves. When biology is understood, self-attack dissolves - and change becomes possible.

This book exists to make that shift.

PART 1: THE CONTROL SYSTEM

Chapter 1: Weight Loss Is About Hormones Before It Is Calories

If you've spent years trying to lose weight, you've almost certainly been told the same thing:

Eat less. Do more.
Burn more calories than you consume.

On the surface, this sounds logical.

Calories are units of energy. If you take in more energy than you use, you store the excess.

Except weight loss doesn't work like that.
If it did, it would work every time.

Millions of people track calories meticulously, exercise regularly, follow the rules - and still fail to lose weight. Others succeed only by living in a state of constant hunger, fatigue and mental obsession.

This is not because calories don't matter.
It's because **calories do not control fat loss.**
Hormones do.

The body does not count calories.
It responds to signals.

The most powerful of those signals is **insulin**.

Insulin's role is to move energy out of the bloodstream and into storage. When you eat particularly carbohydrates aka sugar - insulin rises. Some energy is stored in muscle and

liver. But once those stores are full, the rest is stored as fat.

This process is not a flaw.
It is how humans survived.

The problem arises when insulin is elevated too often, for too long.

Fat loss requires access to stored fat.
Insulin blocks that access.

Until insulin comes down, fat loss cannot occur - no matter how hard you try.

This is not a motivation problem.
It is a biological gate that remains closed.

When you first create a gateway for your body to access its own stored body fat - everything changes.

Chapter 2: Insulin, Glucagon & the Fat-Storage Trap

If insulin stores energy, **glucagon** releases it.

Glucagon allows the body to convert stored fat into usable fuel. This is not an emergency response.

It is a normal, everyday process that should occur between meals, overnight, and during low-intensity activity.

> But insulin and glucagon cannot dominate at the same time.

When insulin is high, glucagon is suppressed. When insulin falls, glucagon rises.

This explains why fat loss feels blocked for so many people.

They are not failing to burn fat - **they are never being given biological permission to access it**.

Exercise does not override this system.

If insulin is elevated, the body burns incoming food, not stored fat. This is why people can exercise consistently yet feel hungrier, heavier or unchanged.

Modern eating patterns (i.e. grazing all day) keep insulin elevated all day.

The result is a permanent fat-storage state.

This is not a behavioural flaw.
It is a predictable metabolic trap.

PART 2: HOW WE LOST METABOLIC FLEXIBILITY

Chapter 3: Snacking, Grazing & Why Fat Loss Switched Off

For years we were told to eat little and often to stabilise blood sugar and keep metabolism high.

Biologically, the opposite happened.

Every time you eat, insulin rises.
That is normal.

But when eating never stops, insulin never falls.

Fat burning requires low insulin. Snacking removes the gaps where fat burning should occur.

Hunger was never meant to signal danger. It simply meant: **use stored energy**.

But when insulin is chronically elevated, hunger becomes urgent and uncomfortable because stored fat is inaccessible. The body becomes dependent on constant incoming food.

This is why missing meals feels frightening for some people - not because it is unsafe, **but because metabolic flexibility has been lost**.

Spacing meals restores it.

ENERGY FIRST

Foods are not good or bad. But they play particular roles in our diet. And

carbohydrates' primary function are to give us energy.

Yet, to lose weight we need to change from relying on carbohydrate in our meals to using the fat already stored on our body.

Of course, snacking usually revolves around refined carbohydrates (not boiled eggs) and with an increasingly carbohydrate-rich diet ever since the demonisation of fats in the 1980s – things have got worse not better.

The fastest way to regain control over insulin is to make strategic dietary changes. More about this is the final section in this book.

Chapter 4: Insulin Resistance: The Silent Weight-Gain Driver

Insulin resistance develops slowly and quietly.

The body becomes less responsive to insulin, so more insulin is produced to compensate.

This is technically called **hyperinsulinemia**.

This chronically high insulin keeps our blood sugars under control (normal). In fact, blood sugar remains normal for years while insulin levels rise behind the scenes.

Fat storage becomes easier. Fat access becomes harder. Hunger increases. Energy fluctuates.

By the time weight gain is obvious, insulin resistance is often well-established.

This is why weight gain accelerates with age - not because metabolism “breaks,” but because hormonal exposure accumulates and muscle mass declines.

The crucial point is this:

Insulin resistance is reversible.

Reduce insulin exposure consistently, and the body regains sensitivity. Fat loss becomes possible again.

PART 3: RE-TEACHING FAT BURNING

Chapter 5: Becoming a Fat-Burning Human Again

Your body already knows how to burn fat. It has simply lost access.

Fat burning is not extreme or athletic. It should happen naturally between meals, overnight and during rest.

When insulin falls regularly, glucagon rises. Fat is released. Blood sugar stabilises. Hunger reduces.

The transition may feel uncomfortable at first - not because it is unsafe, but because the body is relearning trust.

This phase passes.

Fat loss becomes easier, not harder, once adaptation occurs.

When your body becomes what is called *fat-adapted* – **metabolic flexibility** returns and you can burn the calories in food but also the calories stored on your body as fat *with ease*.

Chapter 6: Protein, Muscle & the Metabolic Engine

Muscle is metabolic infrastructure.

From our thirties onward, muscle mass declines (around ½ kg or 3-4lbs+ per year) unless actively maintained. This reduces insulin sensitivity and metabolic capacity.

Protein supports muscle, stabilises hunger, improves satiety and supports brain chemistry.

Protein combined with resistance training sends powerful signals to the body: preserve tissue, handle glucose efficiently and remain metabolically resilient.

This is not aesthetic.
It is metabolic.

Resistance training features, therefore, in our 5 step system I will outline shortly.

Chapter 7: Fat Is Not the Problem - It's the Solution

Fat was **wrongly** demonised.

Fat does not cause fat gain. Insulin-driven energy storage does.

Natural dietary fats support hormones, brain health, vitamin absorption and satiety. Low-fat diets increase hunger and disrupt regulation.

Protein and fat are meant to be eaten together. Whole foods (particularly animal derived whole foods) reflect this design.

When fat returns to the diet, appetite regulation improves and cravings soften.

PART 4: FASTING & TRUST

Chapter 8: Hunger Isn't an Emergency

Hunger has become one of the most feared sensations in modern life.

It is treated as a warning sign - something to be avoided or silenced as quickly as possible. Many people panic at the first hint of it, reaching for food not because they need nourishment, but because hunger has been framed as danger.

Biologically, hunger is not an emergency.

For most of human history, hunger simply meant the body was ready to use stored

energy. It was a signal of availability, not deficiency.

The problem is not hunger itself. The problem is what hunger feels like when fat is inaccessible.

When insulin is high and fat burning is blocked, hunger feels sharp, urgent and emotionally charged. When insulin is low and fat burning is available, hunger is softer and more patient.

Learning this distinction is transformative.

Short waves of hunger during fat loss are not starvation signals. They are transition signals

- moments where the body is shifting fuel sources.

Each time hunger rises and falls without immediate feeding, the body relearns trust.

Blood sugar remains stable.
Energy returns.
Hunger passes.

This is how metabolic confidence is rebuilt.

The key is to nourish the body with what it needs. It will then give you want you want.

This means ensuring the presence of sufficient "**essential**" nutrients in your diet.

In nutrition-speak essential means required in your diet because the body doesn't manufacture it itself.

Fat is an essential nutrient. Essential fatty acids for example – are exactly that, essential. Omega 3 is an example of an essential fatty acid.

Protein is, too – **essential**. The amino acids that make up protein are required to ensure our bodies work and regenerate optimally.

In fact, when we consider "metabolism" we are talking about precisely this. The many thousands of chemical reactions inside our body that are converting amino acids and fatty acids in to cell members, muscle tissue and repairing damaged arteries etc. are what creates our metabolism.

This is one of the flaws of a calorie-centric model of weight management. It assumes a calorie is a calorie is a calorie.

Protein and fat calories, however, unlike carbohydrate calories are **not** designed as energy sources.

They supply the body with the essential ingredients for health.

Indeed, **tryptophan**, an example of an amino acid derived from protein consumption is the building block of serotonin – our mental health hormone.

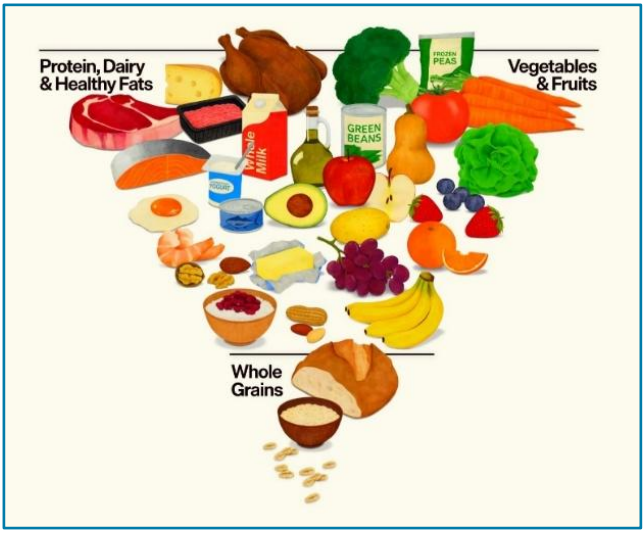
In fact, serotonin is also the building block of melatonin - our sleep hormone.

Given the importance of feeling good and sleeping well in the whole weight loss

equation – tryptophan is a key amino acid we require. And yet it is almost exclusively found in animal-based protein i.e. meat, fish, eggs and dairy. The amount found in any plant form is simply miniscule.

This is one of the reasons why animal products are an important part of an optimally healthy diet (not just plants).

Recent corrected American nutrition guidelines (2025-2030) reflect this fact –



More on this is our practical implications section. Interestingly, carbohydrate is not an essential nutrient.

The human body has a biological process called gluconeogenesis to ensure it has the sugar it needs to fuel the brain and provide a quick dose of energy when it needs.

This is independent of ingested carbohydrates. And hence the technical definition of carbohydrate being a non-essential nutrient.

Of course, we may well still consume them. They taste great. But we don't need them!

As a quick reminder about what carbohydrates are – they include:-

Cereals, bread, pasta, rice, potatoes and grains Indeed all fruits and vegetables are carbohydrates. In fact plants in general are carbohydrate.

Regardless of the source – all carbohydrates are converted into blood glucose i.e. sugars.

So, it isn't just "sugar" we need to me mindful of in order to prevent insulin production but all carbohydrates.

Control carbohydrates - to control insulin.
Prioritise protein and fat - to nourish optimally.

Chapter 9: Fasting, Gaps & Metabolic Trust

Fasting has acquired a reputation it does not deserve.

It is often framed as extreme or dangerous, when in reality it is simply **the absence of eating for a period of time** - something humans have always done.

Overnight, you fast.
Between meals, you fast.

The real question is not whether you fast, but whether those fasts are long enough for insulin to fall and fat burning to resume.

Many people fear fasting because they fear hunger - and beneath that, they fear loss of

control. These fears come from a body that has forgotten how to fuel itself from stored fat.

As insulin sensitivity improves, fasting stops feeling dramatic. Gaps between meals feel normal. Hunger loses urgency. Energy becomes predictable.

Fasting does not need to be aggressive to be effective. Consistency matters more than duration.

The goal is not endurance.
The goal is trust.

You'll create such trust when you nourish your body and mind with what it needs – protein and fat, vitamins and minerals!

PART 5: CRAVINGS & ADDICTION

Chapter 10: The Biology of Cravings

Cravings are not random.
They are not moral failures.

They are learned biological responses driven by reward circuitry, blood sugar instability and emotional reinforcement.

Highly processed foods stimulate dopamine and opioid pathways in the brain, creating powerful associations between eating and relief. Over time, the brain learns that certain foods reduce discomfort, stress, fatigue, boredom and loneliness - even though only temporarily.

This learning is chemical, not conscious.

This is why cravings often return during stress, even after long periods of progress. **This is not failure. It is biology resurfacing under pressure.**

The solution is not shame or stricter rules.

The solution is to stabilise the system: reduce insulin volatility, nourish adequately, and lower nervous system stress.

When the system is calm, cravings lose their grip.

Chapter 11: Real Food as Neurological & Metabolic Therapy

Real food provides nutrients, not just calories. Real food is meat, fish, eggs and dairy as well as fruits and vegetables.

If it comes in a box, in a bag or with a barcode it is likely processed. When you focus your nutrition on meat, fish, eggs and dairy as well as fruits and vegetables – your body doesn't just get the nutrients it needs – but gets them in the right proportions, too!

When the body receives what it needs, the drive to keep eating reduces. Blood sugar stabilises. Reward pathways quieten.

Cravings soften not through discipline, but through sufficiency.

Food becomes neutral again.

This calm is biological.

The other reason we experience cravings, of course, is more obvious. To make us eat.

When we fail to nourish our bodies and minds well over a sustainable period, we will experience cravings.

Cravings to make us eat, hoping to ingest the nutrients that are missing.

This is evident never more so than when people “diet”.

When calories are cut (especially fat calories) - often nourishment is restricted, too. Fat,

remember, is essential – it transports our fat soluble vitamins A, D, E and K and is paramount in new cell membrane resynthesis, for example - and vital for optimal brain functioning.

To stop cravings, we need to master the biology and psychology of consistent nutritional change.

PART 6: MAKING IT STICK

Chapter 12: Accountability Changes Biology

Accountability is often misunderstood as pressure.

In reality, it works because it reduces cognitive load.

When people are left to manage everything alone, every decision becomes a negotiation.

This constant self-management elevates stress hormones, particularly cortisol, which worsens insulin resistance and appetite regulation.

Support changes this.

When structure exists outside the individual, decisions are simplified, stress reduces and consistency improves.

Accountability is not motivational.
It is regulatory.

More on accountability memberships inside my Accountability Club at the end.

Chapter 13: Becoming the Person Who Is In Control

Identity does not change through force.

It changes through repeated biological evidence.

When hunger is predictable, energy is stable and cravings are quiet, people begin to see themselves differently - not as someone who is “trying to be good,” but as someone who simply *is in control*.

The future version of you is not stricter.

They are calmer.
More regulated.
Less reactive.

Consistency becomes who you are - not something you do.

A Practical Reset for Fat Loss, Energy and Consistency

Most people don't fail at weight loss because they don't know what to do.

They fail because the *order* is wrong.

They try to exercise harder before their body can access fat. They cut calories too low and trigger stress. They snack "healthily" and unknowingly keep insulin elevated. Then they conclude the problem is them.

It isn't.

Taking back control is not about becoming stricter.

It's about creating the biological conditions where fat loss becomes *possible* again.

These five steps do exactly that.

Step 1: Control Carbohydrates to Control Insulin

Carbohydrates aren't "bad." Cereal, bread, toast, pasta, rice, potatoes, whole grains - they all have a primary job: **to provide energy**.

But if the goal is fat loss, we want the body to stop relying on incoming energy and start using **stored energy**.

That begins with controlling carbohydrates.

A reminder why:

When we consume carbohydrates, the pancreas releases **insulin**. Insulin's job is to store energy for later. That is what it's designed to do.

The problem is that insulin does something else at the same time:

It puts the body into fat-storage mode.

The body can't be in fat-storage mode and fat-burning mode at the same time.

So if insulin stays elevated - because meals are high in carbohydrates or because we graze throughout the day, fat burning stays locked away.

This is also why exercise can feel so frustrating in the beginning.

If your body is still carbohydrate-dependent and insulin is high, exercise tends to do one of two things:

- It makes you hungry, and you eat back the energy you use
- It makes you feel tired, and you stop doing it

Exercise, of course, is important - but it becomes powerfully effective **after** we've taught the body to access fat.

So Step 1 is simple and foundational:

Reduce the carbohydrate load so insulin falls and fat burning becomes available.

Step 2: Stop Snacking to Let Insulin Come Down

Even when you eat well, meals will create an insulin rise. That's normal.

Breakfast, lunch and dinner will create spikes - even if you do everything "right."

That said, when you limit carbohydrates especially during the 14-day high compliance phase we walk you through during our paid programs – your insulin stops spiking as much.

The BIG problem is what happens *between* meals.

Most snacks are refined carbohydrates:

- Biscuits with a cup of tea

- Cake with coffee
- Supermarket “grab and go” foods
- And even fruit (a banana is still sugar in biological terms)

When you snack, you create another insulin rise. Then another. Then another.

So instead of insulin rising and falling in a natural rhythm, it stays high all day.

And if insulin is high all day, **fat burning is off all day.**

That’s the hidden sabotage of snacking:

- Not because snacking is morally wrong
- But because it keeps the body in storage mode

This is also where insulin resistance becomes relevant.

When insulin is supposed to “bind” and remove sugar from the bloodstream efficiently, insulin resistance makes that process less effective.

The pancreas compensates by producing **more insulin** to keep blood sugars looking normal.

So blood sugars can appear “fine” while insulin is chronically high.
That’s hyperinsulinemia - and it blocks fat burning.

This is why Steps 1 and 2 together are so powerful:

Control carbohydrates + stop snacking = regain control of insulin.

And when insulin comes down, fat loss starts to work again.

Step 3: Base Your Diet on Real Food So the Body Feels Safe

When people reduce carbohydrates and stop snacking, there's a risk:

They feel hungry.

The body interprets the sudden drop in energy as stress. And stress changes everything.

The body doesn't respond well to fear-driven dieting. So Step 3 is what prevents the "panic response":

Base your diet on real, nourishing food.

That means prioritising foods that contain the essential nutrients the body recognises as safety:

- Meat, fish, eggs, dairy
- Alongside vegetables and salad
- And sparingly some fruits

Why this matters:

Protein and fat provide the **amino acids and fatty acids** the body needs. When the body

feels well nourished, it becomes far more willing to release stored fat.

A diet with enough protein and enough fat does two things:

1. It reduces hunger - you feel fuller for longer
2. It reduces stress - the body doesn't feel deprived

And this is key:

We still want a calorie deficit - but not a deficit created by panic, starvation or under-nourishment.

Step 3 is how you stay in a deficit *without triggering a stress state*.

Step 4: Use Exercise Properly: Resistance + Daily Cardio

Once Steps 1–3 are in place, the body begins transitioning from carbohydrate-burning to fat-burning. That transition can take a couple of weeks.

You may not feel your best at first. That's normal. Stick with it.

Then exercise becomes what it was always meant to be:

A multiplier.

There are two types that matter here:

1) Resistance Training

Resistance training raises metabolic rate because it damages muscle fibres (in a healthy way), and the repair process is metabolically expensive.

This does more than change shape.

It improves:

- Strength
- Joint health
- Bone density
- Long-term metabolism

Most importantly for fat loss:

It helps ensure the weight you lose is **fat**, not muscle.

2) Cardio (most days)

Before you change Steps 1 and 2, cardio often produces poor results because the body is still carbohydrate-dependent.

But once the body is in fat-burning mode, walking, jogging, cycling, swimming - even gentle daily movement begins to burn fat *as fuel*.

And the key here isn't intensity.
It's habit.

Once or twice per week takes forever to become automatic.

But when you move daily, even briefly - the habit forms quickly, the volume accumulates, and the results become consistent.

So Step 4 is simple:

- **Lift weights regularly** (to protect metabolism)
- **Cardio on most days** (to use fat as fuel and build rhythm)

Step 5: Learn to Stop Stopping

Most people can start.

The real challenge is continuing when:

- Old habits return

- Other people influence you
- Stress rises
- Boredom hits
- Emotional eating reappears
- Certain foods trigger “I can’t stop” patterns

This is where people don’t just lose fat - they lose confidence.

So Step 5 is the step that makes everything else last:

Stop stopping.

For many people, moderation doesn’t work with certain foods. Some foods create a “switch”:

- Wine on a Wednesday just because…
- Crisps that never stay at one packet
- Biscuits that can’t remain at one or two
- Coffee shop routines where you always “need something”

So the strategy becomes:

1. Identify your problem foods
2. Abstain for a period
3. Regain control
4. Reintroduce intentionally (if you choose), when ready

And then there are two tools that directly interrupt self-sabotage:

Tool 1: Celebrate Daily Wins

When you actively notice what you are doing well, you create reward chemistry (dopamine and brain opioids) linked to your new identity.

That matters because many cravings aren't just for food - they're for a "feel-good hit."

Celebration gives the brain a new source of that feeling.

Tool 2: The 5–4–3–2–1 Method

This is an immediate pattern interrupt.

When you are about to default to autopilot:

- Reaching for wine
- Reaching for biscuits
- Skipping your walk because it’s cold
- Drifting into the old version of you

You count down:

5…4…3…2 and on 1 you act.

The countdown brings the thinking brain back online, your prefrontal cortex - the part of you that already decided and committed.

And the key is this:

The moment you start the countdown, you’ve already chosen the outcome you want.

“1” is simply the trigger to follow through immediately.

Finally, Step 5 includes one more biological truth:

Stress creates cortisol.

Cortisol disrupts fat burning and encourages fat storage - particularly around the midsection and visceral area.

So “stop stopping” also means:

Stop swinging between extremes.
Stop going overly restrictive.
Stop turning fat loss into a stress state.

Healthy eating becomes less about what you're trying to avoid - and more about what you consistently give the body.

Nourishment. Rhythm. Repetition.

That is control.

In Summary: The 5-Step Reset

1. **Control carbohydrates** to lower insulin and access stored fat
2. **Stop snacking** so insulin can fall between meals
3. **Base your diet on real food** so the body feels nourished and safe

4. **Exercise properly**: resistance training + frequent cardio to build habit and burn fat
5. **Stop stopping**: remove trigger foods, celebrate wins, interrupt autopilot, reduce stress

This is not a quick fix.
It's a return to biological common sense.

And when biology is on your side, consistency stops being a personality trait - and becomes the natural result.

What to do next?

MY BREAK-THROUGH MONTH

> 1x 90 minute consult over Zoom (to set you up with my 14 day high compliance nutrition plan as well as create a personal roadmap to get yourself fully back in the driving seat).
> 2x 15 minute accountability follow ups
> Weekly check-in inside my app
> Full access to all the resources you need including recipe ideas, meal plans and more...

Full details here www.dt.coach

I also offer ultra-affordable membership plans

Starting at just £10/week

Join my Accountability Club today!

Full details here www.dt.coach

I hope you have found this book helpful. You can also book a Wake-Up Call on my website to gentle ease into the prospect of working together!