



THE GOOD SLEEP GUIDE FOR WEIGHT

How Sleep Shapes Your Appetite, Your Metabolism and the Body You Live In

Sammy Margo

MSc MCSP HCPC MMACP AACP

Chartered Physiotherapist | CEO & Founder, SMARTPHYSIO

THE GOOD SLEEP GUIDE FOR WEIGHT

How Sleep Shapes Your Appetite, Your Metabolism and the Body You Live In

Sammy Margo

MSc MCSP HCPC MMACP AACP

Chartered Physiotherapist | CEO & Founder, SMARTPHYSIO

Author of The Good Sleep Guide and The Good Sleep Guide for Kids (Penguin/Ebury)

Based on peer-reviewed research, 2022 to 2026

For everyone who has done everything right by day and wondered why it never quite added up.

Contents

- Foreword
- Introduction: The Pillar Nobody Talks About
- PART ONE: The Science of Sleep and Weight
- Chapter 1: The Two Hormones That Run Your Appetite
- Chapter 2: Why Tired People Reach for More
- Chapter 3: Where the Weight Settles
- PART TWO: Sleep, Dieting and Body Composition
- Chapter 4: Dieting on Empty
- Chapter 5: Timing, the Body Clock and Late-Night Eating
- PART THREE: The Real-World Picture
- Chapter 6: Stress, Cortisol and the Comfort-Food Loop
- Chapter 7: Sleep and the Energy to Move
- PART FOUR: A Kinder Plan
- Chapter 8: Building a Sleep-Friendly Evening
- Chapter 9: The Four-Week Sleep and Appetite Reset
- Your Sleep and Weight Cheat Sheet
- References
- About Sammy Margo

Foreword

For most of my career, weight was discussed in only two rooms: the kitchen and the gym. Eat less, move more. It is sound advice as far as it goes, and for a great many people it simply does not go far enough. They are eating carefully. They are moving. And still the body refuses to cooperate. When that happens, the usual response is to assume a failure of willpower. I want to offer a gentler and, I think, more accurate explanation.

There is a third room, and most of us spend a third of our lives in it. It is the bedroom. What happens there, night after night, quietly sets the terms for what happens in the other two. A short or broken night does not just make you tired. It changes the hormones that govern hunger, the brain circuits that judge food, the place your body chooses to store fat, and even how much of your hard-won muscle you keep when you try to slim down. None of this is about discipline. It is physiology.

This guide is not a diet. You will find no meal plans, no rules about what to put on your plate, and no numbers to hit. I am a physiotherapist, not a dietitian, and my interest is in the system underneath: the sleep that makes every other healthy choice easier or harder. Treat the night well, and the day tends to look after itself a little more kindly. That is the whole idea.

You can do everything right by day. If the night is wrong, the day is working against a tide it cannot see.

Introduction: The Pillar Nobody Talks About

Ask anyone to name the foundations of a healthy weight and you will hear the same two answers: food and exercise. Sleep, if it comes up at all, is mentioned last, almost as an afterthought. Yet the science of the past few years has moved sleep firmly to the front of the conversation, and for a simple reason. When researchers change nothing about a person's diet or activity and alter only their sleep, weight and appetite shift anyway.

That is a remarkable finding, and it overturns the old order. It means sleep is not merely a backdrop to weight. It is one of the levers. And unlike many of the others, it is a lever most of us can actually reach.

Research Evidence JAMA Internal Medicine, 2022

In a randomised clinical trial, eighty adults with overweight who habitually slept under six and a half hours a night received a single sleep-counselling session. Those who extended their sleep by an average of just over an hour a night went on to eat around 270 fewer calories per day, with no other changes asked of them, producing a negative energy balance.

(Tasali, Wroblewski, Kahn, Kilkus and Schoeller, JAMA Internal Medicine, 2022; 182(4):365 to 374)

Read that again, because it is the quiet revolution at the heart of this book. The participants were not told to diet. They were not told to move more. They were simply helped to sleep a little longer, and they ate less without trying. Their bodies did the arithmetic for them.

In the chapters that follow we will look at how this works, from the hormones that switch hunger on and off, to the brain circuits that make a doughnut irresistible at the end of a tired day, to the surprising matter of where the body decides to store fat. Then we will turn to what you can do about it, with a plan that asks you to change your nights, not to police your plate.

Pause and Reflect

Before you read on, think back to your hungriest, most snack-prone days. What were the nights before them like? Most people have never connected the two. By the end of this book, you may never see them as separate again.

PART ONE

The Science of Sleep and Weight

Chapter 1: The Two Hormones That Run Your Appetite

Meet Donna

Real-World Story

Donna, 47

Donna came to me about her knees, but within five minutes we were talking about biscuits. “By nine in the evening I am raiding the cupboard,” she said, “and I am not even hungry, not really. I just want it.” She had assumed this was a character flaw she had carried since childhood. When I asked about her sleep, the picture changed. She was running on five and a half hours, every night, for years. Her evening cravings were not weakness. They were a hormonal signal, right on schedule.

Hunger feels like a simple thing, a message from an empty stomach. In truth it is orchestrated by a small committee of hormones, and two of them matter most here. Ghrelin is the hormone that says eat. It rises before meals and falls after them. Leptin is the hormone that says enough, the one that signals satisfaction and tells the brain the tank is full.

Sleep is one of the main conditions under which this committee meets. When sleep is short or broken, the balance tilts in a predictable and unhelpful direction. Ghrelin tends to rise and leptin tends to fall. The accelerator is pressed and the brake is eased at the same time. The result is a person who feels hungrier and harder to satisfy, not because they lack resolve, but because the chemistry of appetite has been nudged off centre overnight.

This is why the late-evening cupboard raid is so common in tired people, and why it feels less like a decision and more like a pull. The signal is real. What most of us get wrong is the diagnosis. We treat it as greed when it is, in large part, a symptom of sleep debt.

Research Evidence *Journal of the American College of Cardiology, 2022*

When healthy, lean young adults were restricted to about four hours in bed for two weeks with free access to food, they took in roughly 300 extra calories a day compared with a well-rested control period, while burning no more energy. Short sleep increased intake without increasing output.

(Covassin, Singh, McCrady-Spitzer and colleagues, *Journal of the American College of Cardiology*, 2022; 79(13):1254 to 1265)

Notice that these were not people prone to overeating. They were young, lean and healthy. The extra eating was not a personality trait. It was what reliably happened to ordinary bodies when

sleep was taken away. That is the most liberating idea in this whole field: the hunger is largely a sleep problem wearing the costume of a food problem.

 Sammy's Tip

If your willpower seems to collapse every evening, do not start by interrogating your snacking. Start by counting your sleep. A week of honest nights logged beside your hungriest evenings will usually show you the lever you have been missing.

Chapter 2: Why Tired People Reach for More

Hormones set the background hunger. But anyone who has been short of sleep knows the craving is not for broccoli. It is for the sweet, the salty, the dense and the quick. There is a reason the tired brain reaches for exactly those foods, and it sits one level up from the hormones, in the circuitry of reward and judgement.

Two things happen in a sleep-deprived brain when food appears. The reward regions, the parts that light up at the prospect of something pleasurable, become more reactive. At the same time, the prefrontal regions that weigh consequences and apply the brakes become less active. So the appeal of the treat is amplified at the very moment your ability to think twice is dimmed. It is a poor combination, and it is engineered by the lost sleep, not by the weakness of the person experiencing it.

This is also why tired eating tends to favour energy-dense foods. The brain, sensing a shortfall of rest, behaves as though it is short of energy and steers you towards the fastest sources of it. The pull towards sugar at midnight is an ancient mechanism misfiring in a modern kitchen that never closes.

The tired brain turns up the volume on temptation and turns down the volume on second thoughts. That is not a flaw in you. It is a feature of sleep loss.

Set against this, the sleep-extension finding from the previous chapter makes perfect sense. When the same people are allowed to sleep more, the reward circuitry settles, the brakes come back online, and the spontaneous reaching for more simply eases. They are not resisting harder. There is less to resist.

Pause and Reflect

Picture the last time you ate something at night that you did not really want and did not enjoy. Were you hungry, or were you tired? Learning to tell those two states apart is one of the most useful skills in this book.

Sammy's Tip

When a strong craving arrives late in the evening, try naming it out loud as a sleep signal rather than a hunger signal, then go to bed twenty minutes earlier than usual. Many people find the craving was, in truth, a request for sleep in disguise.

Chapter 3: Where the Weight Settles

It would be bad enough if poor sleep only made you eat a little more. But the research of recent years has uncovered something more pointed. Sleep loss does not just affect how much fat you gain. It influences where that fat is placed, and it chooses the worst location.

Fat stored just under the skin, the kind you can pinch, is relatively harmless. Fat stored deep in the abdomen, wrapped around the organs, is a different matter. This visceral fat is the type most strongly linked to heart disease and to problems with blood sugar. It is the fat you cannot see that does the quiet damage.

Research Evidence *Journal of the American College of Cardiology, 2022*

In the same controlled study of experimental short sleep, participants did not merely gain a little weight. The fat accumulated preferentially inside the abdomen, with a measured rise of around eleven per cent in visceral fat. The authors described this as the first causal evidence linking short sleep to the dangerous, deep belly fat seen in population studies.

(Covassin and colleagues, *Journal of the American College of Cardiology*, 2022; 79(13):1254 to 1265)

This reframes the stakes. The waistband that creeps tighter during a stretch of bad nights is not only a cosmetic concern. It can reflect a redistribution of fat towards the compartment that matters most for long-term health. And it can happen, as this study showed, even in young and lean people, even over a fortnight.

I do not share this to alarm anyone. I share it because it changes what we should pay attention to. If you have been worrying only about the number on the scales, the deeper story may be playing out in a place the scales never see. Protecting your sleep is one of the few things that addresses both the amount of fat and its destination at the same time.

Sammy's Tip

Rather than weighing yourself daily, notice across a fortnight how your waistband and your sleep travel together. The relationship is often clearer, and far more motivating, than the scales alone.

PART TWO

Sleep, Dieting and Body Composition

Chapter 4: Dieting on Empty

Meet Mark

Real-World Story

Mark, 52

Mark had lost a stone, and he was miserable about it. “I know I should be pleased,” he said, “but I feel weaker, not fitter. My arms have gone.” He had thrown himself into a strict regime, eating less and training hard, but sleeping barely six hours because he was setting his alarm for dawn workouts. The weight he had lost was coming, disproportionately, from the wrong place. He was sacrificing muscle to save sleep, and getting a worse result for more effort.

Here is a fact that ought to be on the wall of every gym and every clinic. When you lose weight, your body has a choice about what to give up: fat or lean tissue, including muscle. That choice is not fixed. It is influenced, powerfully, by how you sleep while you are slimming down.

Research Evidence *Annals of Internal Medicine*, 2010

In a controlled trial, adults followed the same calorie-reduced diet under two conditions: eight and a half hours in bed, or five and a half. Both groups lost similar total weight, but the short-sleep group lost over half as much fat and considerably more of their weight came from lean body mass instead. The difference was made by sleep alone.

(Nedeltcheva and colleagues, *Annals of Internal Medicine*, 2010; a landmark finding repeatedly supported since)

Let that land. Two people, the same diet, the same calorie cut. The one who slept well kept their muscle and shed fat. The one who slept poorly shed muscle and clung to fat. They were not eating differently. They were sleeping differently. The night decided the quality of the loss.

Why does this happen? In short sleep the body shifts into a more catabolic, breaking-down state. Stress hormones rise and the anabolic, building hormones fall. Muscle is metabolically expensive to keep, and a tired, stressed body is quicker to let it go. Since muscle is also the engine that burns energy around the clock, losing it makes future weight management harder, not easier. It is the worst possible trade, made invisibly, in the dark.

Diet decides how much weight you lose. Sleep has a large say in whether you lose the right kind.

Pause and Reflect

If you have dieted in the past and felt deflated rather than strong at the end of it, consider whether your sleep was part of the picture. The answer may change how you approach it next time, with more rest rather than more restriction.

Chapter 5: Timing, the Body Clock and Late-Night Eating

So far we have talked about how much you sleep. Now we turn to when you sleep, and when you eat, because the body is not indifferent to the clock. Every organ involved in handling food, from the gut to the liver to the fat cells themselves, runs on a daily rhythm set by your internal clock. The same meal is not metabolised the same way at noon and at midnight.

In the morning and early afternoon the body is primed to take in food and use it efficiently. As the evening wears on and the body prepares for sleep, that machinery winds down. Blood sugar is handled less smoothly. The same calories, eaten late, are more likely to be stored than burned. This is why a chaotic sleep schedule, which drags eating later and later, can work against you even if the total amount of food has not changed.

Irregular sleep makes all of this worse. When your nights wander, your body clock loses its anchor, and the rhythms that govern appetite and metabolism fall out of step with each other. Shift workers, who live with this misalignment as a condition of their job, show higher rates of weight gain and metabolic difficulty, which tells us the clock is not a minor detail. It is part of the engine.

Research Evidence Sleep, 2024

In a study of more than sixty thousand adults wearing activity monitors, the regularity of sleep, meaning consistent times of going to bed and waking, was a stronger predictor of long-term health outcomes than the total number of hours slept. Consistency, it turns out, is its own form of medicine.

(Windred and colleagues, Sleep, 2024; 47(1), regularity and mortality)

The practical message is encouraging, because regularity is often easier to change than duration. You may not be able to add two hours to your night straight away, but you can aim to go to bed and rise within a similar window each day, and to draw a gentle line under eating a couple of hours before that bedtime. Both steady the clock that steadies your appetite.

Sammy's Tip

Try to keep your bedtime and waking time within about an hour of the same each day, weekends included, and aim to finish eating two to three hours before bed. A steady clock is one of the simplest, least demanding tools you have for managing weight.

PART THREE

The Real-World Picture

Chapter 6: Stress, Cortisol and the Comfort-Food Loop

No account of sleep and weight is complete without stress, because the three of them form a tight little circle that can spin in either direction. Poor sleep raises levels of cortisol, the body's main stress hormone. Raised cortisol, in turn, increases appetite, particularly for sweet and fatty comfort foods, and encourages the body to hold on to abdominal fat. The comfort food disturbs sleep further, and the circle turns again.

Most people meet this loop from the stress side. A hard week leaves them wound up, they sleep badly, and they find themselves grazing on exactly the foods that soothe in the moment and sabotage by morning. It feels like a personal failing repeated night after night. It is not. It is a predictable hormonal cascade, and like any loop, it can be entered from the side that is easiest to reach.

Stress, poor sleep and comfort eating form a circle. The good news about a circle is that you can break it at any point. Sleep is often the easiest point to reach.

The encouraging part is that improving sleep tends to lower the cortisol load, which softens the cravings, which makes the next night easier, and the circle begins to turn the other way. You do not have to fix everything at once. You have to interrupt the loop somewhere, and the bedroom is usually the most forgiving place to start.

Pause and Reflect

Think of the last time stress, a bad night and comfort eating all arrived together. If you could have changed just one of the three, which would have been easiest? For many people, the honest answer is the sleep, and that is precisely where the leverage lies.

Chapter 7: Sleep and the Energy to Move

There is a final, often overlooked way that sleep shapes weight, and it has nothing to do with hunger at all. It is about movement. We tend to imagine our daily activity as a fixed quantity, but a great deal of it is the spontaneous, unplanned kind: the fidgeting, the standing, the walking to the far shop instead of the near one, the taking of stairs. Scientists call it non-exercise activity, and across a day it adds up to a surprising amount of energy.

Sleep loss quietly suppresses all of it. A tired person sits more, moves less, and takes the path of least resistance without ever deciding to. The planned workout may still happen, gritted out through fatigue, but the hundred small movements that fill a well-rested day simply do not. The body conserves, because it believes, not unreasonably, that it is under strain.

This matters because those small movements are not trivial. Over weeks and months they represent a meaningful share of the energy a body uses. When poor sleep switches them off, the effect on weight is real even though no single moment of it is visible. You did not eat more and you did not skip the gym. You just moved a little less, all day, every tired day.

Research Evidence Sports Medicine and related reviews, 2023

Reviews of sleep and physical function find that extending or protecting sleep improves not only exercise performance and recovery but also daytime energy and the inclination to be active, while sleep loss reliably reduces spontaneous movement and increases perceived effort.

(Synthesis of athletic and general-population sleep research, 2022 to 2024)

So sleep helps weight from both ends of the equation at once. It calms the appetite that drives intake, and it restores the energy that drives movement. Few single changes touch both sides of the balance. This one does, and it asks nothing of you during the day at all.

Sammy's Tip

On a day after poor sleep, do not scold yourself for feeling sluggish and sedentary. Recognise it as physiology, take the smallest pleasant movement you can manage, a short walk in daylight is ideal, and put your effort into protecting that night's sleep instead.

Chapter 8: Building a Sleep-Friendly Evening

Everything in this book points to the same conclusion: if you want to support a healthy weight, protect your nights. The good news is that this asks for changes that are pleasant rather than punishing. There is no plate to police here, only an evening to design with a little care.

The aim of a good evening is to lower the body's arousal gradually, so that sleep arrives easily and stays. Light is the master signal. Bright light late at night, especially the blue-rich light of screens, tells the brain it is still daytime and delays the release of melatonin, the hormone that ushers in sleep. Dimming the lights in the last hour, and putting the brightest screens away, is among the most powerful and least demanding things you can do.

Temperature matters too. The body needs to cool slightly to fall asleep, so a bedroom that is cool, dark and quiet works with your physiology rather than against it. A warm bath an hour or so before bed helps by drawing heat to the skin so the core can drop afterwards. And the substances we reach for in the evening deserve a second look: caffeine lingers for many hours and can fragment sleep long after its lift has faded, while alcohol, though it feels sedating, breaks sleep into shallow, restless pieces in the second half of the night.

- Dim the lights and put bright screens away in the final hour before bed.
- Keep the bedroom cool, dark and quiet, and reserve it for sleep.
- Stop caffeine by early afternoon, and treat evening alcohol as a sleep disrupter, not a sleep aid.
- Draw a gentle line under eating two to three hours before bed.
- Keep your bedtime and waking time steady, across weekends as well as weekdays.

Sammy's Tip

Choose one change from this list, not all five. Make it your only job for a week. A single habit kept is worth more than five attempted and dropped, and success in one tends to make the next one easier.

Chapter 9: The Four-Week Sleep and Appetite Reset

Here is a gentle, four-week way to put all of this into practice. It is built around the idea that you change the nights and let the days follow, and it asks for patience rather than willpower. Nothing here involves counting or cutting food. The whole plan works on sleep.

Week one: observe

Change nothing yet. Each morning, jot two things: roughly how you slept, and how hungry and snack-prone you felt the day before. You are looking for your own pattern, the link between your worst nights and your hungriest days. Almost everyone finds one, and seeing it for yourself is more persuasive than any study.

Week two: anchor the clock

Now pick a consistent bedtime and waking time and hold to them within an hour, weekends included. Do not yet worry about how long you sleep. Simply steady the rhythm. A regular clock is the foundation everything else is built on, and on its own it begins to settle appetite.

Week three: protect the wind-down

Add a calm last hour: lights dimmed, brightest screens away, the room cool and dark. Finish eating a couple of hours before bed, not as a restriction but as a kindness to your sleep. This is where the evening cravings usually begin to loosen their grip.

Week four: extend, gently

Only now, with the clock steady and the evening calm, aim to give yourself a little more time in bed, fifteen to thirty minutes earlier to start. Remember the trial that began this book: a single extra hour was enough to change how much those participants ate, without any other effort. You are aiming for that same quiet shift, the body doing the arithmetic for you.

Change the nights, and let the days follow. It is slower than a diet and far kinder, and it is the version that tends to last.

Pause and Reflect

As you finish this guide, ask yourself one question. Of all the things you have tried in the name of your weight, how many were about your sleep? If the answer is none, you may have just found the room nobody sent you to.

Your Sleep and Weight Cheat Sheet

A single page to keep by the bed. None of it is about your plate. All of it is about your night.

- Hunger that arrives late is often a sleep signal, not a true food signal. Read it that way.
- Short sleep raises the hunger hormone and lowers the fullness hormone. You feel hungrier through no fault of your own.
- The tired brain magnifies temptation and weakens second thoughts. Less sleep means more to resist.
- Short sleep steers fat towards the deep belly, the kind that matters most for health.
- When dieting, sleep helps decide whether you lose fat or muscle. Protect your nights to keep your muscle.
- Eat earlier rather than later. The same food is handled better by day than near bedtime.
- Keep your bedtime and waking time regular. Consistency rivals duration for your health.
- Lower the lights and put screens away in the last hour. Light is the master switch for sleep.
- Keep the room cool, dark and quiet. Treat evening alcohol as a disrupter, not a nightcap.
- Change one thing at a time. A single habit kept beats five attempted.

References

A selection of the peer-reviewed research underpinning this guide, drawn principally from 2022 to 2026 alongside a small number of landmark earlier studies.

Sleep, Appetite and Energy Balance

1. Tasali, E., Wroblewski, K., Kahn, E., Kilkus, J. & Schoeller, D.A. (2022). Effect of Sleep Extension on Objectively Assessed Energy Intake Among Adults With Overweight in Real-life Settings: A Randomized Clinical Trial. *JAMA Internal Medicine*, 182(4), 365 to 374.
2. Hartescu, I., Stensel, D.J., Thackray, A.E. et al. (2022). Sleep extension and metabolic health in male overweight or obese short sleepers: a randomised controlled trial. *Journal of Sleep Research*, 31(2), e13469.

Sleep, Fat Distribution and Body Composition

3. Covassin, N., Singh, P., McCrady-Spitzer, S.K., St Louis, E.K., Calvin, A.D., Levine, J.A. & Somers, V.K. (2022). Effects of Experimental Sleep Restriction on Energy Intake, Energy Expenditure, and Visceral Obesity. *Journal of the American College of Cardiology*, 79(13), 1254 to 1265.
4. Nedeltcheva, A.V., Kilkus, J.M., Imperial, J., Schoeller, D.A. & Penev, P.D. (2010). Insufficient sleep undermines dietary efforts to reduce adiposity. *Annals of Internal Medicine*, 153(7), 435 to 441.

Sleep Timing, Regularity and Metabolic Health

5. Windred, D.P., Burns, A.C., Lane, J.M., Saxena, R., Rutter, M.K., Cain, S.W. & Phillips, A.J.K. (2024). Sleep regularity is a stronger predictor of mortality risk than sleep duration: a prospective cohort study. *Sleep*, 47(1), zsad253.
6. St-Onge, M.-P., Grandner, M.A., Brown, D. et al. (2016). Sleep Duration and Quality: Impact on Lifestyle Behaviors and Cardiometabolic Health. *Circulation*, 134, e367 to e386.

Mechanisms: Reward, Movement and Recovery

7. Lamon, S., Morabito, A., Arentson-Lantz, E. et al. (2021). The effect of acute sleep deprivation on skeletal muscle protein synthesis and the hormonal environment. *Physiological Reports*, 9(1), e14660.
8. Cunha, L.A., Costa, J.A., Marques, E.A., Brito, J., Lastella, M. & Figueiredo, P. (2023). The Impact of Sleep Interventions on Athletic Performance: A Systematic Review. *Sports Medicine - Open*, 9, 58.

About Sammy Margo

Sammy Margo MSc MCSP HCPC MMACP AACP is a Chartered Physiotherapist with over 30 years of clinical experience, including as the first female physiotherapist in English professional football. She is the CEO and Founder of SMARTPHYSIO and the author of The Good Sleep Guide and The Good Sleep Guide for Kids, both published by Penguin/Ebury.

Much of Sammy's work is delivered in people's own homes, where she has spent decades seeing first-hand how sleep, movement, appetite and the everyday environment shape one another. She is widely recognised as one of the UK's leading voices on sleep, recovery and the physiology of rest, combining rigorous clinical expertise with a warm, practical approach to helping people understand and improve their own wellbeing.

The Good Sleep Guide for Weight joins a growing series of evidence-based guides exploring the science of sleep across different areas of life, alongside The Good Sleep Guide for Beauty, The Good Sleep Guide for Travel, The Good Sleep Guide for Pain, and others.

MSc MCSP HCPC MMACP AACP
smartphysio.co.uk

© Sammy Margo 2026. All rights reserved.

This guide is for education and does not replace individual clinical or dietary advice.