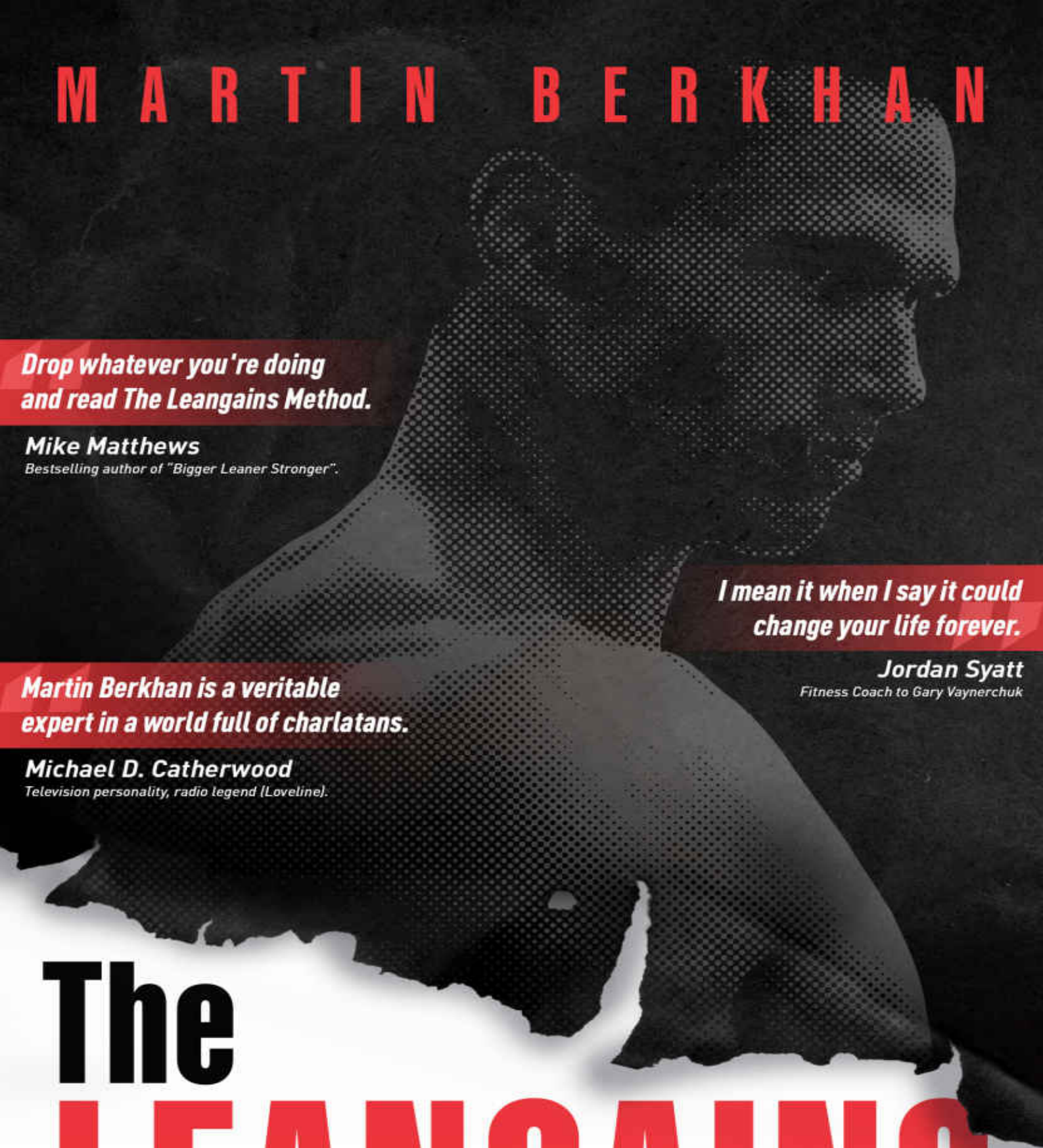
MARTIN BERKHAN



Drop whatever you're doing and read The Leangains Method.

Mike Matthews
Bestselling author of "Bigger Leaner Stronger".

I mean it when I say it could change your life forever.

Jordan Syatt
Fitness Coach to Gary Vaynerchuk

Martin Berkhan is a veritable expert in a world full of charlatans.

Michael D. Catherwood
Television personality, radio legend (Loveline).

The LEANGAINS Method

The Art of **Getting Ripped**.
Researched, Practiced, Perfected.
Foreword by **ALAN ARAGON**

The Leangains Method

By Martin Berkhan

Gifted by Croker2016 Upped to Vola

Published in the United States by Martin Berkhan

Visit the author's website: www.leangains.com

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Specific results mentioned in this book should be considered extraordinary, and there are no "typical" results. Because individuals differ, results will differ.

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First Edition

Praise for *The Leangains Method*

Martin Berkhan is veritable expert in a world full of charlatans. This book is devoid of the superfluous nonsense currently littered amongst the fitness media. I know firsthand how effective Martin's principles can be, as I have been a client of his. If you're tired of wasting money, time, and energy, and truly want to make positive changes in your physique, then this book is for you. I can honestly say that as far as physique transformation goes, this is the only resource you'll ever need.

—Michael D. Catherwood, television personality, radio legend (*Loveline*) and cohost of podcast *The Swole Patrol* with Dr. Drew Pinsky

If you could only read one book on fat loss, nutrition, muscle gain, strength, mindset, and physique enhancement … this is it.

Candidly, I didn't expect the book to be so good. I thought it would be a detailed compilation of Martin's previous material on his website. But it's not. It's SO much more.

In this book, Martin does what I've yet to see a single other author do in that he breaks down precisely how to individualize and structure your nutrition and workouts to, literally, build the body you want. He makes it quick, easy to understand and simple to adjust.

And that's the magic of The Leangains Method.

The information is world class and the extra bonus resources will make your jaw drop when you see how extensive they are. But the magic lies in Martin's ability to teach you how to

create your own, individualized plan. How to critically think, analyze and build a program for yourself (and others) that works just as well as if he wrote it himself.

Martin went above and beyond with this book. I'm honored to give it my highest praise. And I urge you to get your own copy immediately because I mean it when I say it could change your life forever.

—Jordan Syatt, Gary Vaynerchuk's personal trainer and CEO of Syatt Fitness

The Leangains Method is full of intelligence and experience that is (now) of the utmost importance for people planning towards success. Simple does not mean easy, but if you follow Martin's prescription you'll be hard pressed to find yourself faltering on your journey towards optimum health.

—James Frecheville, Australian actor (*Animal Kingdom*, *The Drop*, and more)

I haven't been this excited about a fitness book in years. It's required reading for anyone who wants to get—and stay—in the best shape of their lives.

Inside, you're not only going to discover effective, practical, scientifically proven diet and training strategies and techniques for getting bigger, leaner, and stronger than ever before, but also Martin's unique and motivating insights into conquering the "inner game" of fitness.

Drop whatever you're doing and read The Leangains Method. *It's a fresh, original work in a stale, "me-too" market, and it deserves a lot of attention.*

—Mike Matthews, bestselling author of *Bigger Leaner Stronger: The Simple Science of Building the Ultimate Male Body*

Martin Berkhan takes his readers on a dark and twisted but refreshingly honest journey, from his deepest frustrations with

dogmatic nutritional protocols as popularized by old-school bodybuilders and columnists without true scientific understanding, to dissecting decades worth of scientific studies in nutrition and training, as well as personal experience, ultimately merging both in a practical handbook containing everything that explains the popularity of the Leangains approach to transform physiques, minds, and lives.

Martin has left no "reps in reserve" with this one. Bull's eye!

—Dr. Bojan Kostevski, MD, founder and chief medical officer at LambdaStrength.com

I was honored to be asked to review the long-awaited book from Martin Berkhan. Martin and I go back many years, where we discovered we had mutual passions and mindsets, and have had many interesting discussions both through email and in person.

I have always been both inspired and impressed by Martin, not only by his flair for producing thought-provoking methods and well-written articles, but also for building a world-class physique with world-record lifts to match it.

This book takes you through his personal journey, and Martin tells the compelling story of what made him into Mr. Leangains with an entertaining combination of authenticity and vulnerability. Then, we get into the Leangains diet and training approaches, where Martin presents the unique methods he has developed and evolved through decades of research and experimentation on himself and thousands of clients.

I was pleasantly surprised to discover that he has focused on readability and ease of application, where other authors and experts in the industry tend to muddle the waters with overly complex science and jargon that makes it seem as if they've never actually worked with someone in the real world. Martin cuts through the myths and hype, and presents the diet and training templates that will actually work for everyone, not just genetic freaks.

Bonus material is also included, such as recipes, FAQs and Supplementary Material in the form of his most popular articles.

This easily goes into my top ten recommended reading list, and I expect it to be one of the most influential and popular books of the year, perhaps decade.

—Borge Fagerli, physique coach, author of *The Zero Carb Diet*, and creator of Myo-Reps

Befores and Afters

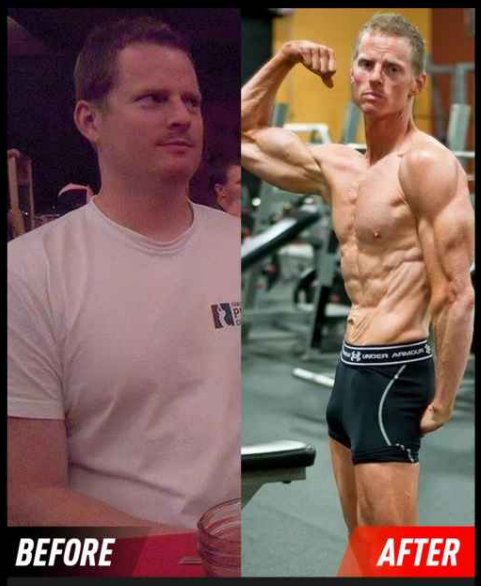
CLIENTS

"I never knew you could get so much with so little, until Martin showed me the way."

ARTHUR, 31

"Martin called me on my shit. Turned out to be just what I needed to get me into the best shape of my life."

GARY, 36



"My body fat went from 25% to 7%. Needless to say, I'm very happy."

DAVE, 39

"Honestly? Leangains changed my life!"

CARRIE, 24

CLIENTS

"I couldn't be happier with the results!"

ILIAN, 41

"Wanted to look like Brad Pitt from Fight Club, and Leangains didn't disappoint!"

PETTER, 24

"Leangains is amazing. I've lost five inches – yes five inches – off my stomach since being on the program."

CHAD, 43

"Couldn't be happier, gone is my tennis elbow and I just keep getting stronger. Amazing!"

LUKE, 26

CLIENTS

"The experience of having it all laid out in black and white has been absolutely priceless. What was unattainable before is now very much a reality."

KHAN, 31

"I grew and slimmed down at the same time, something I didn't think possible until I tried Leangains."

THEIS, 28

"I'm a changed man thanks to Martin. Not only am I stronger and leaner, but my mind is sharper and I'm more positive and happier overall."

KANE, 24

"Martin's word is gospel and his method is the truth. It practically turned my life around."

MATT, 27

CLIENTS

"Martin and the Leangains method have been an incredible influence in my transformation."

SCOTT, 25

"I slept fantastically, had plenty of energy, and can count the times on one hand where I felt hungry. That's the beauty of Leangains and Martin's incredible insights."

TEDDY, 26

"To say Leangains is an amazing program is the understatement of the year."

BOJAN, 30

"The easiest diet and the best training program I've ever tried. Now it's my lifestyle."

SEAN, 33

CLIENTS

"Results came very quickly. Without much effort, it took me three months to get in far better shape than I'd been in years."

MARCUS, 30

"Leangains, and Martin's guidance, is the best thing that happened to me since I started lifting. "

JESPER, 51

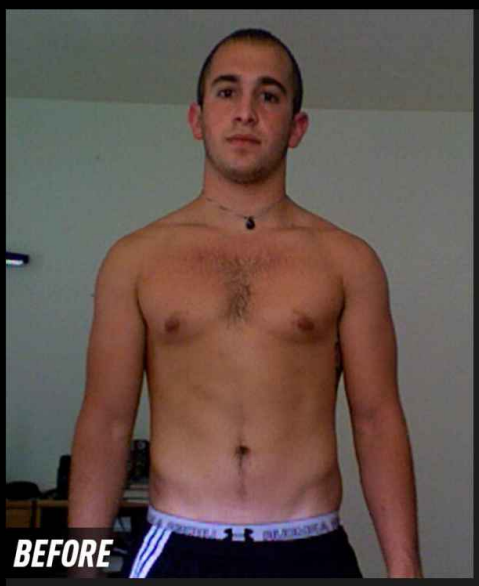
"For someone who used to be in shape, the before-pictures were hard to look at, but Leangains put me back on track in no time at all."

MIKE, 38

"Very pleased with my results and how this is now my lifestyle! It's amazing how Martin's techniques has improved my compulsive relationship with eating and training."

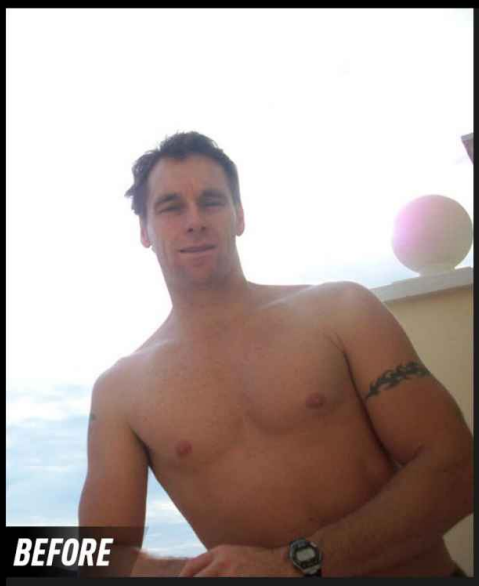
MARK, 40

COACHES



"My results came clearly and quickly. In 9 weeks, not only did I lose a significant amount of weight, but all of my lifts shot up."

JORDAN, 19



"I'm almost 50, but in the best shape of my life thanks to Leangains."

DAN, 46

ATHLETES

BEFORE

AFTER

"On Leangains, I stayed energetic, got stronger and lost body fat; this resulted in European Records for the deadlift and overall, and a World Record in the squat."

ISABELLA, 29

BEFORE

AFTER

"Martin is a master coach, an expert on body recomposition and the workings of the human mind."

ANDREAS, 31

COMMUNITY

"The discovery was a surprise. The effects are incredible. Even now, inching my way to the 40s, I feel as youthful as I did back then."

CHRISTIAN, 38

"The beauty of the Leangains, is the way diet and exercise has "faded into the background" of my life, yet continues to deliver me reliable, consistent results."

JEFFREY, 33

"Leangains provided a systematic approach to diet and weight training that finally worked. Within 9 months I was in the best shape I've ever been."

KEVIN, 39

"Eight inches off my waist, increased strength and no more back pain without over restrictive dieting?.....yes please, thank you Martin!"

SAM, 43

COMMUNITY

"Leangains purged a lifetime of stubborn fat in less than three months. Thanks to Martin, excess fat is a distant memory."

TIMOTHY, 42

"Leangains is the simplest most effective method of losing weight while getting stronger. It isn't only a diet for me, it's already part of my lifestyle."

ANGELO, 32

"Leangains provided a new way of seeing fitness. The minimalist approach was a game changer. My mom bod turned into the body I dreamed of having"

ANTONELLA, 30

"The Leangains approach to training and nutrition was the most effective and easiest to adhere to out of all the different methods I tried."

KEVIN, 31

About the Author

Martin Berkhan is “the thinking man’s musclehead,” with a résumé too long and boring to list. The TLDR goes a little something like this: former model turned personal trainer who made his bones as a columnist and writer for the Swedish magazine *Body* in the early 2000s.

In the mid-2000s, he started the intermittent fasting craze with the website Leangains and the associated Leangains diet, commonly referred to as the 16:8 diet. In 2018, he released this book—and in the process, missed the best summer in Swedish history, so you better show some gratitude and spread the word if you like what you’re reading. ;)

Nowadays, Martin works as a personal trainer and nutritional consultant (mostly online), a lecturer, and as an educator on Patreon. He holds a bachelor’s degree in public health education, a PhD in Flipping the Fitness Industry on Its Head, and a world record in the seal row.

If you’re interested in what Martin’s up to, find him on:

Patreon: https://www.patreon.com/leangains

Instagram: https://www.instagram.com/martinberkhan

Twitter: https://twitter.com/Martinberkhan

Facebook: https://www.facebook.com/martinberkhan

Facebook (Leangains): https://www.facebook.com/officialleangains

The Web: https://www.leangains.com

P.S. Subscribe to Martin’s newsletter at Leangains.com. He sends less than one email per month on average, and when

they come, it's *always* something useful and never an infomercial.

Newsletter: Leangains.com/subscribe

Contents

Foreword by Alan Aragon

I was both proud and humbled to be contacted by Martin and asked to write the foreword of this book. He could have chosen anyone. Choosing me made me realize how much he valued my opinion, not just as a professional in the field, but also a voice who might do justice to the opening note.

I'll begin by harkening back to first seeing Martin in action. This was over a decade ago on Lyle McDonald's Bodyrecomposition message board. Martin's contributions to the forum threads were always thoughtful, analytical, careful, and helpful. From my vantage point, Martin was one of the "big dogs" of the forums. Lyle's forums were sharply intolerant to ideas and claims that lacked scientific support, and despite Martin's ideas on intermittent fasting (IF) being novel, he was able to consistently discuss them within a scientific context. Where there were gaps in the science, Martin was able to support his methods with sound reasoning, not to mention a growing legion of success stories comprised of his clients, as well as lurkers who were intrigued enough to try his ideas out.

With the above said, allow me to explain the irony of my writing this foreword. I caught wind of the buzz around Martin's ideas during the tail end of my indoctrination that a high meal frequency is the best way to pursue physique development. In my defense, practically everyone groomed in formal, conventional education systems was taught this. And of course, we tend to believe what we hear, if we hear it often enough. My first direct communication with Martin was on the Bodybuilding.com Nutrition forum, where I was a moderator, and hence one of the "big dogs" of the community. It was a debate over the effects of fasting on metabolism and muscle loss. There were several rounds of exchange. What stood out,

other than Martin's strong challenges to my position, was his civility. He reasoned without getting emotional and allowing the debate to devolve into the proverbial "pissing match."

The debate I had with Martin occurred near the publishing of an article on IF that I had co-authored with Ryan Zielonka. In this article, the crux of my criticism of the hope for IF was the methodology of Kim Stote and colleagues, whose eyebrow-raising experiment in 2007 found that one meal per day resulted in better body composition improvements (greater fat loss with slight lean mass gain) compared to three meals per day. Their design and methods had several limitations that I felt were enough to view their findings with extreme caution. It was more of a "food for thought" study. Since this publication, which was the first one to really catch the attention of the fitness community, a multitude of studies of varying types of IF surfaced, including alternate-day fasting, time-restricted feeding (TRF), and isolated twenty-four- to forty-eight-hour fasts within the week. A recent succession of systematic reviews and meta-analyses have unanimously arrived at the conclusion that intermittent energy restriction is a viable and effective alternative to daily caloric restriction.

It's fair to say that Martin was responsible for popularizing the "16/8" fasting-to-feeding variant of TRF among the fitness community at large, and he was the first to methodically employ measures to preserve and increase lean mass under these circumstances. What separated Martin from the mainstream authors in this vein, namely Ori Hofmekler of the Warrior Diet fame, was a genuine interest in and dedication to scientific research. About a decade after Martin's methods started gaining the fanfare of online forum members, the first TRF + resistance training studies surfaced, thanks to a study by Grant Tinsley and colleagues, and subsequently by Tatiana Moro and colleagues (also involving Tinsley). The latter study was the first to specifically examine a 16/8 protocol on resistance-trained subjects with optimized protein intake. To the delight of the research-savvy 16/8 fans, this protocol caused significantly greater fat loss than the control diet, with no significant differences in lean mass—which was preserved in both groups. The possible mechanisms underlying the

advantage of the 16/8 protocol for fat loss remains speculative. Furthermore, these results are yet to be replicated. As of this writing, the study is not exempt from one-hit wonder status. Nevertheless, the data are intriguing, indeed.

So, here we are with the present book I've had the privilege of infiltrating. Is it merely a more detailed version of Martin's famous 16/8 protocol? Many will be surprised that it's not… *not at all*. It's almost completely different. I personally was pretty damn shocked, but I was also genuinely impressed. This book is the result of an evolution of several refinements in Martin's methods, with plenty of novel tactics and scarcely known research insights. Put bluntly, it's a kick-ass practical guide with all the necessary tools for success. This book has all the "fat" trimmed from it, with all the "meat" easily consumed, digested, and ready to use for battle. My obvious enthusiasm about it is actually an *understated* attempt to prepare the reader for the goodness to follow.

Here's a crucial detail I want to end off with. Martin not only asked me to write the foreword, but he also asked me to peer review the content as critically as possible. Several months of back-and-forth occurred between us. Martin accepted and implemented many of my suggestions and points of contention. Importantly, he defended his disagreements, once again in a composed and scientifically rigorous way that reminded me of our first conversation a decade ago. The end result is a gloriously groundbreaking book that I am very excited for the reader to experience and benefit from.

Preface

I'm not afraid to break a sweat and appreciate a good challenge. Whether mental or physical, I rise to the occasion, ready to test my mettle. Can't go through life without a little dirt under the fingernails—that's my motto.

But nothing could prepare me for the grueling work of writing this book. It would have been easy to phone it in and simply deliver on people's expectations. As an industry vet with a loyal and hungry following, there'd be no shortage of potential buyers. But I didn't, and believe me, there were many times I cursed myself for it. Many times I wished I'd chosen the easy way. But like the first chapter suggests, the hard way is sometimes the best way, and I'm proud to say I made the right choice.

I started writing on the first of May, 2017. But as weeks turned into months, months turned into seasons, and seasons added up to a year, I changed. And the book changed with me. It stands now, finally, as the book I so desperately searched for myself but never found when I needed it the most. At first, I wanted to write an excellent book in a genre sorely lacking thereof. But it took me a long time to realize that *excellence* isn't achieved by giving people what they *want*. More often than not, they don't know themselves.

Nor is excellence earned by indulging an audience with big words, scientific novelties, and theoretical discourse about the potential implications of it all. Especially not when it has no quantifiable bearing on the outcome.

No, excellence comes from giving people what they need, regardless of wants and expectations. That makes all the difference. The fact that I did deliver a book full of scientific

novelties and findings that readers get to enjoy for the very first time is just a bonus.

With the book's evolution complete, you're about to embark on the most cutting-edge, scientifically advanced diet ever made available to the layman. You'll learn how and why our current theory of calories is wrong, why three meals are better than six, and why whole foods are superior to processed (but not in the way you think), and much, much more. Sleep easy, knowing all this stands up to rigorous scientific scrutiny; I enlisted the harshest research reviewer in the fitness industry, Alan Aragon, to demolish any doubts in this matter.

But more important than the science within, is the practical side of things. Through actionable advice, I'll show you how to make use of every morsel of information mentioned. I will then guide you through each step of the process in setting up your diet. The buck doesn't stop there; I'll teach you how to eat, train, track, think, and much, much more. Things you never thought to consider; things you yearned to know, but didn't know you needed.

For you, this book will be an eye-opening read and a complete how-to-manual for fat loss and body recomposition. I hope that my struggles become your success.

For me, it's the book I always wanted to write, but never managed to find—until one day, I put my journals aside and looked deep, deep inside.

Enjoy.

Martin Berkhan

Chapter 1: The Hard Way

Honesty is the first chapter in the book of wisdom.

—Thomas Jefferson

"This is probably a bad idea," I said to myself as I entered the stage. It was early December 2017, in Stockholm, when I found myself doubting my sanity once again. The previous time was thirty minutes earlier, checking out and exiting the hotel where a friend was still dozing after a wild night out on the town.[1] Greeted by the cold and sobering winds on the way to the event, I had thought the same, knowing I had only slept three hours, was running late, and would have to do my warm-up on stage.

The event at hand was a "deadlift party" at Sweden's yearly fitness expo, but I had already done my fair share of partying the night before. Or should I say, a few hours earlier. Nevertheless, someone had talked me into competing this Sunday, skillfully exploiting my love for the deadlift. And my compromised judgment borne out of one too many gin and tonics.

So here I was. Instead of blissful sleep and a forty-five-minute flight home, I chose to miss my flight and enter a deadlift competition. That wouldn't have been a bad idea, had it not been for the sorry, starved, and sleep-deprived state I now found myself in.

The place was packed. Now here I was, one of two remaining competitors. Yours truly with a torn callus on my right hand, caused by the previous lift. No wonder. The result of half a dozen lifts earlier, each of them compromising the integrity of the skin as the rough knurling of the powerlifting bar dug into it with increasing force as another 20-kilogram

(44-pound) plate found its way onto the bar. Until finally, it was ripped open by 280 kilograms (617 pounds). 300 kilograms (661 pounds) was up next, and I knew I was in for a world of pain.

I wouldn't say I was intoxicated, but the night before could readily be felt. And I found some consolation in the lingering effects of alcohol, hoping it would blunt the pain when I pulled.

Walking toward the bar, I gave myself a mental pep-talk and took comfort in the fact that I'd win if I made it. My competition, a powerlifter well above 190 centimeters (6 feet, 3 inches) and a lean 110 kilograms (242.5 pounds) to boot, sported a 232.5-kilogram (512.6-pound) squat and was no spring chicken when it came to lifting. But while he had 10 kilograms (22 pounds) on me, a good breakfast, a long night of sleep, and the vitality of youth, he had, to my knowledge, never pulled 300 kilograms before. I considered it unlikely that he'd do it in the fatigued state we both were in, having pulled our way up to this point in 20-kilogram increments starting at 180 kilograms (397 pounds). Besides, I'd done 300 kilograms for six reps and was a deadlift legend—or so my pep talk went.

"He needs your support! Big round of applause for Martin Berkhan at 300 kilograms!" the speaker announced as the crowd cheered. *Can you support me with a new brain?* I thought as I walked toward the barbell. *Or at the very least a new hand?* I added when I saw the rough knurling.

"Still lifting without a belt!" the speaker reminded everyone as I readied myself for the hurting. But as the bar flew up, it turned out to be quite endurable after all. And as the crowd cheered and the speaker joked about gin and tonic, I nursed my now bleeding hand and thought about catching the next train home.

Two minutes later, I watched as my rival pulled 300, and tried to think happy thoughts.

Four minutes later, tiny diamonds of iron violently met hypodermis[2] as 310 kilograms (683 pounds) went airborne.

Nanoseconds later, the message to cease this madness was relayed.

But as the sharp, white lightning bolt of pain screamed into the cerebral cortex, it was merely a whisper compared to the booming voice of an uncompromising master who yelled to never let go, no matter what. If one were to consult leading experts and scholars of pain and human physiology, I believe they'd conclude that most would.

But not this one.

Not today.

…

I won two competitions back to back that weekend, and raked in a combined total of $1,500 in equipment and gift cards.[3] A lucrative weekend, all things accounted for, including the flight I missed to partake in the competition that Sunday.

If someone had told me this was possible when I was fifteen, I would've rolled my eyes, reached for a snack, and directed my attention toward the next gemstone in some video game. Or resumed my reading of the latest book in the *Wheel of Time* series—after securing a snack, I should add. That was the kind of guy I used to be. Still am, to some extent.

Well, there's a difference. I have better taste in sunglasses. But this ain't *GQ*, so let's talk about the other stuff. The body.

The one in the bottom right corner is the one I have nowadays, and the one in the upper left corner is the one I started with.[4]

I know what you're thinking—I'm one of the lucky ones, those with the right genes. What else could have enabled such change? I'm not a physical phenomenon. I know people who are, and I know the difference. I work with them.

A few hours ago, I congratulated a client named Isabella von Weissenberg for squatting triple her body weight. This twenty-eight-year old female powerlifter has only been lifting for five years and already holds more world records than I can keep track of.[5] By the time she'd joined a powerlifting club, she'd squatted 130 kilograms (287 pounds) after just five months of training. I don't know about you, but I can't name any *males* that squatted 130 kilograms after five months of training.[6] *That's* a physical phenomenon.[7]

Me? First time deadlifting, I pulled 80 kilograms (176 pounds) six times, benched half of that, and struggled with 60-kilogram (132-pound) squats. But I stuck to it—kept pulling, pressing, and squatting my way through two decades of life's ups and downs.

The picture above shows the result of that journey. What most don't know is where I started and how I arrived. What no one knows is what happened in between. This book shares that story through snapshots of moments and lessons they brought me.

These hard-earned lessons would come to shape me and this book. And when I pass them along to you, I hope they'll end up shaping you as well. Body, mind, and spirit. Because this is not about scoring on spring break, looking good on the beach, or wanting to lose a few for that dress. It's not about 300-kilogram deadlifts, building the upper chest, and "Light weight, buddy!" either. No, that's just a bonus.

What it really comes down to is progress. Your body is one third of the greater whole that is you. Where it goes, the rest follows. And when you keep that momentum going for two decades like I have, you get the result seen earlier.

I'm here to speed up the process. My only wish is that you let me. It's my only consolation for the mistakes I've made and the regrets I have.

And they are many.

Moment of Truth

I was fat, out of shape, and indifferent about it until I turned fifteen. By then, I was the heaviest kid in class and a good contender for Top 3 in our school. I'm going to be perfectly honest and say that I can't recall if I weighed 95 or 105 kilograms (209 pounds or 231 pounds) back then, because I never weighed myself. Unless forced to, which was during the yearly checkups we did in school. Nevertheless, I was fat, plain and simple, and it didn't take a genius to figure out why.

My strategy was simple. I picked video games and books over girls and sports, the main interests of my misguided peers (as I saw them). To fuel these intellectually demanding activities, I supplemented Mom's cooking with chips, assorted candies, and whatever else I could lay my sticky fingers on —"whatever else" being an unlimited supply of bread, cereal, kielbasa and leftovers from the day before. Mom's Polish, so there was always something laying around waiting to be eaten by yours truly.

I knew I was fat, but didn't give a shit. Don't get me wrong. It wasn't a point of pride. I truly didn't care. There simply was no incentive to do anything about it. Bullies avoided me, and girls weren't on my radar.[8] I reveled in nerd-dom, carefree and comfortable.

And then one summer day, everything changed. Some of the details are fuzzy, but my sister, my mom, and I were going to the beach. As we were packing, I was being an annoying little shit. Strutting around shirtless, munching on a sausage, and messing with my sister. Me as aggressor, she as loudmouthed defender who refused to let me have the last word. When the cacophony reached an apex, Mom had an outburst. She probably yelled and told us to shut up, but this

time she added something. That part is the only thing I recall with some clarity.

"Look at you! Are you going to the beach like that? You should be ashamed of yourself."[9] The first sentence is spot on, second sentence I'm paraphrasing, and what came next had the word "fat" in it. That shut me up real quick. I didn't hear that word very often, and it was the first time I'd heard it from Mom.

I was shocked, not embarrassed. I was fully aware of how I looked; it just didn't feel … real, if that makes sense. As if I wasn't really fat, it wasn't really a problem, because no one else seemed to think so. With those words, the problem immediately materialized. Felt like I had been found out. Like the charade was over.

This moment changed everything, and propelled me to take action; to pump the brakes on my growing corpulence and take my first stumbling steps on a two-decade journey that would transform more than just my body.

The lesson learned through this moment was about *truth*. I realized then and there that telling the truth, however much it hurts, is often what it takes to inspire change.[10] As a coach and writer, it would form the tough-love attitude and no-bullshit treatment I've been known to dish out. As someone who had the balls to question authority, my search for truth would also revolutionize the fitness industry, lead to a change in thinking, and put intermittent fasting on the map. And as someone who faced and defeated a great inner struggle, it would lead to the book you're reading right now.

A book about nutrition, weight training, and everything that comes with the territory, yes. But most of all, a book about *truth*.

The Teacher

With opened eyes now, I decided to make up for lost time with a combination of running, lifting, and better eating habits. I'd do a little bit of everything to the best of my ability. And

with spaghetti and bread being a household staple, I ran a lot that summer.

By the start of high school, I had lost enough weight to look like a normal guy was supposed to look at that age. Content with my shape, and the Swedish weather being as it is, I ditched running for lifting when I started high school.

Over the following three years, lifting and nutrition came to occupy my interests more and more. Armed with a 28.8k modem and the pretense of "homework," I'd sit by the family computer for hours and read everything under the sun.[11] Mostly about weight training, which had gone from interest to passion and obsession shortly after.

But I was obsessed in a good way, the kind that brings meaning and purpose to each day. With weight training, that never changed. To this day, weight training keeps me centered, and I'm worse off without it.

Perhaps because I had the best teacher money could buy; a book titled *Beyond Brawn* by Stuart McRobert. I ordered the book from Amazon, and it took three and a half weeks to arrive. Worth the wait. That's for damn sure.

Thanks to *Beyond Brawn*, my weight training education couldn't have started out better. The book laid out all the dos and don'ts of lifting by hammering in each point through countless paragraphs. It exposed the bullshit, provided realistic expectations, and gave me standards to strive for.

Yes, *Beyond Brawn* was a real and raw how-to manual for the natural lifter. That book was everything I needed, and then some. I'm an avid reader, and after two decades and countless books, *Beyond Brawn* is the only one to have impacted my life in a meaningful way.

Invigorated with newfound knowledge, I set out pursuing strength with an enthusiasm unmatched in the town's only gym. The former body shop was dank and dusty and smelled of motor oil, but that only added to its charm.[12] Puffing, grunting, and finally screaming of exertion as reps and sets came to an end, I gained size and strength frighteningly fast from the perspective of onlookers. My training routine was

Spartan, minimalist in nature. I was only in the gym thrice on a ten-day rotation, but employed techniques like breathing squats with such zeal that this was more than enough.

One day, the gym owner approached me to ask if I took steroids. Maintaining a cool exterior, I answered no truthfully, but inside I was beaming with pride. Finally, some acknowledgment. To this day, I get the same feeling when similar accusations or speculations are made. I worked my ass off for these gains; people *better* think I'm on steroids.[13]

The lessons brought by those joyful years were many. First, *Beyond Brawn* taught me much can be accomplished with little. It deconstructed weight training and provided a blueprint for how to train, think, and make progress as a natural lifter. This blueprint was and is very different from the notions many people have: less complicated, more demanding, and importantly, worlds away from the useless nonsense people read about in magazines and mindlessly emulate in gyms.

The book laid the groundwork for my understanding of weight training, and once the nuts and bolts were in, I took off on my own and started experimenting. Using good judgment and carefully balancing effort and volume, I eventually composed and thrived on a routine of my own making. Years down the line, I developed an entire system of my own, inspired by the book and refined through personal experience. What started as a set of rules and guidelines in my head would later evolve into Reverse Pyramid Training, a weight training system that would eventually be used by thousands of people around the globe. Back then, I wasn't aware it was Bruce Lee who had coined the famous quote stating you should take what's useful, dismiss what's not, and add your own secret sauce to the mix—but that's what I did.[14]

The aforementioned lessons were tangible, invaluable on their own merit. But *Beyond Brawn* taught me to appreciate weight training for more holistic reasons, you might say. The world is unfair, and like most teens, I saw myself riddled with more curses than blessings. Weight training taught me the

value of effort: if you worked hard, you got to reap what you sowed, and there were no ifs, ands, or buts about it.

Like a universal law, the reward was in direct proportion to the effort, and it didn't care about how popular you were or how much money you had. I saw the weight room as the ultimate equalizer. Still do, even if my perspective is a bit more nuanced. Regardless of where you start, you *can* change for the better. But the scope and magnitude of that change is dependent on *you*, no one else. That much is still true, and that's a textbook example of empowerment, if you ask me.

Lastly, the book and its author taught me the value of mentorship. Having a congruent voice to follow can make all the difference. With too many cooks in the kitchen, the fitness industry was hard to navigate back then, and my peers never bothered. They simply bought the bullshit they saw and read in muscle magazines. Their results were mediocre at best, and quickly surpassed.

If it was hard back then, it's impossible today. While there are more reasonable voices today, there's exponentially more bullshit as well. If finding a needle in a haystack pertained to good information two decades ago, finding the right grain of sand in Sahara applies today. That's how confusing and diluted information has become.

Dignity and Death

I kept training through high school, and my hard work and persistence paid off. I was big and strong and commanded respect. On the field playing American football, strolling through school corridors, and in discos trying to dance, guys took notice and girls sneaked glimpses.

I'd effectively gone from stereotypical nerd to jock in a two-year span.[15] I embraced this change with open arms. But that didn't stop me from spending many Saturday evenings in dank cellars playing role-playing games all night. The nerd in me was alive and well; he just switched his style up.[16]

Lifting weights was what I did—that's how I thought of myself, and it wasn't an inaccurate assessment. When I wasn't lifting, I was counting days and eagerly looking forward to the moments I would be.

I'd do everything that involved lifting without actually lifting. School breaks were spent in the computer hall, often on internet forums like Hardgainer and Cyberpump. With no loss of enthusiasm, I jumped between threads about forearm work, the ideal rep range for calves, and a fierce debate about the origins of HIT, and from there into the training journal of someone worth aspiring to. Everything isn't interesting, but everything's useful, my motto went. It wasn't, but that's what I believed.

Today I wonder if my increasing preoccupation with all aspects of weight training might have had something to do with the death of my father. He died of pancreatic cancer during my first year in high school. It seemed to happen quickly at first—one day the news, next day the hospital. Unfortunately, it then came to a halt, and the race toward death's door switched gears to a snail's pace. The once tall and athletic-looking man of few words who liked to smoke a pipe, chop wood, and make up outlandish stories about the coins and capsules I collected as a kid withered away little by little, until he was no more.

German bred, he came to Sweden bearing a family seal and the expectations and traditions of a distinguished lineage. But the way he went was anything but. That's the part I mourned. I thought it was so undignified to die like that. Especially a man like him. Stoic and reserved. A hard worker with big hands and fingers so hard they felt cut out of wood. My fondest memories are from the summers when I was a kid. My father used to commision me 0.1 SEK for every dandelion I picked from the grounds around the manor. I took to the task with unbridled enthusiasm, spending hours rooting up bright yellow evildoers sprung from the soil, and counting every one of them. My father was usually chopping wood or fixing this and that close by, and he'd cheer me on or come by and talk for a while whenever he had a moment. When the work was done, he'd pretend to carefully inspect the harvest, asking how

many I'd picked, to which I'd dutifully and truthfully report the number. Later, he'd write it up on a paper pad, and every day, I'd ask how much I had collected so far. I was too young to understand numbers or letters back then, but one summer, I saved up enough to buy a VCR. I was only allowed to make use of it when the weekend came around, but still.

Happy memories that are as clear as the summer days back then and as bright as the dandelions I used to pick. I like to think that's where my work ethic comes from—my father, and the fact I was raised to work for money at an early age.[17]

I didn't dwell on my father's death much, nor did I shed any tears in front of family and friends. Not even at the funeral. That would come years later. Whether lifting and the busywork that surrounded it was an excellent antidepressant or just my way of coping, I'll leave for the experts to debate.

An Option

Aside from the tragic and unexpected death of my father, nothing dramatic occurred during my high school years. I did what most guys do when they're that age, with one exception: I lifted, and spent much of the rest of my time thinking or reading about lifting, every semester but the last, during which my attention switched to nutrition and dieting. I wanted to graduate in style, and decided to trim some fat for the second time in my life. By then, I was well versed in all things lifting and dieting. Knew the playbook like the back of my hand. First you bulk, then you cut, then rinse and repeat 'til the desired result is achieved. Simple enough, I thought to myself.

But the dietary equivalent to *Beyond Brawn* was nowhere to be found. Those that came close didn't meet my standards.[18] Searching for answers high and low, I scoured textbooks and bestsellers to no avail. Information to the point of boredom or stories and empty promises, there seemed to be no in between. Why was it so hard to find a simple how-to manual for dieting, I kept asking myself, as I went through book after book. I wasn't picky. Just wanted formulas to get started, goals to chase, and dos and don'ts to follow.

As my patience wore thin, I decided to try the ketogenic diet.[19] It was a popular subject of discussion on Misc.Fitness.Weights (MFW), a message board frequented by those on the cutting edge of nutrition back then. As a lurker, I had come to include myself in this group, and took a strong interest in the often obscure topics of debate.

For all intents and purposes, MFW was the last outpost when you had learned everything else. The message board was frequented by latter-day celebrities like Victor Conte of Balco fame and Patrick Arnold, the godfather of pro-hormones, among others.

It's hard to imagine now, but the internet wasn't the sprawling megalopolis of fitness infotainment it is today. If you were interested in nutrition and training in the dawn of the millennium, it didn't take long 'till you knew all the hubs and hotspots where news and exchange took place. These exchanges were much different from today's. Communities were welcoming, and people banded together, traded information, and helped each other out. There were still trolls, of course, and MFW was quite notorious in that regard. But among the shit talking, there'd be diamonds in the dirt for those looking, which is more than can be said for internet forums of today.[20]

In many ways, the web was a better place than today. I'm well aware that's something old hats say, that things were better before, but this trope is partly true and can be applied to other instances in the digital age.[21]

Good information wasn't hard to come by once you got properly introduced. I fondly think of weight training forums like Hardgainer and Cyberpump like my second home back then. Today, they're all but abandoned. But when it came to nutrition, information was surprisingly sparse. You had to make do with whatever was available, and so my dietary journey began.

With the definitive guide to ketosis in hand, I started to dabble and experiment with various forms of the ketogenic diet. By the end of the semester, I'd tried them all—standard, cyclical, and targeted. I settled on the former, simply because

it made me feel the least shitty. The shitty feeling was eventually replaced by feeling weak. Which was more than a feeling, because it did make me as weak as a kitten. Stubbornness and lack of alternatives prevented me from changing course.

There I was, eating Skippy peanut butter on egg whites and slices of ham dipped in mayo. As you can imagine, my eating habits drew many strange looks. Several inquiries about my sanity or lack thereof were prompted. With Mom wondering what the hell I was doing, I quickly learned the futility of an explanation. Adopting a sense of shame and secrecy was a far better strategy, I found, and eventually they left me alone. It became part of who I was, the guy who worked out and followed a bizarre diet.

In the year 2000, no one in Sweden knew what a ketogenic diet was. Nowadays, you're hard pressed to find someone who doesn't. Well, I can lay claim to having tried them all.[22] And as shitty a diet as it was, it did come with everything laid out, backed up, and spelled out.

Three months later, with summer around the corner, I was 10 to 15 kilos (22 to 33 pounds) lighter, with visible veins running down my arms. To my peers, it was quite a sight to behold, and I became the local guru for all things fitness.

Though I mourned the considerable loss of strength and muscle, I was svelte and handsome at around 83 to 85 kilograms (183 to 187 pounds), and didn't mind the attention. I had never been lean before, so this was new and exciting territory for me. I didn't have the perfect set of abs of a fitness model, but that didn't bother me. I had enough sense to compare myself to those around me, not the people in magazines. I was, at the time, quite content with my accomplishments. Everything had gone according to plan, and so far, my world view was undisturbed. It was a world view where hard work and persistence was rewarded.

The lessons learned here would only be realized in retrospect. Looking back, my results were catastrophic; I just didn't know it back then. I lost a good 30 kilograms (66 pounds) on my squat and 20 kilograms (42 pounds) on my

bench—three times as much as can be expected by losing 10 to 15 kilograms on a normal non-ketogenic diet.[23]

But options were limited back then, and you had to make do with what was offered. Today's a *completely* different animal. But replacing scarcity with overabundance proves none the wiser, and that's the greatest irony of all.

Unfortunately, I was merely beginning to learn the lesson that the next few years would hammer home *hard*.

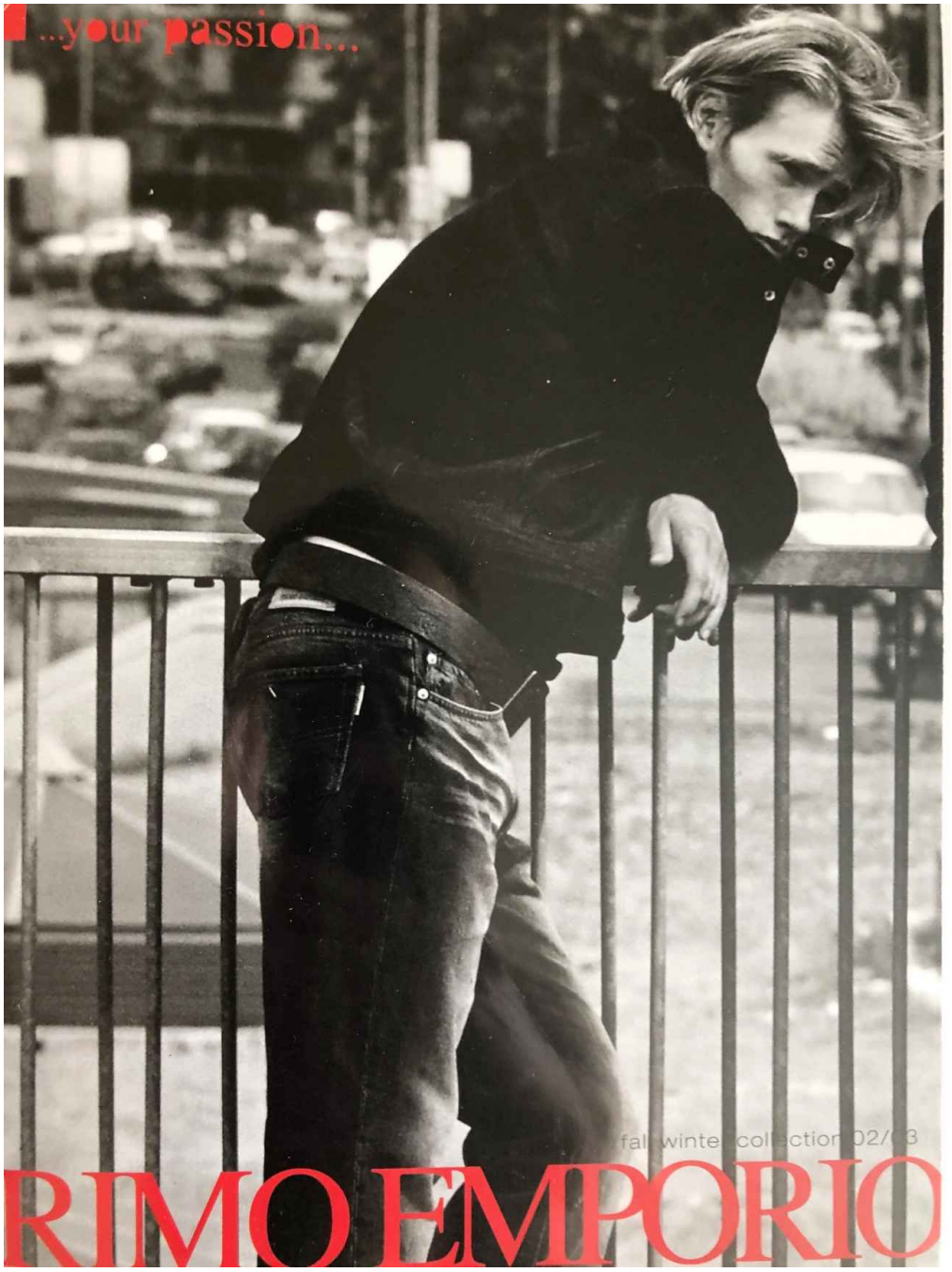
Options. Know your options.

Do you?

Greetings, Ignorance

By graduation, I looked pretty damn good for an eighteen-year-old. Good enough to win the Scandinavian equivalent of *Top Model*, if that show is still around. And that's when the real trouble began.

I had just turned nineteen when I was shipped off to Milan. Thrown head first into an industry with questionable ideals, I embraced them happily, thinking I was going to dazzle the industry with ripped abs and biceps veins. By that time, I had trimmed off another 3 to 5 kilograms, and tipped the scale at an even 80. Thought this nice and round number would be enough for this line of work, but I was wrong. Within fifteen minutes of arriving at the agency, I was measured up and told I was too big.



This picture was taken in Munich during my modeling days. I was pretty slim, as you can see.

With my chest circumference, they said, I couldn't fit into the Italian designer costumes I was supposed to strut around with during fashion week. This was an issue I needed to resolve pronto, preferably yesterday if possible. Because fashion week was coming, and Prada was itching for a piece of me.

I did the deed, and lost another 3 to 4 kilograms over the following two weeks, just in time for fashion week. I was pretty damn hungry, but the constant walking back and forth between castings took my mind off eating and excused the slip-ups.

When fashion week finally came around, I was ready to rock and roll. If rock and roll means walking up and down a catwalk, trying to look cool while thinking about baguettes. ("Would it be weird to eat the chicken filet strips and ditch the rest? My carb window closes at 6:00 PM, so let's get this shit over with. Now walk faster, damn you!")

That's how my first career got started. I spent the following years in Milan, Barcelona, Cape Town, New York, and many other cities around the world. Travelling the world as a model, I became the object of pride and envy for my family and friends back home. They'd greet me with open arms and never question why I got thinner with each passing visit. Why should they? I was a model; it was part of the deal. Everyone reasoned the same, including me. With the kind of money I was making, €1,500 a day for playing dress-up and many times more for TV commercials, a bit of suffering seemed almost fair.

During these years, I didn't travel alone, because my diet obsession followed me wherever I went. Like a loyal friend and companion—aside from my suitcase, the only reliable constant in a world fraught with insecurity.[24]

The fashion industry kept my obsession well fed, myself undernourished. At my most emaciated, somewhere between 70 and 75 kilograms, I had a nice six-pack, and a face like a scarecrow. Trying to maintain that condition usually caused me to look ripped for shoots, bloated afterward, and somewhere in between when I wasn't working.

You're probably wondering what kind of predicament I had gotten myself into. Or what kind of eating disorder I had. Well, I've never had an eating disorder, and simply continued to make the best out of the information available at the time.

I eventually abandoned the ketogenic diet and drifted toward more conventional fitness diets—higher in protein and carbohydrate and lower in fat. Rest assured, my pursuit of the six-pack ideal followed the fitness playbook to the T: after a big breakfast, I ate every second or third hour, and made sure to not eat much after 6:00 PM. My caloric intake was always in the 2,000- to 2,500-calorie range, which resulted in a loss of 0.5 kilograms per week as long as I stuck to it. Nothing stuck for much longer than that, but that didn't keep me from trying.

Whenever I'd fail, binge, and backslide, I'd simply start the whole process over again. I did this for years on end. And after each year, the body weight I typically hovered around, would be less than previous year. In retrospect, I think the yoyo-dieting I inadvertently put myself through, resulted in losing more muscle than fat, as I wasn't much leaner at 70 than I was at 75 kg.[25]

I was always dieting. Always reaching for the dream physique. Thought it would be mine to claim if I got my shit together and learned to be more disciplined. But it didn't happen. I did well for a few days. Sometimes weeks, even—and better when working, strangely enough. But sooner or later, it would all fall apart, and I'd start the whole cycle over again. Sounds familiar, right? I know it does. Just wanted to make sure we're on the same page.

You see, my predicament wasn't an eating disorder. Did I go a bit crazy about eating "clean"? Guilty as charged. Was I delusional about my appearance, and did I lose sight of how thin I had become? Absolutely. But never once did I resort to the destructive behaviors or actions of those with anorexia or binge-eating disorder. Orthorexia? Nope, not me. I didn't give a shit about foods; I cared about breakfast, six meals a day, and no carbs after 6:00 PM, because that was my ticket to ShredCity. The rest of my diet? Had that part figured out as well. Decided on a flexible approach; less than 2,500 calories on weekdays and 2,000 calories on weekends would count as a success.[26] Problem was, I couldn't stick to it for very long.

My predicament was lack of information, or should I say the *right* information. I didn't have the facts, so I didn't know

what the fuck I was doing, nor did anyone else at the time. This will become blatantly clear as the story unfolds, but let me just stop for a minute and point out how times haven't changed.

Because while I suffered the consequences of *lack* of information, people today suffer the consequences of *excess* information *and* the wrong information. The results are no different; if anything its worse. Every day, I interact with people trapped in the same routine as I was back then. Trying and failing, failing and trying, ultimately not going anywhere.

I was undernourished. Not by food, by information. My predicament was not knowing how to diet, and that's *your* predicament too, but for different reasons. In my day, the information simply wasn't there. Today it's everywhere yet nowhere.

The lessons learned here were painful. To this day, it still stings to think about the time, energy, and effort I kept pouring into the pursuit of being like my modeling peers. I envied the guys who stayed lean so effortlessly while I kept struggling. Worst of all, these numerous and constant failures broke my spirit and crushed my confidence, which would affect me for years to come.

Up until then, I had always viewed myself as disciplined, hard-working, and tough. Unable to control hunger and appetite, and condemned to watch my peers succeed in this task, I felt worthless and lonely. Worthless for my inability to stay lean, lonely because I alienated others in my pursuit thereof. The fact that I knew *far* more about nutrition than my friends and *still* failed was the greatest insult of all, I felt.

I learned firsthand what it means to be in dieting hell. I became intimately familiar with the pain that comes from trying but never succeeding. I learned the disappointment and self-loathing that comes from giving in, emptying the last cereal box before rushing out to get more.

Years later, I realized that my friends, those I resented and considered ignorant in these dietary matters, knew far more than me. They ate by instinct, eating when hungry.

I ate when it was "optimal." I followed the playbook. I was the ignorant one.

The Playbook

Let's break from my journey and talk about the playbook. According to the *Cambridge English* Dictionary, a playbook is "a set of rules or suggestions that are considered to be suitable for a particular activity, industry, or job."

There's a playbook for everything. Think of it as a doctrine of sorts, i.e., here's what to do, and here's what *not* to do. And up until the mid-2000s, it was agreed by virtually *everyone* that the playbook for dieting consisted of a few *unbreakable* rules:

- Breakfast was the most important meal of the day. It was essential to start your day off with a big hearty breakfast, preferably consisting of carbohydrates and protein.[27] This was supposed to "kick start" metabolism and put the brakes on muscle catabolism.

- Eating frequently was crucial to keep metabolism going. If you didn't, metabolic rate would plummet, and you'd enter a state called "starvation mode," a dreadful condition in which the body held fat reserves as hostage, refusing release until fed. Connected to this notion was the belief that large meals should be avoided as the insulin spike caused more of it to be stored as fat.[28]

- Evening eating should be avoided or restricted, because after 6:00 PM, food was more likely to be stored as fat. The woke strategy then was to "eat breakfast like a king, lunch like a prince and dinner like a pauper." An exception was issued for the post-workout window—that meal was soaked up by your muscles, so if you trained in the evening, you got a pass.[29]

Those were the rules I and everyone else slavishly followed, thinking we were doing everything right and *optimizing* fat loss. These rules were gospel, and there were no ifs, ands, or buts about them. To go against them, you would literally have to do so knowing you're fucking yourself out of results.

So there I was, traveling the world, playbook in hand. And as the failures kept racking up, I stayed wondering why I couldn't keep my shit together.

I kept thinking that for years to come. And as the years went by, the playbook and the people who subscribed to it stayed the same. As if caught in a place where time stood still. Then one day in 2006, everything changed. *Everything*.

Life as a Student

Fast forward to 2006. By then, I had quit modeling and taken up studies at the University in a city called Kristianstad. It was my second year in academia, and I had my sights on a Master of Science in Public Health Education. Not because I wanted to; it was simply the best option available to me given my grades and the growing impatience to move out.[30]

I just couldn't stand living at home for another year, polishing my grades and hoping it would be enough for the Psych or Dietitian program. I don't know how school systems work elsewhere, but in Sweden, you need a perfect score of 20 to enter attractive programs like those mentioned. I had 17-something—good, but not good enough. I decided to compromise.

I wasn't elated with the course plan at the Public Health program, but there were two parts I appreciated and took a great deal of interest in: epidemiology and statistics. These were tangible disciplines that helped me understand science, but more importantly, how it should be *interpreted*. With a curious mind, lots of free time, and a fast-as-light internet connection, I started applying my new skills to the nutritional sciences.

I was still chasing abs, and even though lasting success eluded me, I had seen significant improvements in all aspects of body composition, diet adherence, and general well-being, thanks to a finding I'd uncovered a few years earlier. The finding was a report by a scientist named Geoffrey Livesey, and its contents will be divulged later in this book, but fundamentally, the report is proof that our current measuring stick for calories is inaccurate and in dire need of revision. To me, it was that and then some. It was the first scientific finding I'd found and successfully applied, with tangible improvements to my physique.

It was also the first among many discoveries that indicated things weren't what they seemed to be. There's a layer to every subject, and skimming the surface only gets you so far. Now, for the first time, I possessed the means and skills to peel away the layers and see the science behind the rules and regulations that dominated my own dietary practices.

God knows I needed it. Despite everything I knew or thought I knew, I still had problems keeping myself in check and wrestled with binges that sent me biking to the store to pick up candy, bread, and whatever junk I fancied in the moment. This was something new to me, and I didn't like it. At home, I ate whatever was in the fridge, and those foods weren't nearly as exciting as the childhood treats I fattened up on. The store wasn't within walking distance either. Maybe that's what kept me in line when I came back from modeling. Who knows.

Or maybe my living situation was the problem. Even though I got along well with everyone, I shared the kitchen with four female students and a burnt-out junkie,[31] and since I was a nutcase, I couldn't stand eating or cooking when they were around.

I didn't like questions about my diet, however well intentioned, and there'd always be someone asking what I was having. It didn't help that my food looked like shit. "Tuna on whole-grain? Where's the butter? You can borrow mine if you like! Are you on a special diet? :)" Yeah, the Anti-Social Diet.

I didn't say that, of course; that would have been too self-deprecating and funny for the person I was back then.

Which brings me to my next point, which is a story I find *hilarious* in retrospect. Back then, though, it was a real-life horror show and no laughing matter. To this day, it remains the most degrading experience in my life, and it goes to show what kinds of situations my six-meal-a-day-eating-habit got me into.

One of the student girls I lived with was an active and appreciated member of the Swedish equivalent of what you'd call a sorority in the States. Except it was a sorority everyone can join and one that provides entertainment in the form of drinking games and X-rated theatre plays—activities that characterize student culture at places of higher learning in Sweden.

She was on her last year and headed elsewhere, and the sorority wanted to send her off in glorious fashion. So they put their funds together and bought a very big and very good cake. Decorated with all kinds of chocolate and marzipan, it was an impressive piece of work. I would know, because I ate the damn thing.

To make a long story short, I found the cake in the freezer downstairs, in the wash room opposite my room. *The package is very nice. I wonder who it's for and what's inside*, I thought to myself. And as the questions kept churning and my stomach kept growling, I heard the cake calling my name later that evening. You can probably guess what happened next.

Confessing to the deed and paying for a new cake was the most embarrassing moment in my entire life. What I did was so unlike me, and frankly, I don't know what the hell got into me that night. I could deal with hunger, but this was more like a craving I couldn't resist.

So when I say God knows I needed to figure out the science behind my diet, now you know what I mean. I was so fed up with my bullshit that I wanted to know what I was missing out on. I felt more than ready to take a hit to my metabolism by switching to three square meals a day. But I

wanted percentages and numbers. A 5 to 10 percent reduction in metabolic rate? I can deal with that. That's only 100 to 200 calories, and surely worth the sacrifice, I reasoned.

Peeling Away the Layers

Over the time to come, I'd spend many evenings in the University library, reading study after study. When the library closed at ten, I'd take the big stash of papers I'd printed out and continue the process in the basement that served as my student dorm.

To make ends meet, I took a side gig as a "personal trainer" at one of the commercial gyms in town. "Instructor" was more like it. I wasn't given free rein with those sent my way, and it was mostly the unenthused or unwilling who seemed to require this service, but every so often I'd get someone who asked all the right questions and pricked their ears when I answered. The gleam in their eyes would spark my enthusiasm, and it didn't take long before I told them about *real training*, not this shit, and what books and resources they should look into.

Unless, of course, they didn't want private training with yours truly, hinting that such services could be arranged if they were willing to train at the campus gym. I didn't have to drop too many such hints before I had enough private clients to quit my job and support myself through them. If the previous employer knew I finessed them, they must have found out long after I left. As a parting gift, I received free entrance to the gym for the remainder of my studies, and a giant rose bouquet with a thank-you card signed by the staff. I kept the bouquet, but never set foot in there again.

Between training, studies, and the occasional LAN party, I spent my time reading scientific papers. The way I was once obsessed with weight training in a good way, I was now obsessed with science and research. That's how I gradually learned that everything everyone believed about meal frequency, breakfast, and late-night eating was wrong. This, in turn, led me to intermittent fasting (IF), an umbrella term for

diets that cycle between periods of fasting and nonfasting during a defined period—an eating regimen that evaporated my dietary struggles overnight.

Well, not exactly overnight. As with any new diet, there were stumbling blocks, but even so, the ones I encountered were brief and easily traversed. And once the summer of 2006 was over, I had settled into an eating regimen that allowed me to finally complete my eight-year mission of "getting ripped." Not only that, but I had passed the test with flying colors and not been sidetracked by unforeseen binges or slip-ups to any meaningful extent.

The intermittent fasting plan that allowed this miracle consisted of a sixteen-hour fast followed by an eight-hour feeding window. In practical terms, I'd eat a late lunch between two and four in the afternoon and have my last meal between ten and midnight. When the summer break ended and school started, I simply adjusted my routine accordingly, eating lunch at noon and my last meal at eight or nine o'clock. In between my first and last meal, I'd eat my second meal, which varied in size depending on my energy requirements for the day; if I was weight training that day, my second meal would be smaller, and my last meal larger, and vice versa if I was resting.

Following my successful diet, I was comfortable enough to embark on a muscle-gaining phase in the fall, something I hadn't done since I first started weight training in my late teens. But after seven years of trying to eat *less*, I welcomed the idea of eating *more* with open arms and devised a plan I intended to follow as methodically as I had followed my diet.

After twelve weeks on my new muscle-gaining plan, I had packed 7 kilograms (15.4 pounds) onto my frame, going from 83 kilograms (183 pounds) to 90 kilograms (198.4 pounds). A bit more than expected, since I wasn't as methodical and disciplined with my diet this time around. But despite going off the trail and eating a bit more than I'd planned to, I was still lean—and a lot stronger and bigger—so I didn't complain, and actually felt rather good about the whole deal. Exhilarated, frankly. Having found great success with this new and

unconventional eating strategy, I knew I was on to something big—and convinced that intermittent fasting was not only something I alone could thrive on, but others could too.

Eager to share findings and results, I first wrote about my experience with intermittent fasting on Lyle McDonald's forum in 2006. This not only prompted a good deal of interest, it also provided the acknowledgement I needed as a twenty-four-year-old student from Sweden. I had come across scientific discoveries that seemed too good to be true. And with countless PhDs, RDs, and fancy titles circulating the fitness community, I had doubts whether my research actually proved right.

It seemed ludicrous, I thought, that everything said and believed about nutrition was wrong when there were so many well-educated people around to prove this point and inform the community. But I was right when no one else was—and took it upon myself to carry this information to every corner of the internet. The next step in the crusade for nutritional enlightenment was my website, Leangains, in 2007.

The Birth of Leangains

When I started my website, Leangains.com, I chose the name based on an ideal. It was my belief that a person should be able to look good and have a decent six-pack at all times of the year, not just a few months during the summer or whenever it was time to strut the stuff. I was wildly opposed to the classic bulk-and-cut mentality entrenched in the fitness community. People were encouraged to eat like pigs during fall and winter and spend spring and summer dieting, supposedly ending up with a net positive after a year of this foolishness.

Based on personal experience, and a bit of wishful thinking, I refused to believe this was the only way to do things. Or even a good way to do things. Gains should be lean, not fat, I proclaimed—and I found support among peers and an increasing stable of Swedish clients who became guinea pigs for my strange ideas and unconventional eating regimens.

When Leangains.com went live in the summer of 2007, I had been using intermittent fasting for a year and devised a system that worked well for myself and those who tried it: Swedish fitness influencers, clients and friends who had subjected themselves willingly to my experiments.

When I wasn't writing posts about intermittent fasting and the nonsense that pervaded the fitness industry, I was taking the fight to *them*, the advocates of nutritional nonsense who stood in my way and represented obstacles with their backward ideas. I journeyed to the iron fort of BroScience, the megaforum at bodybuilding.com, and launched an attack on the sensibilities of those I viewed as purveyors of nutritional nonsense. I went in alone, expecting insurmountable doubt and disbelief, but I knew how to swing and was ready to dance.

To my surprise, the forum was easily conquered. Partly because my physique and strength demanded attention and made me insult proof from those looking to belittle my claims on the basis of appearance.

Partly because Alan Aragon, who I knew from Lyle McDonald's forum, came to the rescue. Alan had earned his moderator status by establishing himself as the go-to guy for bullshit, a balancing force in the minefield of ignorance. When people couldn't tell right from wrong, Alan was called in to settle the matter, and he executed with fact, humor, and charm. And he proved me right on every point.

No, there's nothing special about breakfast. No, you don't have to eat every other hour. No, carbs don't turn to fat after 6 PM. It was game over for the disbelievers. I went alone, expecting resistance and disbelief. I left with a following, hopeful and growing by the day.[32]

Invigorated by support and empowered by science, I worked furiously on all fronts to spread the message. I didn't just sit back expecting people to come to me; I went to them. I waged guerrilla war from the trenches at forums and message boards, fired missiles of enlightenment with fully referenced articles from my site, and swiftly dismantled those foolish enough to interfere.

I made examples out of those who presented the opportunity, and it didn't take more than a few high-profile bodybuilding gurus before the rest learned their place. I *raged* against those who tried to keep the old shit alive, and my fury came from the personal failures and struggles I blamed them for and attributed to their lies.

The nail in their coffin came in the form of "Top Ten Fasting Myths Debunked" in 2010, a lengthy and undeniable article that dispelled most of what people falsely believed back then. It was the atom bomb that blew up the fitness industry.[33]

That's how I learned that all is not right in science and academia. How I realized that titles and pedigrees are nothing but a guarantee of conformity and stagnation. Because it took nothing more than a student in his mid-twenties to topple them all.

And history would prove me right many times over.

Cogs of the Machine

My following exploded after "Top Ten Fasting Myths Debunked." People flocked to my banner, sang my praises, and begged me to accept them as clients. The line grew far beyond what I could keep up with, and everyone wanted in on the action: reformed meatheads, fitness divas, skinny teens, and housewives, Average Joe and half of Silicon Valley, to World Series of Poker winner Phil Galfond and unnamed movie stars who offered several times my normal rate to skip the line. I obliged most of them, and you've seen my work on movie screens whether you know it or not.[34]

Leangains was a household name, and I became intimately associated with intermittent fasting. The endless line of clients didn't stop me from churning out articles and posts at a furious pace, and the momentum gained after "Top Ten…" didn't skip a beat. After the article's release in October 2010, Leangains.com exploded, growing from 493,000 sessions per month to 1.34 million per month at its peak in January 2012.

The masses eagerly awaited every article with bated breath, knowing I'd bring the goods when no one else would. The next viral hit came in the form of "Fuckarounditis," where lifting received the "Top Ten…" treatment. In the article, I exposed every common error and ignorance with the right blend of humor, experience, and realness, and people responded with a roar, like they did the year before.[35]

But while I kept running victory laps, the old guard adapted with the times. Suddenly, every key figure in the industry had e-books about intermittent fasting to sell. These shoddy PDF files were nothing but garbled copies of material on my site, dumbed down to nonsense and shamelessly served to an unsuspecting audience for the gentle price of $49.

These money-grabbing schemes infuriated me to no end. How could they? How *dared* they? *I* do the work, and *they* get the payoff? And with those thoughts, the downward spiral began.

Instead of focusing on the success I'd had and the change it had inspired, I could only think about the indecent and undeserving lot who'd profited from it the most. My thoughts and priorities shifted, colored by the hate I felt toward these conmen and their transgressions.

The way I viewed the situation, the fitness industry had robbed me of *years* by telling me falsehoods about how to eat. Now, this entity and its agents robbed me again by stealing the work that came from all this suffering, ultimately *profiting* off all my struggles and hard work. I felt like I couldn't win no matter what, and who were these jackoffs anyway? These mouth breathers couldn't tell the difference between a *scientific abstract* and a post-it note where someone had scribbled the term with rainbow-colored crayons. Misspelled. With a Pokemon-sticker on top.

But I was a fool. In my arrogance, I was all-knowing, thinking I understood this world the same way I understood science, nutrition, and weight training. With my delusional naivete, I thought I'd defeated the fitness industry by proving myself right and them wrong. But the fitness industry doesn't

care what people believe. It's not a person. It's not someone you can put in place by debunking its theories.

No, the fitness industry is a giant machine running on money, and the currency is *anything* that converts into clicks, sales, followers, or views. At the same time, it's an organism not unlike bacteria; ever evolving and adapting to its environment, sensing and mimicking the needs and desires of the masses it feeds from.

Or perhaps it's more fit to depict as an otherworldly abomination that takes what it cannot have, sucking life force from nonconformist elements and leaving husks in its wake. Digesting and vomiting this stolen essence over the hungry masses, who rush in to lap it up. Foul, wretched, and a long way removed from that which it once was—but fit for mass consumption, nonetheless. Because only the gimmick remains, and that's enough. A single undigested bead of corn, mistaken for a clump of gold, and swallowed whole by those too undiscerning to know or too desperate to wait. And that gimmick happened to be intermittent fasting.

The reality of the fitness industry was a lesson learned too late. My growing resentment got the best of me. Within a year of Leangains reaching peak popularity, I exited the scene and left the world wondering.[36]

Change

Between 2013 and 2016, I was effectively gone from the fitness industry. I re-emerged sporadically and made stumbling attempts to re-ignite the flame, but it just wasn't there.

But I was happy. Not at first, of course, but the tide eventually turned. I traveled, then settled. And suddenly I had a life where other priorities ruled, love being the strongest. As time passed and love remained, the bad memories faded and gave away to hope and enthusiasm for the future. I evolved for the better, and gained new perspectives and the bird's eye view on everything that had transpired. And finally opened my eyes to the role I myself played in my downfall.

I saw that there would have been ample time to write the promised book about intermittent fasting. But I choose the rush of instant feedback and prestige instead. In the process, I allowed others the opportunity I didn't take.

I understood that I kept myself busy all those years to *avoid* writing the book I secretly dreaded to put out. Because in the back of my mind, I knew intermittent fasting wasn't the magic pill everyone thought it was. I knew too much for my own good. And feared the repercussions of revealing the truth.

And finally, I saw that my work ethic and physical discipline became the only qualities I cared for. With little to no regard shown for the discipline in thought and action that my predicament demanded to survive those times with sanity intact.

It was painful coming to terms with reality. But it allowed me to grow as a person. I became mature and responsible, where before I was petty and impulsive. I became tempered in thought and structured in execution. No longer could I come and go as I pleased, and no longer would I argue and seek conflict for cheap thrills.

And as order displaced chaos, it brought a newfound appreciation for the work I did and the lives I changed doing so. I had a folder with hundreds of thank you emails who I never cared to read because I was too busy being busy. I had time now. And fought to hold back tears reading some of them.

That's when I knew. My work was not done yet and I'd never find peace until it was. The calling will always be there, distant, but ever present. Reminding me of a destiny unfulfilled.

So I answered the call. And learned to forgive. Because things never change unless you make it so.

A False Prophet

In 2016, I started to work and write again. As you might imagine, coming back was tough for several reasons.

Explaining my absence being the least of them, but dealing with the consequences thereof—now that's a different story.

My newfound outlook and restrained personality was immediately challenged and put to the harshest test possible. The void I'd left behind had been filled by someone whose name I immediately recognized. It was a former client of mine—and he had taken the plagiarism I was used to dealing with to a whole new level: YouTube.

As the son of a wealthy oil merchant, this Canadian twenty-something played to his strengths, funneling those resources into ad campaigns and video production. He dazzled his audience with displays of wealth, liberally using props like luxury cars and promotional models playing beautiful women who just happened to be around. To this he added what he took from me and mixed in the right blend of life coaching advice, pickup artistry, and the "profound" statements you cringe at ten years later in your thirties, shaking your head in disbelief when reminded thereof. Yet this was a winning formula, and it allowed him the impressive following he had amassed in record time.

It was flash and flair over substance and competence, but he rose to the occasion with extravagance and enthusiasm and seemed perfect for the role. It was hard to deny that the kid had a knack for marketing, whereas I had little. While it came at the price of competence, those watching his silly antics didn't know, but he certainly knew *his* audience well enough to lead his insecure peers where he wanted them—without exception, to one of the sales pages for his overpriced PDFs.

But, like those who came before him, he kept the gimmicks and left the rest, greatly diminishing the end result, as evidenced by those who ended up as before–afters to sell his schlock. He was, I finally realized, nothing more than a run-of-the-mill internet marketer posing as a trainer. He just happened to be the most obnoxious and skilled thus far.[37] Last I heard, he's selling sunglasses and, according to a source, has a makeup line for men in store. An interesting change of direction. Perhaps he's finally found his true calling, like I have mine.

I moved on to minding my own business and focused on client work. By the end of the year, I had a new client update on the site. That seemed to signal my comeback officially. Those previously unsure about my intentions quickly accepted the fact that I was here to stay. Once again, I had more work than I could handle in a timely manner.

Perhaps it's presumptuous to say, but I learned that water seeks its own level. As long as you're the one turning on the faucet. You know, "Build it and they will come," and all that jazz.

The Book

Book writing's a bitch. Disciplined writing must be matched with discipline in choice and decision. And judging by the one hundred thirty thousand-something words it took to produce this one, I was a late bloomer. I'll explain why less than half made it into the final product, but let me talk about the process first.

Starting on May 1, 2017, I promised myself to commit to writing every day for a week at first. I didn't go for a set amount of words, my goal was simply to sit down and put any number of them on a page, every day, no matter what. A word, sentence, paragraph, a whole page or pages, that didn't matter to me. Only consistency did.

When that commitment turned out successful, I set a new goal—I would now write a full month. I did that too, and ended up writing every day that summer. And when it was time for a vacation on the eighth of August, I had racked up a ninety-eight-day winning streak.

Which I stretched out to a hundred-day winning streak just so I could brag about it to you. I made that number by writing a short paragraph in between planes on the eighth of August, adding two sentences to said paragraph the day after, scribbling on my phone while taking a shit. I know you didn't want to read that, but that's the price of truth and transparency, my friend. Sometimes it sucks or stings. Believe me when I

say writing this introduction sucked and stinged more than anything I've ever done before.

Sometimes it's rewarding and empowering. Like the vacation I went on, the big house I stayed at, where I was fed, cared for, and never found wanting. A token of appreciation from a grateful client who turned out to be a most generous host and a friend for life. Never spent a dime for the duration of my stay—because every time my wallet came up, my host made it very clear that such ideas insulted his Greek sensibilities.

Not to mention the change I inspired many years earlier—also a product of truth and transparency, resulting from my desperate need to find it where none was seen.

But you can't have one without the other. You can't have the reward without the suck, and you can't empower others by dodging the sting. Sure, you can fake it all day long, and almost everyone does. You can flex your guns, show your ass, write motivational quotes and talk about sacrifices made pursuing bigger guns or tighter glutes. The young and dumb might find this charade inspirational and mistake it for authenticity. But it's not. And it won't lead to anything that counts.

So what's my point in saying that? Well, I was just talking about book writing and how this one's trajectory changed into another direction. And kept changing. Because the direction I was so sure of after Greece, turned out to be yet another side-track.

It wasn't 'til early 2018 this ship found its port, but that's beside the point. What's not is that I was willing to switch lanes and kill my darlings.

And if practice makes perfect, this is a lesson you're going to have to figure out for yourself.

Don't worry. Next one's on the house.

Wants and Needs

While I didn't write much on Leangains.com in 2017, I invested in a complete makeover of the site. It hadn't been updated in nearly a decade, and was in dire need. What was once a user nightmare, hard to navigate and visually hackneyed, slowly evolved into the streamlined and modern website I imagined for Leangains 2.0. Aside from that, I kept busy with clients, book writing, and social media.

In February 2018, however, things got busy, fast. I started a page for Leangains on Patreon, and advertised it as a place for "the intelligent and selective reader wishing to educate himself (or herself) about weight training, nutrition, and ways of strength, leanness, and balance. Through personal experience, knowledge, and science, I provide a shortcut to your dream physique, make you smarter in the process, and promise a good time getting there."[38]

The setup was simple. For $1 to $10 per month, my Patrons—the people who subscribed to my Patreon page—gained access to exclusive articles, training programs, and expertise. In "Question Threads," questions and concerns were addressed by me or my two assistants, Patrick and Zach. This initiative turned out to be a resounding success.[39]

With Leangains on Patreon, my new responsibilities included reading and answering questions on a daily basis, something I hadn't done in years.[40] This was yet another learning lesson, one I didn't expect.

With my ears pricked, I listened to the pulse of the people. And as the days went by and the questions kept coming, I finally became attuned to the needs of my audience. Their questions mirrored their concerns and priorities, and however misplaced or trivial I deemed them be, I knew I had something to answer for myself.

With intermittent fasting and the many technical details surrounding the Leangains protocols, I had gifted them a Lamborghini before they had learned to drive. Told them about the cherry before teaching them how to bake the cake. Revealed the ending before everything that comes before it.

I had foolishly assumed the rest would fall into place, which it clearly never did. How could it? Twenty years had passed since my first steps on the barren landscape fit to describe the internet fitness community in the late ‘90s. What were once a few towns where everyone knew their neighbors had grown into a mega-city where everyone knew everything, yet no one knew anything.

Taken together, I rediscovered my audience through a new lens. Because while I had overestimated the practical and theoretical knowledge of the people, as far as weight training and especially nutrition is concerned, I had also underestimated their ability to recognize and relate to more abstract concepts involving the psychology and behavior required to succeed. I saw this in different ways, but most clearly in response to articles like “A Quality of Utmost Importance.”[41]

Before publishing articles or weekly Q&As that involved what I call the “softer” science of dieting, I always had great doubt, thinking the advice given wouldn’t resonate or would simply fall on deaf ears. But my doubts were never realized, and I always met with a positive surprise.

These were willing students with big gaps of knowledge they didn’t know how to fill. And I saw it as my responsibility to steer them right. The fact that I now got paid for my writing, gave me no other choice, and made me think carefully of the topics I chose to address.

The last lesson on this journey taught me about needs and wants. Two *entirely* different things with nothing in common. Like black and white. And yet despite this strong contrast, they tend to get mixed up. By the student, who lacks the experience to tell them apart, and by the teacher, who lacks the restraint to put one before the other. For both, the outcome is the same. Wants ends up on top.

One of the best books I’ve ever read is called *The War of Art* by Steven Pressfield. A quote from that book goes, “The Principle of Priority states (a) you must know the difference between what is urgent and what is important, and (b) you must do what’s important first.”

Don’t think I understood it back then. Who knows, maybe I still don’t. But I think I have a better idea of what he meant. And a better idea of where I’m going now.

The Easy Way

I’m not a fan of catchphrases and popular sayings. Wouldn’t be a stretch to say that I hate some of them. Take “Eat breakfast like a king, lunch like a prince, and dinner like a pauper,” for example. What a load of bullshit.

Excluding this offensive example, however, I’m hard pressed to deny that a great deal of truth can be found in these quotes. My personal favorite is “Learning the hard way is the best way to learn.” Don’t know who or where it’s from, but I’d like to shake hands with the person who came up with it. This is the truism that defines my journey, and I am its unwilling paragon. Unwilling because I never asked for it. And if I’d known what was coming, I would have rejected it. Even if it had meant that I would never be the one to break intermittent fasting to the world, or hold any other such pedigrees that I today can claim. The price was simply too high.

I lost years, relationships, and opportunities thanks to diet fallacies and mundane rituals that came with the territory. When I finally uncovered the truth, I lost nearly as much by spreading the word and beating myself up over the people who plagiarized my work.

But for everything lost, I find some consolation in the paradox of adversity. On one hand, adversity is best avoided and never invited. Who wants to expose themselves to unpleasant and difficult moments? No one. How about a show of hands for seven years of yo-yo dieting? No hands.

Whether we like it or not, adversities make it into our lives anyway. They come in different shapes and sizes, ranging from inconvenience to trouble, chaos, and mayhem. Each of them unique, but everyone’s a pain in the ass.

They’re always bad news—but also unique opportunities for growth and learning. That’s the paradox. In his book *The*

Subtle Art of Not Giving a Fuck: A Counterintuitive Approach to Living a Good Life, the author Mark Manson writes:

"Improvement at anything is based on thousands of tiny failures, and the magnitude of your success is based on how many times you've failed at something. If someone is better than you at something, then it's likely because she has failed at it more than you have. If someone is worse than you, it's likely because he hasn't been through all of the painful learning experiences you have."

Adversity, hardship, and failure are big themes in Manson's book, because that's the way to grow, and he's honest enough to tell it like it is.[42] If we conquer our demons and live to tell the story, we've evolved—mentally, spiritually, or in ability.

Manson has a similar take on the nature of perspective, writing that our "most radical changes in perspective often happen at the tail end of our worst moments." My journey spans two decades, and I've had my fair share of failures and worst moments. But I'm still here. And I'm very, very good at what I do.

Asked about what quality that contributed to his success as a writer, Steven Pressfield, author of *The War of Art*, said something along the lines of "my ability to suffer."[43] I'd answer the same if anyone cared to know what made me good, and since we're being honest, the hard way is the best way to learn. But it's not a choice—nor is it a guarantee.

Most people walk the hard way without learning a thing. I walked the hard way to the very end, peered over the edge, and stared into the abyss. Survived. And came back to tell the truth.

The truth. The only thing that matters in this world. I learned that the hard way so you don't have to. And wrote the book I so desperately searched for during those long lost years.

So hold it close to your heart, because it came from mine.

Chapter 2: Unpacking the Leangains Method

If you ask most smart or successful people where they learned their craft, they will not talk to you about their time in school. It's always a mentor, a particularly transformative job, or a period of experimentation or trial and error.

—Ryan Holiday

In stark contrast, the hip hop artist Fetty Wap once proclaimed, "I am my own mentor. I like to listen to myself to improve." And where is he now? Nowhere to be found after enjoying some modest success with the hit single "Trap Queen." What's my point? Mentorship is not only important, but absolutely crucial to reach the next level. Or to be at a level at all.

If the above isn't proof enough, consider the tremendous impact of Stuart McRobert on yours truly. By placing my full trust in McRobert's teachings and directing my undivided attention to the methods and principles of *Beyond Brawn*, I gained an undeniable advantage and a mile-long head start on my road to great strength and an impressive physique.

The clueless jocks from school who once outlifted me? They stopped coming to the gym once I made a mockery of their one-rep maxes. What they lifted for one repetition, I did for eight. Their pride simply couldn't take it anymore, and why is that? Only because *I* followed a mentor, while *they* followed the latest pro bodybuilder routine in *Flex Magazine*.[44]

Unfortunately, the days of mentorship are long gone. Now, we live in an age of distraction and facade—there's too much

of everything, and with so much input, no focal point to rest your eyes on, and no man or woman to lend your attention to. And the so-called "teachings"? Delivered through motivational quotes, memes, or soundbites from Instagram models or "influencers."

But it doesn't have to be like that. You can be different. You have a choice, and I pray you make the right one. Because with this book, I set out to do what no one has before: to write the book I was looking for when I needed it the most, the *Beyond Brawn* of fat loss.

A book that will take you from A to Z and dutifully instruct you in the art of getting ripped, one that's fully referenced, meticulously crafted, and forged through blood, sweat, and tears by two decades of learning *the hard way*.

A lean book with no fluff, no gimmicks—and no fifty-page recipe section, because that's for hacks who can't do without them.

A book that demands your complete and unquestioning loyalty. Because doubt and insecurity kills progress and puts you right back where you started: weak, fat, on Amazon looking for diet books or on Instagram wondering what his or her "trick" is. Like a goddamn idiot. And guess what? You deserve to fail, and I hope you do—for years, like I did. And if you knew how lucky you are to be living in this age, today, with this book in your possession, you'd agree with me.

What you answer now is of no relevance. If your answer holds in a month, congratulations. But what about in three months? Because that's what it takes to make a real change with the Leangains Method—a head-turning change that will put your "lean" friends to shame. But for that, I require your unfaltering attention, belief, and trust.

Enough with this nonsense, then. Let's begin.

The Leangains Manifesto

It can be argued that I already taught you my most valuable lessons in the previous chapter. Then again, that

wasn't what you came for. Well, story time's over, and a more actionable form of learning begins. Let's start with a look at the Leangains Method manifesto:

The Leangains Method is formulated for lifters who want to shed fat as fast as possible while maintaining or increasing muscle mass and strength, with a minimum of effort and needless complexity. That is, effort and complexity that cannot be scientifically, logically, or behaviorally justified shall hold no place in the diet, or dominion over the individual.

The first part of the manifesto is a given—if you want *weight* loss, join Weight Watchers, and if you want to do it faster still, hop on this week's crash diet *du jour*. But the rest of us—you, me, my clients—are all interested in maximising the positive—*fat* loss—while negating or reversing the negative, muscle loss. Doing so requires special consideration of certain details, all of which will be covered and expounded in the chapters to come.

The second sentence of the manifesto shouldn't come as a surprise after reading the introduction, much of which was spent detailing my many years of struggles and hardship. It was due to nonsensical beliefs founded on faulty science and logic that I kept failing for *years* until I finally got it right. For this reason, I promised myself that I wouldn't contribute to the spread of misinformation. Therefore, the Leangains Method rests on an unshakable scientific foundation, and contains no principle or practice that doesn't stand up to rigorous scientific scrutiny.

In my experience, long-term success can only be enjoyed when you have the freedom of *choice*—when you're able to modify your diet based on personal preferences, such as *when* you eat, how many *times* you feed, and what *foods* you eat, for example. Only then will you be able to consistently stay on track and feel at ease around food. Everything else is just a short-term fix, whether you want to admit it or not. And it can't be done if you walk around with a bunch of bullshit in your head. Trust me. If there's one person on this planet who knows the secret to succeeding on a diet, it's me. I'd dare you

to find a better example, but it'd be a waste of your time, so I won't go there.

Beyond the manifesto, what is the Leangains Method? It's the definitive diet for lifters of all rank and merit. Of course, everyone claims their diet is the best thing since sliced bread. Few, however, can back it up with actual results, and fewer still can back it up with scientific references, both of which I've done in this book. Put real-life results and science together, and I invite you to come up with one example, because I can't.

Let's get to it then, shall we?

Overview of *The Leangains Method*

This book can broadly be divided into three sections: "the why," "the how," and "everything else." This is a somewhat arbitrary and perhaps redundant way of categorizing each chapter, especially since many "how" chapters contain a good deal of "why." That said, I think it's helpful to think about diets—any diet—in this manner: here's the theory, and here's how to put it into practice. Because what use is science if we don't find a way to make it work in real life?

What follows is an overview of the upcoming chapters, a summary of their contents, and an explanation of how they fit into the greater whole.

The Why: Diet Theory

Chapters 3 and 4 represent the dietary theory of the Leangains Method. In these chapters, you will receive a thorough introduction to the central theme on which the diet is founded. When you're done reading, you will understand *the why.*

Chapter 3, "Calories 2.0," is a general introduction to *diet-induced thermogenesis* (DIT). You may be familiar with this phenomenon as the more commonly used term *thermic effect*

of feeding (TEF). But as you will come to find out, food isn't the only regulator of thermogenesis.[45]

In Chapter 4, "Hacking DIT," we'll take a deep dive into DIT and look at how it is affected by various macronutrients, exercise, meal frequency, and more. Much of this chapter consists of novel scientific findings previously unknown and unexplored in the fitness community. Exciting stuff, guaranteed, and enough details to make your head spin.

The How: Diet Practice

Chapter 5, "The Thermogenic 7," starts off the practical part of the Leangains Method. Here, you'll learn how to apply everything you've read in the previous chapters by familiarizing yourself with the Thermogenic 7—seven actionable strategies to harness the power of DIT.

In Chapter 6, "Crunching Numbers," we'll untangle the mystery of how much you're going to eat; how to calculate the amount of calories and macronutrients you're to consume based on your individual characteristics, such as gender, age, muscle mass; and much more. If your IQ is less than 140, bring a calculator.

Chapter 7 is a master class in the art of tracking, something that's almost *always* brushed past or treated with indifference. And that's a shame, since this crucial skill can make or break your success on *any* diet. As you'll come to understand, there is much more to this than weighing yourself at the end of the week to see how much weight you've lost. In this chapter, you'll also learn how to adjust your diet if and when the time comes.

Chapter 8, "Getting Stronger," covers another vital yet mishandled part of a successful diet: weight training. Contrary to popular opinion, weight training is far more important than cardio while dieting.[46]

Perhaps it's this ignorance that leads many in the fitness community to claim that you can't gain muscle and strength on a diet. That may be true for them, but I've proven time and

time again that with the right weight training program, properly executed and balanced in terms of volume and effort, it is indeed possible for the great majority. In fact, it's the norm among my clients to not only lose fat, but also gain muscle and strength in the process. Now you can enjoy the same success as them for the very first time.

Chapter 9, "Leangains Recipes," features a variety of original diet favorites by yours truly. Each recipe is especially suitable for the Leangains Method and caters to a broad range of tastes, from hearty to sweet and everything in between.

Chapter 10, "Sample Menus," is a collection of meal plans. I encourage everyone to make their own meal plans based on personal preference and routine, but that doesn't mean everyone knows how and where to start. There are plenty of pre-made plans here to choose from until you figure out your own.

Everything Else

Chapter 11, "Frequently Asked Questions," covers common and uncommon questions related to the Leangains Method. If you're left wondering anything after reading everything else up until this point, you're most likely going to find your answer here. If you're still not sure or feel like anything has been left out, I encourage you to visit my website at www.leangains.com, where I will keep a running FAQ specifically related to the Leangains Method.[47]

You can also present questions to me directly on my Patreon site at www.patreon.com/leangains. There, you will also find a thriving community and a plethora of informative articles related to diet, exercise, the psychology of success and everything in between.[48]

In "Supplementary Material," you'll find a great deal of useful reading material to supplement your knowledge base and assist your body transformation journey. Here, you'll find two of my best articles from the website, a third article from the Leangains Patreon site, and a fourth that didn't quite fit with the rest in this book. All of them are revised and edited

for this book. And don’t miss the list of high-protein foods at the very end. It might come in very handy for those looking for alternatives to the usual.

All right, then. Now that you know what’s in store, let’s get on with the show.

Chapter 3: Calories 2.0

Never assume the obvious is true.

—William Safire

Let's talk calories. They're among the most counted things in the universe. The word calorie, at root, means a measure of energy.[49] When conceived, it was in the context of work. Akin to coal in the human stove, more calories meant greater capacity to perform, more physical fire to get the job done.

You may use MyFitnessPal or FitBit religiously to track calories, but do you know the *thermic value* of those calories? Those apps won't tell you. Yet *thermogenesis* plays an important role in accomplishing the goal you're using these apps for in the first place: fat loss. And knowing how fat loss is stimulated by certain foods and macronutrients, thermogenesis becomes a powerful tool for manipulating body composition—as you'll see.

First, a bit of caloric history. Because despite handy apps, scientific advances, and available technology, in many ways we're still stuck in the nineteenth century. The current food values and nutrition labels are based on the Atwater system, named after nineteenth-century American chemist Wilbur Olin Atwater. He became America's leading authority on nutrition after establishing that each gram of carbohydrate and protein contributes 4 calories of metabolizable energy (ME), while fat and alcohol contribute 9 and 7 calories, respectively (ref. 1).

ME is roughly defined as the gross energy in food, specifically the calories converted by your metabolism. ME is the portion of calories that remain and are used by the body *after* those lost in feces, urine, and digestive processes. Consider, for example, the amino acid leucine. In its basic,

undigested form, leucine contains 6.5 calories per gram. After bodily assimilation, this figure drops to 4.6 calories (ref. 2).

But the equation has a shortcoming. Leucine doesn't provide 4.6 calories; the actual number is somewhere between 3 and 3.7 calories. That's because ME doesn't factor in the *thermic effect of food* (TEF)—that is, the increased *resting* energy expenditure after feeding attributed to the digestion and storage of nutrients consumed (ref. 3). It's the key element of *diet-induced thermogenesis* (DIT)—a term you'll become friendly with throughout this book.

Thermogenesis in Action

Remember that holiday when you ate too much, passed out on the couch, and woke up in a puddle of sweat? That's thermogenesis, or food's "thermic effect" in action. Since the extent depends on the calorie and macronutrient content of a meal, it's best illustrated (and felt, by a tightening belt) during those holiday hog-fests we all love so much.

Indeed, consuming 5,000 calories in one sitting is not unheard of during Christmas or Thanksgiving. I should know. So while you're passed out, dreaming about oversized cheesecakes and chocolate reindeers, it's consoling that at least 500 (10 percent) of those calories will be eliminated over the next five to six hours, thanks to thermogenesis. Seventy-six percent of that (380 calories) will be expended during the first three hours after the meal.

At a rate of 127 calories per hour, you've more than *doubled* your resting metabolism simply by eating—a lot. That's not a trivial amount. You're burning more calories *resting* than walking at a leisurely pace—for *hours*.

You can break a sweat and work off 500 calories in the gym, sure. Or burn 500 calories via *thermogenesis* while at rest, as the underlying mechanisms are the same. The body heats up with rising energy expenditure, which in turn stimulates a sweat response (or "burn") if the increase is significant enough. Optimizing thermogenesis and calories

burned during this process largely depends on the percentage of protein, carbohydrate, and fat in a meal.

My mom makes a mean cheesecake. Rest assured, the thermic effect of one of these is nothing to play around with.

Defining DIT

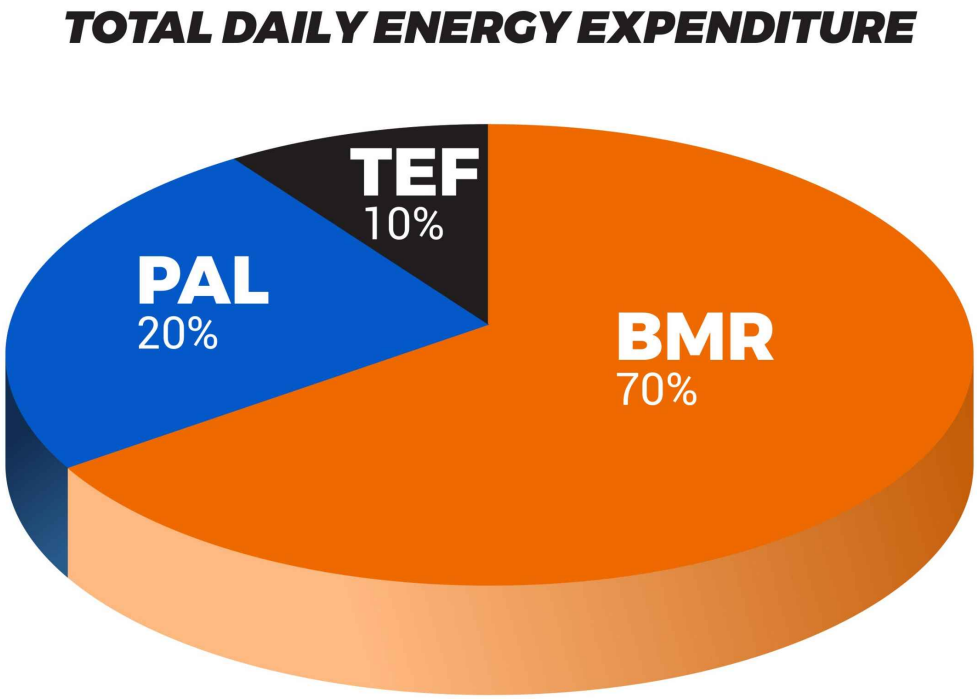
DIT, as it's commonly known in the scientific literature, or TEF, as it's generally known among educated laymen, is the amount of energy (calories) expended above resting metabolic rate. While influenced by a few factors, DIT is basically the caloric cost of processing food for use and storage during digestion (expressed as a percentage). It is, along with basal metabolic rate (BMR) and physical activity level (PAL), one of the three components of daily energy expenditure.

In essence, DIT *burns energy to store energy*, but scientists didn't know this until eighty years after Atwater's discovery (ref. 4). At that point, his system had long been implemented by governing agencies worldwide. While DIT is a fascinating paradox in its own right, you're probably wondering how big a deal this is. Well, accumulating data suggests it's significant enough to warrant an overhaul of our current system (ref. 5).

Failing system, that is. It's not your imagination. People are getting fatter with every generation. Even countries whose populations have, for centuries, been the leanest, healthiest in the world are recording higher obesity and affiliated disease/death rates than ever before, after adapting to aspects of the "mixed" or "standard American" diet.

Few topics are as polarizing as diets and dieting. Akin to religion, they often reveal the best and worst in people. Regardless of where one stands on the issue, placing blame on governments, corporations, or individuals, we can all agree it's helpful (and in some cases, vital) to know the right calorie content of food. That way, it's easier to make better choices and know which macros to invest in wisely. And to harvest these secrets, we turn to DIT.

It's generally assumed DIT accounts for 10 percent of total daily energy expenditure on a "mixed" diet—what scientists write instead of the more accurate "shit" diet, to get their papers published (ref. 3). It's also known as a Western type/pattern diet, characterised by comparatively low protein intake (15 percent) relative to fat (35 percent) and carbs (50 percent). This diet, characterized by highly processed and refined foods, sugar, salt, fat, and protein from red meat, is an important factor contributing to the development of metabolic disorders and rising obesity worldwide (ref. 6).



Components of daily energy expenditure of modern man in modern society. Historically speaking, PAL is at an all-time low. In hunter-gatherer tribes, PAL makes up roughly 40 percent of total daily energy expenditure (ref. 7).

On the typical Western diet, 10 percent DIT is a stretch. Crunch the numbers, and you get 7 percent. (You'll know how later.) That means 175 calories of Average Joe or Jane's 2,500-calorie requirement is attributed to DIT. Yet if they'd only adjust their daily macronutrient ratios, they could keep eating 2,500 calories daily and *still lose 25 to 30 pounds (11.3 to 13.6 kilograms) per year.*[50]

How could this be? In the next chapter, we'll examine how different macronutrients and lifestyle choices affect DIT, and lay the groundwork for one of the greatest dietary hacks ever conceived.

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Chapter 4: Hacking DIT

Meaning and reality were not hidden somewhere behind things, they were in them, in all of them.

—Hermann Hesse

You've passed the DIT crash course. Welcome to the Advanced Level. Prick your ears, open your mind, and have a notepad ready. Because here, for the first time, you'll find the most detailed and thorough examination of DIT available to laymen and experts alike. When you're done reading, I'll show you how to use this information through actionable steps, habits, and choices. Armed with these facts, fat loss becomes easier than ever before. Toned thighs and ripped abs will be no longer a dream, but reality within reach. So let's dive in, shall we?

DIT: Carbohydrate

First on the list is the hotly debated carbohydrate. Is it to blame for all our ills? Modern-day news media are quick to point their fingers. Perhaps we'll find the answer here. Carbs yield a rather modest 5 to 10 percent DIT (ref. 1). In simpler terms, consuming 100 calories from carbohydrates results in 90 to 95 calories the body can make use of. This number can change radically, however, depending on circumstance. Exclusive to carbs, there are two components of DIT to consider:

The first, *obligatory thermogenesis*, relates to the digestion, absorption, and processing of nutrients. DIT always features an obligatory component—a thermogenic response induced by a nutrient that affects energy regulation.

Think of it as processing cost—a price paid in a percentage that varies depending on how the nutrient is altered before it can be stored or used. If the cost is 5 percent and 100 calories are ingested, 95 calories can be "used" while 5 calories are lost due to the administrative cost of making those 95 calories usable. In the case of carbs, those 95 calories become blood sugar, directly or indirectly (as liver glycogen), or muscle glycogen.

Burning glucose *directly* by drinking a sports drink only yields 1 percent DIT. However, storing glucose as liver or muscle glycogen results in a loss of 5 to 10 percent of calories due to additional metabolic processing. Remarkably, after exercise that percentage generally increases another 5 to 10 percent, to 15 percent total (ref. 3).

Why this is remains to be seen; it's not due to depleted muscle glycogen stores, as one might assume (ref. 4).

While no game-changer, DIT provides a solid argument for strategically timing carbohydrate intake.

The greatest carb-induced DIT results when converting glucose to fat. For this to occur to a meaningful degree, liver and muscle glycogen stores must be saturated. A few days of stuffing your face will do the trick. The name for this phenomenon is not Thanksgiving or Christmas, but *de novo lipogenesis* (DNL), and it yields 20 to 25 percent DIT (ref. 5).

Essentially, then, carbs are 3 calories, not 4—*after you've filled glycogen stores*. Consolation, perhaps, when your cereal fetish goes overboard. And a good case for overfeeding on carbs if given a choice—and/or following certain dietary strategies that call for *refeeds*.[51]

The second component of DIT is *facultative thermogenesis*, and it is unique to carbs. This process is attributed to insulin, which is released after carbohydrate consumption. Carbs activate the sympathetic nervous system by increasing noradrenaline. The effect is similar to that of caffeine and various "fat burning" supplements (e.g., ephedrine), but on a smaller scale (ref. 6).

Since insulin drives this process, people who are insulin resistant get less thermic burn or DIT from carbohydrates. On a mixed or Western diet for diabetics or the like, this results in roughly 100 *fewer* calories burned every day, or a weight gain of nearly 4.5 kilograms (10 pounds) per year.

And a note for all fruit phobes: the black sheep of carbs, fructose, produces higher DIT (8 to 10 percent) than glucose (5 percent). This occurs in spite of lower insulin levels, and is explained by the higher energy costs of storing fructose as liver glycogen. Counterintuitive, perhaps, since fructose is preferentially transported to the liver. As such, one would think it requires *less* thermic expenditure than glucose to store, but that's not the case.[52]

Pears, my favorite fruit.

In sum, is a calorie still a calorie when it comes to carbs?

Yes, because the modest DIT of carbs is not a cause for revision. However, there are instances in which carbs are closer to 3 calories: post-exercise and overfeeding (depending on glycogen stores).[53] And that's worth remembering.

DIT: Fat

Ah, fat. The tastiest nutrient, and the most calorically dense. Personally, I'd be delighted if fat weren't 9 calories per gram—to discover some self-negating, lesser value. I've spent hours trying to find one. Regrettably, I don't have good news.

We evolved to store dietary fat seamlessly.[54] Since there's no insulin response after eating this nutrient, there's no additional energy expenditure or facultative component. Fat from food goes to adipose tissue quickly, entering as lipid droplets virtually unaltered. This obligatory component alone yields a negligible 0 to 3 percent DIT.[55]

The exception are medium chain triglycerides (MCTs). These fats are assimilated faster, and yield a much higher DIT: 9 to 13 percent (ref. 7,8,9).

While it's fair to count MCTs as 8 calories instead of 9, it's also a moot point. Counting calories will be the least of your worries if you consume enough MCTs to make this a meaningful difference. But if you do, make sure you're secluded and have expedient access to a bathroom.

100 grams of coconut meat contains 33 grams saturated fat, 55 percent (18 grams) as MCT—the same as coconut oil.

Interestingly, fat from butyric acid found in milk, cheese, and butter appears to have pronounced thermogenic effects in mice. But until human research shows the same, a significant caveat is warranted (ref. 10). A more practical issue is limited availability. Butter contains the highest concentration, a measly 3 to 4 percent. Butyric acid *is* available as a supplement, of course, though with unsubstantiated claims. My advice? Don't bother until there's more research.

DIT: Protein

Protein leads the way in body weight regulation, producing the greatest satiety and highest diet-induced thermogenesis of any macronutrient: a staggering *20 to 35 percent*.[56] It's a large enough number that any reasonable person might propose counting protein grams as 3 calories instead of 4.

That's exactly what Dr. Geoffrey Livesey, one of the world's leading authorities on metabolism and human nutrition, did during the Food and Agriculture Organization (FAO) meeting of the United Nations in 2001.[57] There, experts on human nutrition gathered to discuss and improve our understanding of dietary issues, including the energy content of food.

We need to take into account all the considerable knowledge we've learned since 1889 and start applying it.

—Dr. Geoffrey Livesey

Livesey suggested the prevailing and outdated concept of *metabolizable energy* be replaced by *net metabolizable energy*, a model superior in every way that—among other things—accounts for DIT. While there were no academic objections to Dr Livesey's proposal, the administrative headache of pushing this through must've seemed daunting. After deliberating for two years, the FAO decided to stay with ME. (ref. 11)

Why didn't they take strides to publicly update and recalculate calories per the evidence of current science?

- Cost to the food industry of changing labels.
- The FAO was attempting to harmonize regulations across agencies worldwide. Introducing NME and replacing the latter would have slowed, or even dismantled, that process.[58]

The delay ultimately came down to expenditure, timing, and special interests—an unfortunate trifecta. No surprise—but an impetus, I suppose, for this book.

Why is the DIT of protein so high? In short, protein contains nitrogen, which needs to be removed before amino acids can be put to use. Once amino acids are freed, they're used for energy-demanding processes such as protein synthesis and de novo gluconeogenesis (DNG). Studies looking at the latter found 20 to 33 percent of calories from ingested protein were lost, depending on the nutritional state of subjects—20 percent when fed, and 33 percent when glycogen depleted (ref. 1,12).

Indeed, the two biggest factors that affect the DIT of protein are protein synthesis and DNG. Initially, protein synthesis is responsible for two-thirds of the increase in energy expenditure. DNG largely makes up the other third. With time, however, this shifts into a more even split, as protein synthesis cannot remain elevated indefinitely. While there are several minor contributors to the DIT of protein, it's fair to say it's mainly caused by protein synthesis and DNG (ref. 12,26).

It's also worth mentioning that the DIT of protein differs slightly depending on food source. High-quality sources like meat, eggs, or dairy provide a different DIT compared to lower-quality protein (e.g., vegetables and grain products). In this context, the amino acid profile of the aforementioned foods determines the protein quality.

Meat contains an abundance of essential amino acids, making it high quality, while proteins in vegetable and grain products do not. High-quality proteins therefore yield a higher DIT, but this is of negligible consequence in a diet containing a mix of protein sources.

Flank steak is the king of the grill, but can also be enjoyed on a frying pan like any other meat. Just make sure the cut is not too thick.

Since the DIT of protein varies depending on the physicality and habitual diet of the consumer, it's not far-fetched to think weight training, which affects protein synthesis positively, also affects DIT. But the extent thereof remains speculative until research proves otherwise.[59]

Along with being the most thermogenic nutrient, protein is also the most satiating (ref. 1). While attempts to draw a direct link between satiety and DIT, implying the former causes the latter, have been made in theory, they've failed in practice (ref. 13,14). Indeed, the "filling" properties of protein are largely explained by its impact on peptide YY (PYY), an appetite-regulating hormone (ref. 13,14,15).

DIT: Alcohol

The DIT of alcohol is a relatively high 15 percent (ref. 27). Surprised? A gram is therefore 6.3 calories, per Livesey's (updated) NME, and 7 calories in our current system. In

contrast to carbs, fat, and protein, the DIT of alcohol is poorly understood—and unrelated to obligatory or facultative thermogenesis. Studies on animals suggests alcohol-induced thermogenesis may instead be governed by increased enzyme activity after consumption (ref. 2,16).

My favorite way of enjoying alcohol depicted above. In both red and white wine, 85 to 90 percent of the caloric content is alcohol and the rest is carbohydrate.

leangains	AVERAGE DIT	MAXIMUM DIT	kCal/g (ME)	True kCal/g (NME)
FAT	1.5% Range: 0–3%	13% Condition: MCT	9	9
CARBOHYDRATE	7.5% Range: 5–10%	25% Condition: Saturated Glycogen Stores	4	4
PROTEIN	27.5% Range: 20–35%	35% Condition: Favorable Amino Acid Composition	4	3.2 *
ALCOHOL	12.5% Range: 10–15%	15% **	7	6.3 *
DIETARY FIBER	NA	NA	2	1.4 ***

* NME is set by the lowest number in the range (DIT). The actual kcal/g may therefore be lower still.

** This is likely a result of variation in data or improved techniques for measuring DIT. It's not known whether conditions exist that modify the base value.

*** The value is unrelated to DIT.

A table summarizing the true caloric yield of the four macronutrients and dietary fiber.

DIT: Caffeine

The world's most popular drug is widely recognized for its stimulating effects on mind and body. Indeed, caffeine impacts energy expenditure in a linear and dose-dependent manner. Over 2 to 2.5 hours, 100 milligrams, 200 to 250 milligrams, and 400 to 450 milligrams of caffeine increase the metabolic rate by 4 to 5 percent, 10 to 12 percent, and 16 percent respectively. One cup of coffee every other hour throughout the day burns 150 calories—nothing to scoff at. Better yet, the increase primarily affects fat metabolism (ref. 17,18).

Caffeine's effect on energy expenditure is subject to individual variation, as reflected in the 8 to 30 percent increase participants experienced in the cited study (ref. 17). I've known people who could go to bed and sleep soundly after a cup of coffee, and others who'd start climbing walls after half a cup. Needless to say, habitual intake and tolerance are significant factors.

What *isn't* widely known about caffeine is its effect on DIT. In the aforementioned study, subjects were fed the same breakfast with either coffee or decaffeinated coffee. This was the kind of breakfast people eat on a "mixed diet," mind you: 63 percent carbs, 27 percent fat, and 10 percent protein. In the decaffeinated group, DIT was 6 percent, but in the caffeinated, 9 percent. Blood tests revealed that coffee drinkers started burning more fat, instead of carbohydrate, sooner than decaf drinkers.

An increase from 6 percent to 9 percent isn't bad—and possibly, the effect would be greater still after a more thermogenic meal. Importantly, this effect is *additive* to the effects of caffeine on metabolic rate. Other benefits of caffeine include appetite suppression, improved exercise performance, better insulin sensitivity and increased muscle glycogen synthesis (ref. 19,23,24,25).

Did you know coffee beans aren't beans? They're actually fruit pits.

DIT: Meal Frequency

Ah, a subject close to my heart. A decade ago, everyone in the fitness community believed high meal frequency was beneficial in several ways. The most commonly touted was an increased metabolic rate. The more frequently you ate, the more you'd "stoke your metabolism." Or so the reasoning went.

I'm ashamed to say I fell for this absurd logic too. Until I delved into all the research available at the time—and later, when I was sure, made a name for myself by exposing it for what it was: *bullshit*. The research I shared, along with my personal experience and clients' successes, slowly silenced the naysayers and confirmed my claims.

An interesting question I battled with back then was how people came to believe this nonsense in the first place. My argument centered on the confusion stemming from misunderstanding DIT (ref. 20,21). Certainly, metabolic rate increases every time you eat. But the magnitude is proportional to the amount of calories and macronutrients consumed, as you've learned here. *Not* the frequency by which they are ingested, as believed back then.

Turns out I was wrong. Not by pointing out errors, but in downplaying the role of meal frequency in DIT. A decade

later, more and better data is available (ref. 22). In a curious twist of events, it now appears a *lower* meal frequency results in a higher metabolic rate due to greater effects on DIT.[60]

Taken together, research suggests a difference between one meal compared to four or six meals, but no difference between one, two, or three meals. Ironic, because it's the exact opposite of what everyone believed, until I told them not to.

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Chapter 5: The Thermogenic 7

Great things are done by a series of small things brought together.

—Vincent Van Gogh

As the wise man implied, several things within the big things that matter will affect your results. In isolation, one wouldn't get very far—if you only changed from four to two meals, you wouldn't notice unless it also made you eat less overall. But if you applied several small things and did them consistently and dutifully? Now we're talking. And now that you know the potential of DIT, it's time to put this information to good use.

Many things influence a person's eating habits. For Average Joe and Jane, it's usually what's right in front of their eyes. Or whatever tastes good. The well-informed reader of this book, however, uses the *Thermogenic 7* as his guiding light.

Follow these seven principles, and you will eat yourself lean by optimizing DIT. The best part? Not all seven need to be employed stringently to see results. But the more of them you use, the faster you'll lose.

That is, provided adherence to said principles does not cause you to falter—*and this is key.* Fat loss is a marathon, not a sprint. If you want to make it to the finish line, find ways to balance compliance with the perceived challenge of *staying* compliant.

For example, if you do better with six meals instead of three, feel free to skip that strategy. But give it a fair try first. Adjustment to a new routine may take time. If it's still not right, do what you're most comfortable with. The bonus burn you get from three meals will not outweigh the benefits in consistency you may experience with four meals.

What's the point of perfect if your brain eventually flips a switch and sends you charging to a bakery? Most people think rigidity is the solution, when the opposite is true. Be *flexible*, and bend these principles to suit you. Don't let them bend you.

1. The Protein Principle

Protein is the most crucial nutrient for anyone looking to lose fat while retaining muscle and sanity through the process. Gram for gram, protein…

1. Is the most anabolic and muscle sparing of all nutrients, and the only one that directly increases muscle synthesis (ref. 1).[61] Studies show more protein equals more fat loss *and less* muscle loss on a diet (ref. 2,3).

2. Provides more satiety than other nutrients. Think about it. What fills you up more, beef or bread (ref. 2,4)? It doesn't take a clinical trial to figure out the answer (although many of them prove this).

3. Yields the highest DIT (ref. 3,5). As you saw in the previous chapter, there isn't even a close second!

You'll receive all those benefits from *one* nutrient. Talk about the most bang for your buck. It shouldn't come as a surprise that protein constitutes the foundation of the Leangains Method.

Remember Average Jane & Joe from the last chapter? If they did *nothing else* except raise their protein intake from 15 percent to 60 percent, both would lose a quarter kilogram (half a pound) per week simply from elevating DIT. Assuming they're not too full and fall short of advised intake, of course. Protein is extremely filling. They're more likely to lose another 0.25 to 0.5 kilograms from undereating—but that's beside the point.

Strategy: Get as close to 60 percent protein as possible.

In practical terms, this means you'll be eating 300 grams of protein on a 2,000-calorie diet. Why 60 percent? Through experience, I've found this to be the highest percentage maintainable without feeling deprived or tempted to cheat. Personally? Fifty-five percent is the sweet spot for me, though your mileage may vary. Hitting 60 percent protein on the dot is not important; getting as close to 60 percent as possible *and* being able to maintain it in the long run, is. Perhaps you'll find 60 percent protein too challenging or restrictive, but 50 percent protein doable. That's a reasonable compromise that will bring more fun to your diet while still retaining a high DIT.

Like its cousins quark and cottage cheese, Greek yogurt contains 65 to 70 percent protein, making it an excellent and flexible protein source. Add sweetener and berries for a cool, summer-friendly dessert—or use it as the foundation to of a healthy dip or sauce.

2. The No-Nibbling Principle

The latest research shows one to three meals produce a higher DIT than four to six (ref. 6). Other studies find fewer meals also make you fuller (ref. 7). Days of exhaustive meal prep and stressing over food intake every two to three hours are over, and thank God for that!

Most people have no problem eating three meals a day. After all, that's how we ate before snacking became a thing. Ironically, this is a habit recommended by dieticians to "keep hunger at bay." Curiously, though, recent studies show nibbling produces the opposite effect (ref. 7).

Regardless where one stands on the issue, there's very little support for snacking/nibbling as an effective diet strategy. But there are exceptions. As with anything, you'll always find outliers who do better with more meals. With that in mind, feel free to experiment.

One way of integrating the no-nibbling principle is intermittent fasting. I made my bones in the fitness industry over this topic, and have written about it exhaustively on Leangains, which brought IF mainstream, and made it popular —certainly more widely known. If you're interested in combining the Thermogenic 7 with intermittent fasting, there's a guide called the Leangains Guide 2.0 among the supplementary materials in the back of the book. Uh-uh—don't look yet. Full attention, remember? (ref. 8)

More useful reading on meal frequency and intermittent fasting can also be found in the Leangains Site Guide (ref. 9).

Strategy: Eat two to three meals a day, whenever you want.

Although you *can* vary this frequency from day to day, eating one meal on Monday and three meals on Tuesday, I *strongly* suggest you stick to one meal pattern, and maintain it for the duration of your diet.

The reason for this? Hormonal entrainment. We get hungry at the times we're used to eating, governed by the hormone ghrelin. You'll only make it harder on yourself by constantly varying meal times. For more on this, visit the links above, where the key facets of meal frequency (plus the science thereof) are discussed.

If you ask me, the biggest benefit of a low meal frequency is being able to eat like a man. While writing this book, one of my meals consisted of a freshly grilled rotisserie chicken.

3. The Greens Principle

Veggies provide bulk and satiety—important on any diet—and fiber, *extra* important on a high-protein diet, to avoid constipation. Note how the majority of carbs in dark leafy

vegetables derive from fiber. This may cause confusion. For instance, if you've tracked calories digitally and found your total doesn't match the app's, it's because of how nutritional labeling calculates **dietary fiber.**

Broccoli, raw

Serving size: 100g or 3.5oz

Amount per serving	
Calories 34	Calories from Fat 3
	% Daily Value*
Total Fat 0g	1%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 33mg	1%
Total Carbohydrate 7g	2%
Dietary Fiber 3g	10%
Sugars 2g	
Protein 3g	

Cauliflower, raw

Serving size: 100g or 3.5oz

Amount per serving	
Calories 25	Calories from Fat 2
	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 30mg	1%
Total Carbohydrate 5g	2%
Dietary Fiber 2g	8%
Sugars 2g	
Protein 2g	

Broccoli & cauliflower nutrition stats per 100 grams

The sum of all nutrients combined for broccoli is roughly 43 calories—25 percent higher than the listed value of 34 calories per 100 grams. What gives? The information sheet lists 7 grams of carbs per 100 grams, but doesn't note how only 3 grams are digestible—the rest are an even mix of *soluble* and *insoluble* fiber. Soluble fiber provides 2 calories per gram, but insoluble fiber provides none. When the amount of dietary fiber is known, nutritional labels and calorie logging software *assume* 70 percent is soluble—usually overestimating the amount.

According to the regulating agencies in charge of providing this information, 100 grams of broccoli has:

- 3 grams of digestible carbs (12 calories),
- 4 grams of soluble fiber (8 calories),
- 2.8 grams of protein (11.2 calories)
- 4 grams of fat (3.6 calories)

For a total of 35 calories. The *correct* number according to metabolizable energy (ME) would be 31 calories.

The *actual* number using NME would be 27.6 calories, since this system uses 3.2 calories for protein and 1.4 calories for soluble fiber. Note the wide span between 27.6 calories and 43 calories—a 64 percent difference! That doesn't mean you should abandon all calorie-logging software. These apps are still highly useful. Just keep in mind:

1. Nutritional labels and calorie-logging software overestimate caloric values for leafy greens, which contain a high amount of fiber—and it's *insoluble*, so no calories.

2. Calorie software adds soluble fiber to the total carbohydrate count *and* counts it separately. So, there will likely be discrepancies between logged intake and total macronutrients combined.

Strategy: Eat lots of vegetables, preferably dark leafy greens.

This will keep you full and happy, and everything moving smoothly, due to high fiber intake. You'll also be getting less energy (calories) than you think, so don't be shy, and pile on the veggies. For men, I recommend a fiber intake of 45 grams per day, accomplished with 1 kilogram (2.2 pounds) of broccoli and two large apples. Women would do well with 30 grams per day, or 600 grams of broccoli and two large apples.[62]

Let me end with two disclaimers. People with gastrointestinal issues such as bloating, gas, constipation, or diarrhea might be better off without this principle. The same goes for everyone else who reacts poorly to fiber, and anyone else for whom this causes more grief than it's worth.

Lastly, there's a lot of leniency with my recommendations above. I've set them quite high to make sure you're going to be full and happy throughout your diet, but if hunger or constipation isn't a problem, feel free to ignore them as long as you remember the key point: veggies are an important part of your diet, so do eat them—especially in the beginning, so you learn and feel how satiating the combination of protein and veggies is.

Broccoli was brought to America by Thomas Jefferson from Italy in 1767.

4. The No-Junk Principle

You don't need to be told about the various ills and evils of processed foods. Anyone reading this already knows a successful diet is built on whole foods. But an interesting new study shows how these benefits extend beyond satiety and nutrient density. The thermic effect of whole foods are *significantly* higher than an equal number of calories from processed foods.

In this study, subjects ate a "wholesome" meal of multi-grain bread and cheddar cheese, or a more processed meal of white bread and pasteurized cheese. Remarkably, results showed the wholesome meal produced nearly *twice* the DIT of the processed meal. Both groups ate the same number of calories, but DIT burned off 137 calories in the wholesome group and only 73 calories in the processed group. This suggests the former may produce higher DIT than the latter—even if calories and macronutrients are equal (ref. 10).

This is an important and curious finding, because it suggests there are other factors involved in the obesity epidemic besides simple overconsumption of calories. In what *form* those calories come also plays a role. The authors of said study speculate that fiber, which was three times higher in the wholesome group, may be a causal factor for this. So if you need a better argument than satiety and effortless shits to meet your fiber intake, there it is.

Strategy: Choose whole foods over processed foods.

To most readers, this might sound like a no-brainer. But up until now, no stronger rationale beyond satiety and nutrient density has been given.

So, RIP, IIFYM (an acronym for "If It Fits Your Macros"). In recent years, IIFYM has become something akin to a movement. Members exist on every forum and social media platform, and take it upon themselves to glibly inform everyone how "a calorie is a calorie." Therefore, you can eat anything you want on your diet. According to their ill-conceived logic and poor grasp of nutrition, it doesn't matter if your carbs come from ice cream or potatoes—it all goes in and out the same two holes. Nonsense, of course.

5. The Timing Principle

Eating carbs directly before or after training yields a higher thermic effect (ref. 11,13). Additionally, eating carbs at these times may also lead to better workouts and enhanced post-workout recovery. With the Leangains Method, carb intake is limited, and usually not much higher than 100 grams per day —so make the most of it, and center them around training.

Strategy: Include a fruit in your pre-workout and post-workout meal.

To make the most of carbs when supplies are limited, a combination of glucose and fructose is ideal for exercise

performance (ref. 12,14). Fruit is therefore a perfect carbohydrate for the Leangains Method. An apple, pear, or orange are all good standbys, and cheap and practical to boot. More pricey and less practical are berries. But on the flip side, blueberries, strawberries, and raspberries have higher nutrient density and fewer calories.

The recommended meal frequency with the Leangains Method is low; most people eat no more than thrice a day: noon, dinner, and evening, for example. It's therefore worth clarifying that the pre-workout meal constitutes the meal you had prior to training. Even if the meal was consumed several hours before exercise, as is often the case. On days where you train, say at six in the afternoon, for example, you'd then add fruit to the meal at noon (twelve o'clock) and dinner (eight o'clock). These would be your pre-and post-workout meals, respectively.

Lastly, to squeeze the most out of those pre and post-workout carbs, wash them down with a cup o' joe. Aside from amping you up, and boosting strength and performance, studies suggest coffee enhances muscle glycogen storage after exercise (ref. 16,17). Whether this moves the needle when it comes to real-world results is anyone's guess, but it certainly won't hurt.[63]

6. The Caffeine Principle (Featuring the LG Caffeine Protocol)

This one's a no-brainer. Caffeine increases metabolic rate *and* DIT (ref. 13,14). It also suppresses appetite if consumed before a meal (ref. 15). It's the best legal fat loss supplement money can buy—plus it's safe, cheap, and tasty. I suggest 100-milligram caffeine pills.[64]

Strategy: Dedicated coffee drinker? Then don't fret too much about this. But if you want to take your blood

concentration of caffeine to the next level and burn more calories, try the following:

Drink one cup of coffee or take 100 milligrams of caffeine first thing in the morning. From there, ingest 100 milligrams of caffeine every other hour for as long as possible without interfering with sleep. This protocol is identical to those used in studies mentioned in the previous chapter, and it will burn 150 calories if maintained for twelve hours. Doubling the dose results in nearly 300 calories over twelve hours. Example:

6:00 a.m.: 100 to 200 milligrams of caffeine

8:00 a.m.: 100 to 200 milligrams of caffeine

10:00 a.m.: 100 to 200 milligrams of caffeine

12:00 p.m.: 100 to 200 milligrams of caffeine

2:00 p.m.: 100 to 200 milligrams of caffeine

4:00 p.m.: 100 to 200 milligrams of caffeine

Here are some guidelines to keep in mind:

- Caffeine-sensitive individuals, women, and men who don't consume more than 4 cups of coffee per day (400 milligrams of caffeine) must exercise caution, and start at the lowest dose (100 milligrams).

- People who don't drink coffee, and those who drink coffee sporadically, would do well to start at half the dose (50 milligrams).

- Men who drink more than 4 cups of coffee per day can start at 200 milligrams until noon, and take a half dose in the afternoon. Maintain this regimen for a few days, and if all goes well, increase the afternoon dose to 200 milligrams. You're the best judge of your tolerance, so start low, and gradually increase the dose.

Warning: A common but harmless side effect of high caffeine consumption is loose stools. Less common but more alarming is any negative mental state or sense of panic. If you experience feelings of unease or anxiety after consuming, stop taking caffeine for the day.

Coffee: The Dutch consume by far the most coffee per capita, but the Swedes are in a commendable fourth place (ref. 21).

7. The Damage-Control Principle

Listen, it's going to happen. While dieting, there will be a special event, dinner, or party you just can't skip. Maybe it's your birthday, your sister's wedding, or an old friend in town. And why should you? Unless you're dieting for a competition, sometimes it's not worth missing out on life just to be "perfect."

Strategy: There are two viable strategies in these situations.

The *first* requires more discipline, and is arguably more effective. It's simple: don't go overboard. Have one slice of cake, a maximum of three drinks, and be content. Be an ideal dieter and a responsible drinker. If you can.

The *second* is for those who acknowledge they can't or won't keep their shit together. It's less effective, requires little discipline, and is more fun. I call it *thermogenic damage control*. There are three rules to follow:

1. Up until the occasion or party where your decadence will manifest, consume only lean protein and vegetables.

2. At the party, eat as much as you want—but keep fat intake low. No matter what.

3. You may drink to your Bacchanalian heart's content, with one caveat; it must be pure alcohol, i.e., vodka, tequila, brandy, or any other drink with zero or negligible carb content.[65]

The aforementioned rules limit fat storage, due to the high DIT of alcohol and DNL. For more details on this approach, I suggest reading "The Truth About Alcohol, Fat Loss and Muscle Growth" (ref. 18) and "Cheat Day Strategies for A Hedonist" (ref. 19).

Note: The responsible drinker may also find my advice in the article "Does Alcohol Affect Strength Training?" (ref. 20) useful. These days, it's what I do. Or try to. And when that fails, I usually resort to the second strategy (and always regret it the day after).

What's the best alcoholic beverage to drink on a diet? For intoxication relative to caloric intake, vodka and other hard liquors that only contain alcohol can't be beat. Beer is on the other end of the spectrum, with roughly one third of its calories coming from carbohydrates.

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Chapter 6: Crunching the Numbers

I have just three things to teach: simplicity, patience, compassion. These three are your greatest treasures.

—Lao Tzu

You now know the *theory*, and how to put it into *practice*. Now, the nitty gritty. Because fat loss—no matter what anyone claims—is still about math. If energy out exceeds energy in, you'll lose fat, and vice versa. Not up for debate. And I give zero fucks about what diet guru *de jour* is claiming on a blog. These facts have served me and countless clients very well throughout the years.

Yet saying fat loss is *all* about numbers is overly simplistic, and true only in the strictest sense. Because the math required to figure out energy needs for weight loss isn't hard. If it were strictly about calories and calculations, I wouldn't have a job—or be writing this.

If someone tells you calories don't matter, they have no credibility. But if someone tells you calories are *all* that matters, they have even less. Because the energy balance equation is incomplete. It doesn't include the most vital variable of all: the human element.

Patience and Balance

Beyond the numbers, fat loss is about psychology, behavior, habits, and environment. But above all, it's a *balancing act.* And that's where many fail. There's a Swedish

proverb, *Den som gapar efter mycket mister ofta hela stycket*, which is roughly translated as, “The one who wants everything often loses all.”

This is true for most people I work with. Once they learn the basics of dieting or calorie counting, people don’t fail because they eat too much. No, that’s how your clueless aunt fails until she joins Weight Watchers. Those who already know the basics—that’s probably you, reading this—fail because they do *too much*, eat too little, and don’t have the patience or discipline to pace themselves.

Yes, pacing and balance require discipline. More so than trying to function on a 1,200-calorie starvation diet while obsessively training and doing cardio all day. That kind of foolishness or “discipline” doesn’t last long, and only requires an idiot willing to suffer the delusion it’ll be over in a matter of weeks. No, you need to plan for months ahead.

Your body is too smart, and naturally programmed for self-preservation; push it too hard and it’ll make its grievances known. Sooner or later, Hunger comes to collect. And when it does, you’ll give in, binge, backslide, and start the cycle all over again. You know the drill. I know you do.

I’ve been there too. Years lost in a revolving wheel of dieting, bingeing, restricting, and bingeing again. Countless hours hating myself for what I saw as a weakness of character, a lack of willpower. Months turned into years thinking, reading, and researching everything, trying to come up with a solution.

After putting it all together, through trial and error, finally, one day—I did. A light bulb lit, and Leangains was born.

Ever since, I’ve made a career of helping people in similar situations: those with sufficient knowledge, but sans the temperance and battle-proven experience to last past the finish line. I help clients find *the balance,* tailored to their goals and lifestyles. And I’m here to tell you that the ideal diet embodies Lao Tzu’s teachings from the beginning of this chapter.

Practice patience. Fat loss is swift with the Leangains Method, but your goal isn’t reached in a matter of weeks. To

see striking visual changes, you'll need eight to twelve weeks. For a complete body transformation, double that. Make it easy on yourself. Look forward, but don't count days. Focusing on time left will make things harder. Focus on the here and now instead; you're *dieting*, not serving time in prison.

Stay simple. Eat similar foods every day. Rotate no more than two or three menus throughout the week. Should you tire, change a thing or two. Soon enough, you'll find your rhythm. And when you do, roll with it to the finish line. Don't get distracted by fancy recipes and countless choices, or you'll find yourself tempted and overwhelmed.

Have compassion. Acknowledge your failures, and learn from them. Don't punish yourself and overcompensate. This leads down a dark road of chaos and disorder, one I travelled down many times before I finally listened to Lao.

All right. Let's get started.

Fat loss takes time—even with the Leangains Method. Don't try to hack the process with crash diets and stupid ideas. That will only add more time. Trust me.

Calculating Maintenance Intake

Maintenance is a term for the number of calories required to maintain your weight. There are various ways to calculate it, and knowing it is essential for altering your body composition, be it fat loss or muscle gain. Everything starts with maintenance, which is why it's the first thing I go over with a new client.

In my experience, traditional models complicate and overestimate actual needs—case in point below.

EQUATION	MAINTENANCE
Harris-Benedict 1919	3265 KCAL
Schofield 1985	3030 KCAL
Mifflin St. Jeor 1990	2802 KCAL
Cunningham 1990	2617 KCAL
Institute of Medicine 2005	2914 KCAL
Henry Oxford 2005	2646 KCAL

Energy needs of a 36-year old male according to six common equations. Physical attributes used as input: 186 cm height, 100 kg body weight and 10% body fat.

No wonder people are confused when it comes to estimating energy needs. Here are my energy needs, according to six commonly used equations. As you can see, the same configuration results in a span of 2,617 to 3,265 calories, which is quite remarkable. The difference between the numbers at the extreme ends (648 calories) is equivalent to a gain—or loss—of nearly 0.6 kilograms (1.3 pounds) per week!

The one presented here is adapted from my work, and it's simple but effective. Aside from three weekly weight training sessions, the formula below assumes a sedentary lifestyle typical of men and women living in a world where much time is spent in front of a computer, be it for work or leisure:[66]

Your body weight in kilograms, multiplied by a base value of 28 for men, or 26 for women.

Example: 90 kilograms (198 pounds) x 28 = 2,520 calories is the estimated maintenance intake for a 90-kilogram male. This is the average daily number of calories required to not gain or lose weight, i.e., maintain.

As another example: 65 kilograms (143 pounds) x 26 = 1,690 calories would be the corresponding number for a 65-kilogram female.

Several attributes affect the base value.

Height

Tall: +1

Men: > 185 centimeters (6 feet, 1 inch)

Women: > 170 centimeters (5 feet, 7 inches)

Short: -1

Men: < 167 centimeters (5 feet, 5 inches)

Women: < 153 centimeters (5 feet)

Body Fat

Men < 10 percent body fat: +0.5

Men 20 to 24 percent body fat: −0.5

Men 25 to 29 percent body fat: −1

Women < 18 percent body fat: +0.5

Women 28 to 32 percent body fat: −0.5

Women 33 to 37 percent body fat: −1

For every 5 percent increase in body fat above 29 percent and 37 percent for men and women, respectively, subtract 1 from the base value.

Note: The effect is cumulative. A man with 32 percent body fat should subtract 2.5 from the base value.

Muscle Mass

Muscular: +0.5

Very Muscular: +1

Very Muscular is only applicable to males. Muscular requires a fat-free mass index (FFMI) of > 22. For Very Muscular, the FFMI is > 24.[67]

Women may use Muscular at their own discretion. There is no FFMI for women.

Note: The effect *is not* cumulative. A Very Muscular male adds 1, not 1.5.

Very Muscular male, yours truly, depicted above at 90 kilograms and 6 percent body fat.

Age

> 45 years: −0.5

< 25 years: +0.5

Activity

To get an idea of how active you are, take note of your steps using a pedometer or an app such as Health (iOS) or Google Fit (Android).

6,000 to 7,499 steps per day: +0.5 to base value.

For every 1,250 steps above 7,500 steps per day: +0.5 to the base value.

7,500 to 8,749 steps per day: +0.5

8,750 to 9,999 steps per day: +0.5

10,000 to 12,499 steps per day: +0.5

Note: The effect *is* cumulative. Someone taking 12,000 steps a day should add 2.5 to the base value.

Using myself as an example:

- I'm a 36-year-old male (+0)
- 186 centimeters tall (+1)
- Very Muscular (+1)
- 10 percent body fat (+0.5)
- Taking fewer than 6,000 steps per day (+0)

My body weight is 100 kilograms (220 pounds). Maintenance intake for me would therefore be 100 kilograms x 30.5 = 3,050 calories.

A short (−1), fat (−1) version of myself would require 100 kilograms x 26 = 2,600 calories.

Calculating Caloric Intake for the Leangains Method

Now that you know your maintenance intake, let's determine your daily calorie intake with the Leangains Method.

For most people, it's simple. Men subtract 500 from maintenance, and women subtract 350.

90-kilogram male: 2,520 − 500 = 2,020 calories

65-kilogram female: 1,690 − 350 = 1,340 calories

On a typical diet, subtracting 500 and 350 calories from maintenance will result in fat loss of 0.5 kilograms (1.1 pounds) and 0.35 kilograms (0.77 pounds) per week for men and women, respectively.

With the Leangains Method, these numbers increase to 0.6 to 0.7 kilograms (1.32 to 1.54 pounds) and 0.4 to 0.5 kilograms (0.88 to 1.1 pounds) per week, respectively—thanks to the power of thermogenesis.

Now for the big elephant in the room. How do we count calories in a world using Atwater's outdated figures? Answer: *As usual*. Why? Because the alternative isn't practical, and would drive anyone crazy.

The whole system, including every nutritional label and food tracker, uses Atwater factors. Simply count calories as you've done before, apply the Thermogenic 7, and you'll lose more than your calculations predict (as shown in the previous example).[68]

Note: Faster and slower alternatives for people with high or low body fat are discussed and covered in the FAQ, as are tackling plateaus, alternate guidelines for athletes, transitioning to maintenance, and much more.

Macro Composition on the Leangains Method

Now that you know *how much* you'll be eating, it's time for the fun part: choosing *what* to eat. Let's talk macros. The macro composition of food denotes the amount of each nutrient (carbs, protein, fat) your diet is composed of, expressed as a percentage of your total caloric intake.

The only fixed variable of the Leangains Method is protein. As mentioned earlier, protein should make up 50 to 60 percent of your caloric intake. Aside from that, you may customize the diet based on your personal taste preferences.

By the way, the standard advice, "Eating a varied diet is the healthiest," thrown around indiscriminately by every health columnist and Registered Dietitian, is complete horse shit, and *not* what I mean by "balanced." If you're eating nutrient-dense foods like veggies, fruit, potatoes, and fish, chicken, or meat, there's no need for variation. You'll receive all the nutrients you need from those wholesome foods.

Included are a few basic sample menus that have been created with simplicity, food tolerance, and flexibility in mind. Use them as written, or keep what you like and substitute the

rest with something else. Or create something entirely of your own making.

Again, whenever possible, choose whole foods over processed. Eat plenty of greens and fiber-rich carbs, preferably from fruit, before and after your workout. And most importantly, use menus you can stick to and foods that suit your personal preferences, within the boundaries given. If you do that, it won't even feel like a diet. And before you know it, the flab over your stomach will melt away, revealing a six-pack, like spring flowers emerging through snow in April.

Chapter 7: The Art of Tracking

The measure of who we are is what we do with what we have.

—Vince Lombardi

We've covered the why, what, and how of the Leangains Method. You know how to get going, and I can imagine you're eager to start. Not so fast, though, grasshopper. What you don't know yet is the part that's always skipped or skimmed over in other diet books. It's not surprising, then, that this knowledge, like most things of actual importance, is more crucial to success than the nonsense often found in its place.

I'm talking about the art of tracking. But what I'm actually talking about is dealing with plateaus. In my experience, this is done very poorly across the board. The reason is simple: to deal with a plateau, it must first be identified. And when people can't, bad things happen.

Here's a typical scenario. A person hops on a diet. Everything's going great, and they're happy to watch the scale hit new lows every week. And then suddenly, their victory streak comes to a screeching halt. The number on the scale is not budging.

So they panic, quickly resorting to desperate measures. Some lower their calorie intake drastically, while others double down on cardio. Many do both. And as hunger and fatigue sets in, the downward spiral begins.

Why? Because more often than not, these reactions are unnecessary and extreme. Unnecessary because people have uninformed expectations, and extreme because they're people.

They rely on the scale to give them their hard-earned reward at the end of each week, a new low to record and brag about. To them, this number is very important. It serves as motivation, receipt and reward for their hard work and discipline. As long as it keeps dropping, they know they're on track.

But fat loss is never linear, and it's often unpredictable. It's common to see virtually no progress one week, followed by twice the progress next week. Sometimes two weeks go by without moving the needle. Then in the third week, you wake up looking like a new person—and the number on the scale is showing two weeks of fat loss and then some.

Those in the know call this the "whoosh" effect. After coaching people for more than a decade, it's something I'm very familiar with. Most people aren't. And they fuck everything up by trying to solve the problem with more cardio and less food—a problem that would resolve itself soon enough with patience and know-how.

I can't teach you patience. That comes with age and experience, if practiced enough. But I can tell you how to interpret your progress correctly. And that, my friend, is very useful information on any diet.

The Weekly Average

First lesson: stop thinking days, and start talking weeks. As implied earlier, it's important to adopt a weekly perspective, since day-to-day fluctuations in weight don't matter. Who gives a shit what you weighed on Tuesday, when you can be up a kilo on Wednesday with no change in diet? Your body acts in mysterious ways, and there are no ifs, ands, or buts about it. It just is.

This doesn't mean you should throw away your scale. You're just going to use and interpret it differently—meaning *correctly*.

Step by step:

1. Weigh yourself first thing in the morning, every day or as often as you can. More days mean more data,

and seven weigh-ins are ideal.

2. At the end of each week, add up the numbers from your weigh-ins. Divide the result by number of weigh-ins, and you have your *weekly average*. Like so:

Week 1

Monday: 80.9 kilograms (178.4 pounds)

Tuesday: 80.3 kilograms (177.0 pounds)

Wednesday: 81.3 kilograms (179.2 pounds)

Thursday: 80.8 kilograms (178.1 pounds)

Friday: 80.7 kilograms (177.9 pounds)

Saturday: 79.8 kilograms (175.9 pounds)

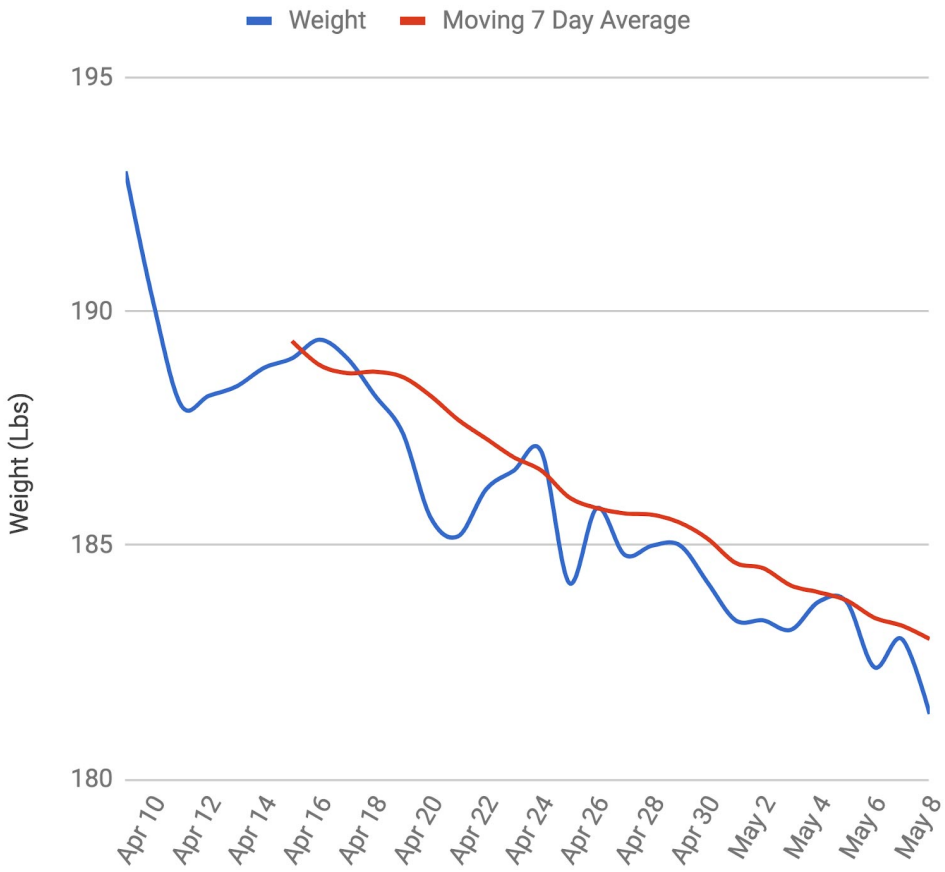
Sunday: 80.3 kilograms (177.0 pounds)

The sum of the values is 564.1 kilograms (1,243.5 pounds), and divided by 7 equals 80.6 kilograms (177.6 pounds), aka the weekly average.

Rinse and repeat the above for every week on your diet. Simple enough, right? Yes, so let me end on a quick PSA about scales. If anyone's still holding on to an analog scale, it's time to let go. That I recommend a digital scale goes without saying. And those who like to enjoy the advantages of technology should consider a more ambitious model. They're full of useless functions, including a particularly abhorrent one that professes to show your body fat percentage.

But they do come with one simple and very useful function, namely keeping track and reporting averages. The Nokia Health brand, formerly Withings, is one example. By fiddling around in app settings, you can request a weekly average to be tracked and sent to your inbox every week. Simply put, they do the aforementioned calculation for you.

It’s basic stuff you can do yourself with pen and paper or Excel—but in reality, something you won’t do for more than a week or two before losing track and discovering what a huge pain in the ass it is.



This graph was made by a client. The blue line shows daily values (weight), and the red line is a rolling average of the former. Graphs are a great tool to visualize long-term progress.[69]

The Biweekly Review

OK, so we’ve established the importance of a weekly average. Lesson two is what you do with it.

Look at it this way. The *weekly average* is how you measure. *Biweekly* is how you judge. Meaning, how’s your diet going—good, or not good enough? Because there’s no in between. Things are either going according to plan or they’re

not. If they are, just keep on keeping on. If they're not, you need to adjust your intake. (More on this later.)

Why is a biweekly perspective important? Can't you just do it like everyone else? Of course you can. By doing things like everyone else, you'll get results like everyone else. On the flip side, doing things like a pro, won't yield the results of a pro. But you'll still be two steps ahead of everyone else.

The biweekly perspective is important for accuracy. And accuracy is crucial for compliance. Compliance is the alpha and omega of a successful diet. And I'll be damned before I let you screw this one up.

It's not uncommon to see virtually no change on the scale from one week to another, followed by a radical drop the week after. Like so:

Week 1: 80.6 kilograms (177.7 pounds)

Week 2: 79.9 kilograms (176.1 pounds)

Week 3: 79.8 kilograms (175.9 pounds)

Week 4: 78.7 kilograms (173.5 pounds)

After dropping 0.7 kilograms (1.6 pounds) in Week 1, nothing much happened in Weeks 2 or 3. No cause for alarm, though—patience pays off in Week 4, when the result is clearly reflected in the sharp drop (1.1 kilograms/2.4 pounds).

To measure and review progress with precision, adopt a biweekly perspective. During your first month, ideally compare Weeks 4 and 2. The difference divided by 2 equals your weekly fat loss.

Week 4 − Week 2 = (−1.2 kilograms/−2.65 pounds) / 2 = 0.6 kilograms/1.3 pounds of average weekly fat loss

Why not Weeks 1 and 3? Because embarking on a diet, any diet, causes your weight to drop quickly in a matter of days. Through the first week of dieting, the weight you're offloading

is largely water and glycogen. By the second week, body weight has stabilized.

Lastly, women must be mindful of their periods. On these weeks, weekly average increases to levels higher than previous week. Sometimes higher than the week before that, and occasionally… Fuck it, this is just a long-winded way of saying obvious shit women already know.

So, when reviewing your progress, ignore period weeks. If your period arrives in Week 4, for example, make a note to exclude it when evaluating progress. In this case, Week 5 vs. Week 3 is the better option for determining weekly fat loss.

	Days (M)	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Avg	AWL	Date Range
Week #1	103.50kg	103.40kg	103.50kg	103.20kg	103.40kg	103.50kg	103.40kg	103.41kg	FAT	~ Jan 7
Week #2	103.20kg	103.10kg	103.00kg	102.50kg	101.50kg	101.80kg	101.40kg	102.36kg	-1.06kg	Jan 8 - Jan 14
Week #3	101.30kg	101.40kg	101.60kg	101.20kg	100.70kg	100.70kg	100.80kg	101.1kg	-1.26kg	Jan 15 - Jan 21
Week #4	100.90kg	100.70kg	100.50kg	100.30kg	100.00kg	100.30kg	100.20kg	100.41kg	-.69kg	Jan 22 - Jan 29
Week #5	100.10kg	100.30kg	100.00kg	100.20kg	100.00kg	100.20kg	100.00kg	100.11kg	-.3kg	Jan 30 - Feb 4
Week #6	99.60kg	99.30kg	99.00kg	98.10kg	98.00kg	98.40kg	99.20kg	98.8kg	-1.31kg	Feb 5 - Feb 11
Week #7	98.30kg	98.20kg	98.10kg	96.90kg	96.20kg	96.90kg	95.90kg	97.21kg	-1.59kg	Feb 12 - Feb 18
Week #8	96.00kg	96.10kg	96.60kg	96.00kg	95.20kg	95.60kg	95.60kg	95.87kg	-1.34kg	Feb 19 - Feb 25
Week #9	95.30kg	94.40kg	94.60kg	94.90kg	95.00kg	94.30kg	94.70kg	94.74kg	-1.13kg	Feb 26 - Mar 4
Week #10	95.50kg	95.00kg	95.00kg	94.80kg	95.50kg	94.50kg	95.00kg	95.04kg	.3kg	Mar 5 - Mar 11
Week #11	95.70kg	94.40kg	93.60kg	93.30kg	93.80kg	93.60kg	94.10kg	94.07kg	-.97kg	Mar 11 - Mar 18
Week #12	93.70kg	93.40kg	93.90kg	93.90kg	93.40kg	92.60kg	92.10kg	93.29kg	-.79kg	Mar 19 - Mar 25
Week #13	93.00kg	93.00kg	92.60kg	93.80kg	93.50kg	92.30kg	92.50kg	92.96kg	-.33kg	Mar 26 - Apr 1
Week #14	92.80kg	94.00kg	92.80kg	93.60kg	92.50kg	92.50kg	91.70kg	92.84kg	-.11kg	Apr 2 - Apr 8
Week #15	92.20kg	93.30kg	93.00kg	92.50kg	92.20kg	91.20kg	92.10kg	92.36kg	-.49kg	Apr 9 - Apr 15
Week #16	90.60kg	91.70kg	91.20kg	90.40kg	91.20kg	90.80kg	90.90kg	90.97kg	-1.39kg	Apr 16 - Apr 22
Week #17	91.30kg	91.30kg	90.70kg	90.80kg	90.40kg	90.80kg	90.20kg	90.79kg	-.19kg	Apr 23 - Apr 29
Week #18	90.20kg	90.70kg	90.70kg	90.70kg	89.90kg	89.40kg	90.60kg	90.31kg	-.47kg	Apr 30 - May 6

Tables are another way of keeping track and displaying long-term progress. This one was made by a client.

Tackling Plateaus

You know what to measure—weekly averages. You know when to review—biweekly. The final lesson will teach you how to decide, and what to adjust. This is probably easier than you think, and it's definitely simpler for me. I don't know about you, but those previous two lessons had me bored to tears. I imagine it must be likewise for you. That's the thing with matters of importance—they're fucking boring, and I'm the first to admit it.

But tackling plateaus is easy as pie. Why? Because I've taught you all the steps leading up to this point, skipping no fact, advice, or lesson. You're armed with secret equations and the art of tracking, ready to show the world what you're able to accomplish with the right tools in hand.

By starting at the right end, proceeding methodically and leaving nothing rushed, you'll start to see things clearly. This is true for any subject, but very much so when it comes to nutrition and dieting. What people think of as important, and what truly *is* important, are different things. What they believe are proven and agreed-upon facts, aren't.

Like plateaus, for example. They don't exist. But if you've spent more than ten minutes on an internet forum, they're everywhere. And these sons of bitches seem impossible to defeat. Requiring unconventional tactics, by the looks of it, along with a good deal of theories about insulin, dairy, and toxins. It seems the learned men and women of the internet are still debating the merits of various strategies to this day.

Here's a lesson: never base your view of reality on what's going on right in front of you. There is no such thing as a plateau. I have mountains of laundry to deal with tomorrow. That doesn't make it a mountain. It's just a heap of dirty laundry I've been too lazy to deal with.

Tackling a plateau doesn't mean there's much to tackle. Tackling plateaus is what clueless people on the internet do instead of tracking, reviewing, and deciding. Wrestling with plateaus is what people do instead of waiting. These imaginary battles are lost before they've started. With fantasies and theories indulged, everyone involved is dumber after the experience.

A plateau is simply the lag between a transaction and the time it takes for the money to reach your account. Look at it as a test of patience. Or learn to *love* the plateau, as it's often a sign that progress awaits around the corner, like author George Leonard suggests in his book *Mastery*.[70]

Adjusting the Leangains Method

That said, let's move on to the topic at hand. When and how should you adjust calorie intake with the Leangains Method?

When depends on weekly fat loss. Men should expect to average 0.5 kilograms (1.1 pounds) per week minimum, and women should expect 0.3 to 0.4 kilograms (0.66 to 0.88 pounds) per week. Exceptions and options are discussed in the FAQ.

For almost everyone, fat loss will fall in the range of 1 to 1.5 kilograms (2.2 to 3.3 pounds) and 0.7 to 1 kilograms (1.54 to 2.2 pounds) in the biweekly review. If it's less, you have reason to adjust your diet.

How? This is how you do it.

If you're a male averaging −0.4 kilograms (−0.9 pounds) per week, you're 0.1 kilograms (0.22 pounds) away from your goal.

0.1 kilograms (0.22 pounds) short means you need to increase your deficit by 100 calories per day.

0.2 kilograms (0.44 pounds) short translates to 200 calories.

0.3 kilograms (0.66 pounds) short translates to 300 calories.

It's that simple. Cut calorie intake by 100 calories per day. Problem solved.

Don't want to cut calories? Then a brisk twenty- to thirty-minute walk will prove equally effective for men and women, respectively. Put on your headphones, and listen to a good audio book. Take a stroll, and enjoy the weather. A combination of both works well if you need to cut more than 0.1 kilograms (0.22 pounds).

Let me remind you that everything here assumes you're eating according to plan, and not indulging in too many transgressions. If compliance is a problem, restriction isn't the solution. Honesty and discipline is.

What to cut?

Now for the question of what to cut. Of the 100 calories needed to meet the goal, how much protein, fat, and carbs? It's a reasonable inquiry, with a simple answer. While staying mindful of the benefits of protein, ask yourself what you can do without. Whether that's an apple, a few almonds, or 150 grams of cottage cheese isn't important. The choice is entirely up to you.

Protein's not off limits—there's more than enough already. That said, recall that 100 calories of protein is actually 75 to 80 calories in reality. Knowing this, you need to weigh compliance and taste against thermogenesis and appetite suppression.

If you hate protein, you're probably not reading this book. But if you're dead tired of some of your protein sources, that had better be the first thing to go. Otherwise, you're just fooling yourself, and risking failure.

Find a compromise that helps you last to the finish line. Don't get too caught up in macros. Think food, not grams and percentages, once the foundation is in place. As long as you're not dipping below 50 percent protein, macros aren't important.

…

My lessons in dietetics and math now comes to an *end*. You know everything you need to know for now. Go, and make me proud. But before we close the chapter on the art of getting ripped, let me leave you with a story. To prepare you for the journey ahead.

The Journey

Shortly after unearthing the magic bullet known as intermittent fasting, I reached my goal of acquiring perfect abs. Perfect abs, subjectively speaking, yes, but most of you would agree. Those abs were as perfect as perfect goes. Once I saw ripped abs with skin as thin as the back of my hands, I was happy, and immortalized the moment with a few pictures I posted on my website.[71]

My exultation started to fade after I had uploaded the pictures to my website, bought ice cream and snacks—my "reward," if you will, nothing outlandish—and made myself comfortable in front of a movie. Or a TV series. It might have been *Mad Men* or *The Killing*; I'm not sure, but I *do* remember that the excitement was gone. Replaced with a strange feeling of uncertainty. I shrugged it off and went about my business.

Something felt off, however. Ice cream is ice cream, but it didn't feel like the ice cream I had fantasized about during the last few weeks of my diet. It tasted like regular ice cream, but it didn't taste nearly as good as I had imagined. No, wait. It didn't taste like *victory*. And as I ate it, what I had accomplished didn't feel like cause for celebration.

Feeling robbed and deprived of the glory and fanfare I deemed righteously mine, I thought to myself "This can't be it. There has to be something more to it."

But there wasn't, and if getting to this point was the goal, it was the greatest anti-climax of my life.[72] It was as if it had come too easy, knowing very well how much I had struggled just a few months ago. How much I had failed for—how long had it been now? Seven years. Still, I couldn't shake the feeling.

In my head, the conversation went from there to "Any idiot can do what I did. That's why nothing's different." It continued later, "But who can maintain this condition all year long? No one I've heard of." Before I lay down to sleep that night, I had set another goal for myself. I would maintain my chiseled physique for a year, because that's the real challenge. The true test and measure of a man, I reasoned, and closed my eyes.

The year came and went. Reaching the goal wasn't without its challenges, but I found that as long as I didn't expose myself to too much socialising, it wasn't hard for someone as devoted as I was. If I overate, be it a planned or unplanned transgression, it was just a matter of dieting for a few days until I was back at normal. But at the end, I still felt nothing.

What my next goal was I can't recall, but it doesn't matter. The feeling I chased never presented itself. My website, youthful energy, and naiveté mixed with the typical mentality of most guys in their mid-twenties, provided a strong enough incentive to stay ridiculously lean, so I kept it up for a few years until I got tired of it.

At some point, I did a complete 180 and started bulking like a mad man. Being lean had lost its allure; getting big and strong hadn't. I engaged my task with newfound excitement and unbridled hedonism.

One of my goals was to deadlift 300 kilograms (661 pounds). And when I tried 300 kilograms for the first time, it came up quickly and easily, accompanied with the familiar feeling I'd experienced many times before reaching similar goals. But I had matured. Knew the feeling wouldn't last, and had no such expectations either.

By then, I knew the journey was the goal.

Chapter 8: Getting Stronger

In the depth of winter, I finally learned that within me there lay an invincible summer.

—Albert Camus

There are two components to any successful body transformation. We've talked about the first, diet. Now the second, training.

Don't let anyone say you can't gain muscle on a diet, because it happens all the time—both in studies and consistently with clients. But you need to be smart about it. High protein intake is one part of the equation (ref. 1). An effective weight training program is the other. The latter is a no-brainer for most of you; the question is not *if* you should train, but *how*.

Because without weight training you might as well stop reading and hop on Weight Watchers. You bought the wrong book. The Leangains Method, and its accompanying training program, is for those seeking serious results and good-looking bodies. Not carb-counting soccer moms and Dadbod Dans who think a round of golf or the occasional hiking trip will get them there.

You'll need to grunt and strain under heavy weights for this to work. Period. But discipline and commitment will shift your body composition quickly. If you're not routinely stressing and challenging your muscles on a caloric deficit, weight loss will not only consist of fat, but a considerable amount of lean mass (ref. 2).

If a number on the scale is all you care about, muscle or fat be damned, consider this: weight training significantly reduces

the likelihood of weight regain, because 1 kilogram of muscle burns more than five times the calories of 1 kilogram of fat.[73] Preserve muscle, lift consistently, and you'll keep your metabolic rate humming just fine post-weight loss (ref. 3,4).[74]

Without external demands, the body becomes weaker for every pound lost. Weight training is the glue holding your muscles together as the fat pours off.

Done right, you won't have to settle for maintaining what's already there. You can grow stronger and gain muscle as you're losing fat. It's a win–win you can't afford to ignore. And thus, it's the focus of this chapter.

But first, a reality check.

"Working Out"

Do you look like you work out? Be honest. Most don't—even if they do work out religiously. You know the ones. On any given day, you'll find them doing something; weights, jogging, CrossFit, the list goes on. Some call it dedication. But without any results to speak of, I call it foolish.

There's an acronym for this in the lifting community: DYEL (for "Do you even lift?"). It's a condescending expression used on social media and bodybuilding forums (generally between men), questioning the legitimacy of one's fitness expertise or lifting routine. Most go to the gym three or four days a week, throw some weights around, work up a sweat, enjoy a little socializing, and leave satisfied. I'm friendly with all types. They're often great conversationalists on just about any topic—except lifting.

Then there's a more casual group, usually women, who lift and dabble in the occasional spinning class. Spades of enthusiasm and a chipper attitude. Sometimes, you'll see them with a personal trainer, laughing and chit-chatting as they struggle to maintain balance on a wobble board. Other times, with pink dumbbell in hand, arms flapping, somewhat

reminiscent of a curling motion. But it's no more a curl than bringing fork to mouth is a curl.

I could continue describing many different groups that inhabit the gym flora. But it's not necessary to make my point. Because while these people vary wildly in every conceivable trait, they have two things in common:

1. Nothing to show for the time and effort invested. Not now, not ever. Fast-forward a decade, and most of them look exactly the same, if not worse. Preposterous? Yes. But having spent the last two decades training with these people, I've pored through hundreds if not thousands of questionnaires containing background information and pictures of prospective clients, and can say it's the God's honest truth.

2. They suffer from fuckarounditis.

A severe case of fuckarounditis is depicted above. The smiling man is oblivious to his condition—a symptom shared with everyone else afflicted.

Fuckarounditis

The “dedicated” aren’t dedicated. They’re obsessed in a bad way, driven by ignorance. Slowly killing themselves, and going nowhere fast. Dedication without precision and focus is pointless.

But most aren’t dedicated or obsessed. So what about the good ol’ boys club, with their three to four days in the gym? Good intentions don’t mean shit without effort—not enough to keep their guts from expanding while their biceps shrink. And that satisfied smirk only lasts as long as the pump from their ridiculous arm routine.

The conversationalists only make good conversation because they’re never out of breath. These guys are phoning it in, and don’t know the first thing about weight training principles like progressive overloading or even basic, compound movements. They’re just going through the motions. Quitting a set of curls as soon as it starts to hurt. Or when they hit eight, ten, twelve, or another nice, even number of reps.

And those smiling, chipper women on wobble boards and bouncing medicine balls I mentioned earlier? They would quickly go Medusa if they knew the exorbitant amount of time and money they were wasting on this shit—and the useless trainers who profit from it. (And if you know anyone who might be such a victim, share this book with them.)

These people are part of the 90 percent—a *conservative* estimate—suffering from a debilitating illness called *fuckarounditis*. Yet most don’t know it. Do you? To find out, read my article of the same name (ref. 5). I wrote it years ago, and it’s since become kind of a cult classic. Not a week goes by without someone thanking me for it. The principles remain true to this day. In fact, it might be the most important thing you’ll ever read on weight training.

Because recognizing the symptoms of fuckarounditis early is your first step to understanding weight training—and

winning the iron game. Likewise, curing fuckarounditis, which is what I do, is the hallmark of a good trainer.

Most do the opposite. They *spread* the disease by encouraging shitty training practices and not knowing right from wrong, corrupting clients (who ultimately find their fitness goals futile and blame themselves) with their ignorance.

The fitness industry is *rife* with fuckarounditis—worthless exercise gadgets, faulty logic, absurd beliefs about human physiology, and ill-conceived ways to approach weight training. And sadly, personal trainers and fitness gurus are some of the most notorious aggregators.

For example (and there are many), one common exercise myth is specific to how one should approach weight training while dieting: to burn more fat, use light weights and high repetitions with little to no rest between sets, in a circuit-style fashion. Current mainstream examples like P90X and Insanity are nothing more than catchy names for advanced aerobics.

This isn't weight training; it's cardio. It'll improve your endurance, sure, but it won't make you as strong and defined as a solid weight training program and caloric deficit combined. In fact, these aerobics-like exercise modalities might actually speed up muscle loss, to the point where you're better off not doing them *at all* (ref. 4).

Those who think they need to pump, tone, or shred the fat with high repetitions and light weights will soon find themselves disappointed with the results. Or lack thereof. Strength is strength, and cardio is cardio. They're separate animals, and should be kept that way. If your primary goal is muscle gain, use cardio sparingly. There are better ways to spend your time at the gym—and smarter ways to lose fat.

Thankfully, you won't be engaging in any muscle- or time-wasting exercise with the Leangains Method. Hell, no. You'll be doing the best, most time-efficient weight training program on the planet.

This man does not suffer from fuckarounditis.

Reverse Pyramid Training

You don't need to live at the gym or spend countless hours on cardio to achieve your dream physique. Do that, and you probably won't. Training and dieting are *not* full-time jobs that require sacrifice and suffering, no matter how many inspirational quotes your Instagram idol posts.

Hit it hard, and hit it right. Then get out, and on with the rest of your life. That's my motto, and it's served me and countless clients well, last time I checked. They grow muscle and gain strength while losing fat—most spending less than two hours a week at the gym. But how?

Enter reverse pyramid training (RPT). Hands down, RPT is the most effective training method for dieting ever conceived. Several things separate RPT from other weight training programs. These are the most important:

AMRAP

Every set is AMRAP, or *as many reps as possible*. For the uninitiated, the acronym means exactly what it says. Every set, do as many reps as physically possible. Preferably with passable technique, and without failing or getting stuck with a loaded barbell over your chest.

AMRAPs—the core of RPT—are tough, and the *very definition* of hard training. A set of squats or deadlifts may have you seeing stars and begging for mercy. Before you learn to love this, you may fear it. That's fine. Roll with it. RPT builds character. And when you see the results, you'll learn to love it that much faster.

Plus, you don't have to do a lot of it. RPT is not easy. But it *is* time-efficient, and extremely effective. You won't be spending more than forty-five minutes in the gym thrice a week *at the most*. That's two hours and fifteen minutes per week devoted to training to get the best results *possible*—if you commit and do it right. Sounds like a sweet deal to me.

Breakdown

Load decreases by 5 percent to 10 percent after every set. Percentage depends on the movement. This is referred to as *breakdown*. For the bench press, overhead, and seal row, it's 5 percent. For everything else, 10 percent. So, if you're about to bench press using 100 kilograms in the first set, the sequence might look like this:

Week 1

Goal: 8

Set 1: 100 x 9

Set 2: 95 x 10

Set 3: 90 x 11

Double Progression

Above the sample sequence, you'll see "Goal: 8." This translates to: *As long as you're able to complete at least 8 reps in the first set, increase the load by roughly 2.5 percent in the next session.*

An increase of 2.5 percent means +2.5 kilograms (+5 pounds) for most movements. But if you're a reasonably strong squatter or deadlifter, it may be +5 kilograms (+10 pounds). Your next sequence should therefore look similar to this:

Week 2

Goal: 8

Set 1: 102.5 x 8

Set 2: 97.5 x 9

Set 3: 92.5 x 10

We're still hitting 8 in this theoretical example, so let's move forward to our third sequence in Week 3:

Week 3

Goal: 8

Set 1: 105 x 7

Set 2: 100 x 8

Set 3: 95 x 9

Sooner or later, it'll happen. You'll fail to complete the goal, and that's fine. For now, just work on increasing reps instead of load. Be patient. Usually, what happens is you'll increase first on Set 3 and/or Set 2, then finally on Set 1. This strategy of increasing load and repetitions is called *double progression*. And when applied consistently, it works.

Now you know enough to use the training routine in this book productively. But do yourself a favor and read "The Reverse Pyramid Training Guide" (ref. 6) and "Reverse Pyramid Training FAQ" (ref. 7) to understand the depth and nuances of RPT.

The Leangains Method Training Guidelines

Here are the key guidelines to follow to ensure success with the Leangains Method training routine.

1. Use the following training routine on Monday (A), Wednesday (B), and Friday (C). If you can't train on those days, choose three others and adhere to the same format: A/rest day/B/rest day/C/rest day/rest day.

2. All movements should be performed AMRAP-style. Put as much as you can into each set. Don't hold back.

3. Rest at least three minutes between sets.

4. After each set, reduce the load by 5 to 10 percent for that exercise.

5. −10 percent: Squats, deadlifts, chin-ups, and assistance movements

6. −5 percent: Everything else[75]

7. Once you achieve the goal in the first set, increase the load by 2.5 percent (2.5 kilograms/5 pounds).

8. In the routine below, movements are listed "Movement: Sets x Goal."

Deadlift: 2 x 6

Meaning: "Two sets of deadlifts, with a goal of six."

The Flying Start

First time training? Returning after a break? Trying a new routine, and don't know where you're at strength-wise? For all three, the worst thing you can do is to start too heavy.

It's wise to employ a "flying start" if you don't know what weights to begin with. In the context of RPT, this means starting out by *not* hitting your goal.

Let's take the deadlift: 2 x 6, for example:

Set 1: 120 x 3

Set 2: 107.5 x 6

Someone clearly let their ego get the best of them. Bad idea.

Why? You're unaccustomed to the movement. What do you think you're accomplishing with 3 reps? Those first reps will look terrible, and greatly increase your chance of injury. *Especially* on RPT, which calls for maximum effort.

You need *practice*. Your technique and nervous system will benefit more by doing more repetitions, and so will your results.

The solution? Never mind the goal for now. Start with a weight with which you're comfortable performing 10 to 15 reps. For the second and third set(s), reduce the load by 5 to 10 percent per RPT breakdown rules. Each week, increase the load by 5 percent instead of 2.5 percent.

Week 1

Set 1: 100 x 12

Set 2: 90 x 12

Week 2

Set 1: 105 x 11

Set 2: 95 x 11

Fast forward a few weeks…

Week 7

Set 1: 130 x 6

Set 2: 115 x 7

Week 8

Set 1: 135 x 5

Time to stop with the 5 percent jumps. Now, switch to double progression and 2.5 percent jumps. And remember, only increase the load when you're able to do 135 x 6 in the first set.

Set 2: 120 x 6

By beginning light and using a higher rate of progression —5 percent instead of 2.5 percent—you'll eventually enter the six-to-eight–rep range, per the example above. When that happens, you'll have had enough practice to train there safely and productively. *Then* switch to the routine below, and apply as intended.

The Leangains Method Training Routine

To get the most out of this training routine, read "The Reverse Pyramid Training Guide" and "Reverse Pyramid Training FAQ."

Monday

- Deadlift – 2 x 6
- Row or Overhead Press – 3 x 8
- Accessory: Calves, biceps or triceps – 2 x 10

Wednesday

- Bench press – 3 x 8
- Row or Overhead Press – 3 x 8
- Accessory: Calves, biceps or triceps – 2 x 10

Friday

- Squat – 3 x 10
- Weighted Chin-Up or Chin-Up – 3 x 8
- Accessory: Calves, biceps or triceps – 2 x 10

Notes on Routine

- "2 x 6" means two sets with a goal of six. "3 x 8" means three sets with a goal of eight. Etc.

- Starting out, select a load you can manage no less than Goal −1 in the first set. More than seven reps in the bench press is fine; fewer than seven is not. If this is the case, reduce the load by 5 percent next time.

- Each workout has two compound movements and one accessory movement. Always start big (squats) and finish small (calves, biceps/triceps, etc.).

- In the example above, you can choose whether you want rows on Monday and overhead press on Wednesday, or vice versa. With regard to accessory movements, you can choose whether you like one each workout or two; to save time, for example, you can do biceps and triceps back to back, e.g. alternate curls and pushdowns with sixty to ninety seconds of rest between movements.

- Rest at least three minutes between sets, preferably more between sets of deadlift and squat.

Notes on Movements

- For exercise tutorials, I recommend the YouTube channel of a gentleman named Alan Thrall. Search for "Alan Thrall squat" or "Alan Thrall deadlift" (or any exercise of your choice) and you'll receive excellent instruction and advice on the technical aspects of the lifts, far superior to the abhorrent advice you're likely to suffer from your run-of-the-mill personal trainer.

- When deadlifting, take your shoes off, and use chalk to help with the grip. Don't use a "touch-and-go" style of lifting where you're bouncing each rep off the floor; instead, treat each lift like a single, starting from a dead stop with a few seconds of rest between each rep. Lastly, make sure to learn the difference between upper back rounding and lower back rounding. The former is fine if you have the flexibility to do it. Lower back rounding, however, is not okay and should be avoided at all costs. During the lift, your lower back should be neutral.

- Row can be any row you're comfortable with, but the best row is the seal row—demonstrated by yours truly in the picture earlier in this chapter. The seal row is

the premier row because it removes cheating; a repetition only counts when the bar hits the bench. When performing other types of rows, however, it's all too common to see people increase the weight from week to week while reducing the range of movement and letting body language do the lifting. Be mindful of this lest you risk fooling yourself and potentially shortchanging progress.

- If you can't do weighted chin-ups, do chin-ups. Once you're able to do ten chin-ups with your body weight in the first set, add weight, starting at 5 kilograms (11 pounds) of extra weight attached via a weight belt (most gyms have these). You can also hold a dumbbell between your thighs. If you can't do chin-ups, get bands for assistance. You can find them on Amazon. Alternatively, do pull-downs instead of chin-ups. As you lose weight and get stronger, you'll eventually be able to do chin-ups and make the switch accordingly. Lastly, keep in mind that chin-ups have palms facing you, while pull-ups have palms facing away from you.

- When squatting, go as deep as your mobility allows, and to parallel as the bare minimum. If you can't go to parallel, Alan Thrall has plenty of mobility advice and instructionals on his YouTube channel; I suggest you invest the time in getting your mobility to a point where your squats are passable, or don't bother squatting at all. The world doesn't need more quarter-squatters with chicken legs.

- When lifting, especially when squatting and to a lesser extent overhead pressing, don't use running shoes. Use shoes with a flat sole, such as Converse or similar ones, because balance is important. Those with money to spare may also consider shoes

especially made for lifting, such as Adidas Adipower, which is a personal favorite that greatly improves your squatting experience.

- Always use full range of motion, no matter what some halfwit on YouTube says.

- There are arguments for and against the use of a belt in the squat and deadlift. I'm a minimalist, so I wear neither. Whether that's why I've never had back problems, and very rarely tweak my back despite deadlifting 300 kilograms (661 pounds) or more on a regular basis, is anyone's guess. The use of straps and gloves, however, is inexcusable.

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Chapter 9: Recipes

Everything should be a simple as it can, but not simpler.

—Albert Einstein

Indeed—and I'm a simple man with simple needs. But I'm certainly not simple where it matters, which is the quality, taste, and volume of the food I eat.

I like my food fast, big, and tasty. I have neither time nor interest in French cuisine or rare spices, so take your fine dining elsewhere if that's what you came for. No stools and table in here—only squat racks, barbells, and a good dose of shut the fuck up if your macros are off.

The less time you spend preparing food, the better, and most important of all, the fewer choices you have to make, the greater the likelihood of staying on track with your diet. You're going to have to take my word for that, because I refuse to cite science in my recipe section. But studies show more choices equals fatter people, and the dietitians who advise people to vary their diet? They can shove it.

And with that said, I bring you my favorite recipes—to try, to include in your diet, or to simply ignore and do without.

Enjoy, folks.

Protein Fluff

Craving something sweet? Say hello to protein fluff, your new best friend. With 59 percent protein and 100 percent awesome taste, it's a perfect dessert for the Leangains Method. Here's the basic recipe.

1. Thaw 250 grams of frozen strawberries in a microwave for 45 to 60 seconds.

2. Put the strawberries in a big bowl together with a scoop (35 grams) of casein powder and 1 deciliter (3.4 ounces) of skim milk (0.1 to 0.5 percent fat). Add sweetener; I prefer 1 tablespoon of granulated aspartame. Mash everything together.

3. Use an electric mixer and whisk for 5 to 10 minutes. The longer you whisk, the bigger the fluff.

4. Enjoy alone, or coupled with sliced banana and/or anything else that tickles your taste buds. You can also eat it with cottage cheese.

One serving:

237 calories

34.1 grams of protein (59 percent)

18.4 grams of carbs

2.4 grams of fat

Leangains Fluff

Once you've learned the basic recipe, there are countless combinations to try. Here's my personal favorite.

1. Thaw 250 grams of frozen strawberries in a microwave for 45 to 60 seconds.

2. Put the strawberries in a big bowl together with two scoops (70 grams) of casein powder and 1 decilitre

(3.4 ounces) of skim milk (0.1 to 0.5 percent fat). Add sweetener; I prefer 1 tablespoon of granulated aspartame. Mash everything together.

3. Two to three minutes into mixing the fluff, throw in a handful of frozen blackberries. The blackberries need not be thawed if you have a strong mixer, but if you want to err on the side of caution, give ‘em 15 seconds in the microwave before adding them.

One serving:

407 calories

65 grams of protein (64 percent)

27.6 grams of carbs

3.9 grams of fat

Behold, a glorious bowl of Leangains Fluff! So much of it, it barely fits in the bowl. Alright, time to wrap it up, have to hurry up and eat this quick…

Coconut Protein Shake

A scoop of whey or casein in 3 decilitres (10 ounces) of coconut water makes a great thermogenic snack on the go.

One serving:

175 calories

29.5 grams of protein (68 percent)

1.3 grams of carbs

5.6 grams of fat

Martin's Omelette

A personal favorite. I ate it daily for three months when leaning down for the summer of '17.

1. Heat up the stove. Crack 10 eggs and put 2 yolks and the whites in a bowl. Add salt and stir.

2. Put some butter (10 grams) in the pan and spread evenly over the surface. It should melt in a jiffy if you turn on the stove before cracking the eggs.

3. Pour the egg whites in the pan and wait.

4. Shortly before the omelette is ready, add 250 grams of cottage cheese and watch it melt into the omelette.

One serving:

505 calories

70.1 grams of protein (56 percent)

13.7 grams of carbs

18.7 grams of fat

Leangains Basic

A simple but effective meal that ticks all the boxes. Thermogenic, check. Filling, check. Nutrient dense, check. Fun, che— … Okay, maybe not that one.

1. Cook or prepare 250 grams of broccoli or cauliflower.

2. Put some butter (10 grams) in the pan and prepare 400 grams of sirloin steak.

3. Finish off your meal with a large apple, pear, or orange.

One serving:

638 calories

95.6 grams of protein (59 percent)

12.6 grams of carbs

23.6 grams of fat

Late-Night Classic

A great pre-bed meal. Quick and easy, yet tasty and long lasting. Mix 500 grams of cottage cheese and 200 grams of blueberries, then add sweetener; I prefer 1 tablespoon of granulated aspartame.

One serving:

402 calories

61 grams of protein (62 percent)

32.3 grams of carbs

2 grams of fat

Leangains Salad

For this meal, you'll need 400 grams of chicken breast, 250 grams of iceberg salad, one whole cooked egg, 200 grams of mushrooms, and 1 decilitre of low-fat dressing. Since it's a salad, I think you can figure out the rest on your own.

One serving:

695 calories

109.5 grams of protein (64 percent)

23.9 grams of carbs

16.6 grams of fat

An excellent and complete meal that requires no cooking if you use pre-sliced chicken breast strips. Alternatively, use frozen prawns instead of chicken, and let them sit in warm water while you prepare the salad. When your salad is ready, remove the prawns and squeeze to drain the water, then add to the salad.


MOCCAMASTER

Chapter 10: Sample Meal Plans

Here are a few basic meal plans for those in need. They're suitable for a 90-kilogram (198-pound) male per the example given in "Crunching the Numbers." To make them female friendly, simply reduce the amounts by one-third and you'll have sample meal plans for a 65-kilogram female. Three things to note:

1. On training days, men and women add 25 grams (0.9 ounces) of carbohydrate and 20 grams (0.7 ounces) of carbohydrate respectively to the post-workout meal. If you're following the same or a few different meal plans every day, I suggest simply adding an apple, pear, or orange to this meal.

This displaces lost muscle glycogen, and the combination of glucose and fructose found in fruit is ideal for this purpose. Another benefit of this timing strategy is that it takes advantage of the post-workout DIT discussed in Chapter 5 ("The Thermogenic 7"). To improve it further, place the brunt of your daily carbohydrate intake in the post-workout meal.

The math is simple. Using the example from "Crunching the Numbers," here's how a full week looks:

Rest days (4 days/week)

90-kilogram male: 2,520 − 500 = 2,020 calories

Training days (3 days/week)

90-kilogram male: 2,520 − 500 = 2,020 calories + 100 calories via 25 grams of carbohydrate = 2120 calories.

2. Don't be afraid to use your creativity and find something that suits you. These are only ideas to get you started—don't forget that.

3. And here are ten handy tips that will make your tracking better, your cooking faster, and your life *easier*.

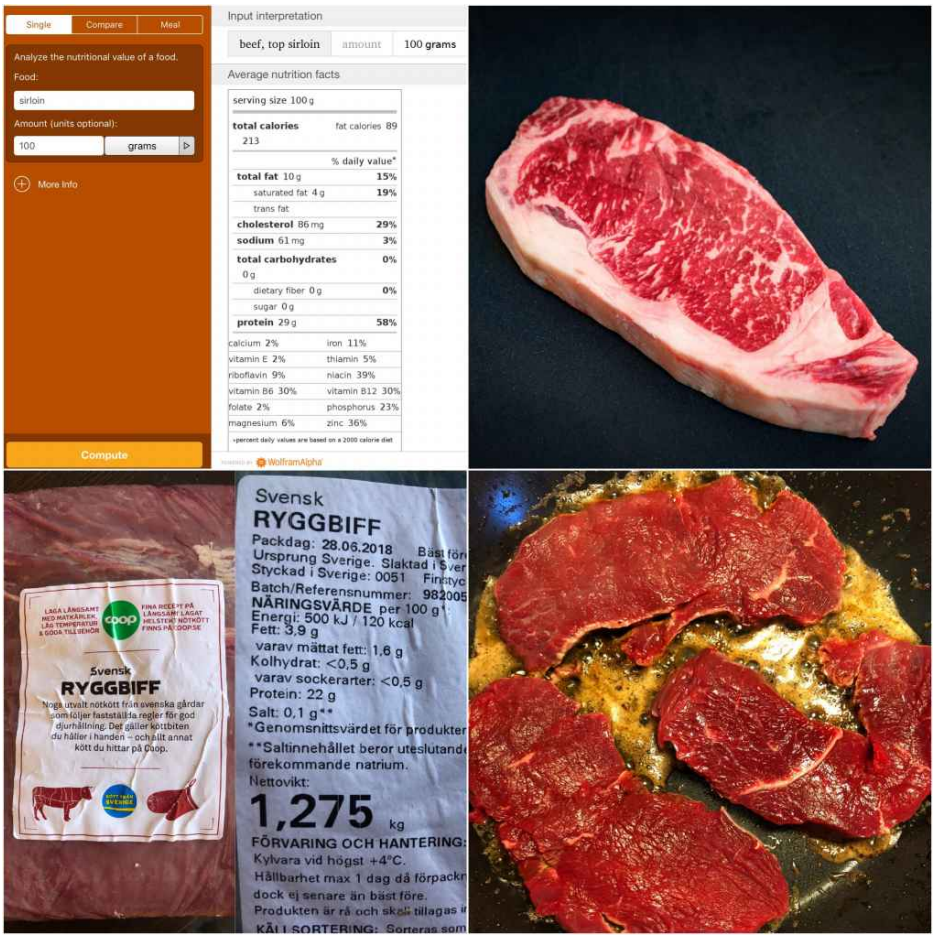
11 Quick Food Tips

1. When you're using diet trackers like MyFitnessPal to log your food, be mindful of food values. If you're using the sample meal plans, you'll most likely find that the values are off by a few percentage points. This is to be expected, since trackers use different food databases. The same menu might be 2,011 calories in one app and 1,958 in another one.

   Personally, I use a custom food base with handpicked values for foods used frequently for meal plans with my clients: an Excel workbook with the most precise values for a few dozen recurring foods.

   This is perhaps stating the obvious, but it doesn't really matter much, as long as you stay consistent and don't jump from tracker to tracker.

2. Beef, top sirloin, and nearly all lean meat contain 120 to 125 calories, 20 to 22 grams of protein, and 3 to 4 grams of fat per 100 grams. However, in food databases, this isn't a given, and red meat *especially* is reported a few dozen ways for each entry. The one you should look for is the one with the lowest caloric value—"trimmed" is the keyword here, as in "fat trimmed."



Top sirloin, my favorite meat. Lean, per the lower example, it contains 120 calories, 3.9 grams of fat, trace amounts of carbohydrate, and 22 grams of protein per 100 grams. But the example above is a different story, and if you ask Wolfram Alpha, that's what you'll get. When it comes to meat, be mindful of the fine print.

3. Eaten on its own, meat is a "fast" protein, just like whey, and for a variety of reasons, eating meat alone isn't ideal. Put simply, it's beneficial to have a steady and constant supply of amino acids in the blood, and eating meat on its own will cause it to be absorbed too quickly. Eating meat with veggies slows down absorption and solves the problem.

4. For the reasons outlined above, whey protein is not a good pick as your go-to protein powder. It's fine after training, but that's that. If you only want to buy one

protein powder, make sure it's casein, or a milk protein isolate (80 percent casein and 20 percent whey).

5. Fighting a sweet tooth? Don't be afraid to indulge it every now and then. There are tons of high-protein replacements to soothe even the most insistent craving for sweetness—combine sweetener with Greek yogurt, quark, or cottage cheese, add sugar-free Jell-O, berries, or even protein powder, etc., and you have a million different desserts to experiment with. Put the concoction in the fridge or freezer for a cool treat or a high-protein ice cream.

6. Don't keep snacks at home. Simple as that.

7. Freshly cooked veggies are the best. But let's face it—many of you aren't going to eat them, because they're a hassle to prepare and you're always in a rush. Here's what I do: I empty a bag of frozen veggies in a wide pan, no butter, turn the heat up and let them cook in their own water for roughly ten minutes. That's right. When you're heating the veggies, they release water, and if you just make sure to check on them and stir once in a while, you can get your veggies cooked and ready to eat without the usual hassle.

8. Simplify. Three egg whites is 100 grams. A piece of meat the size of your palm, 100 grams. A normal-sized apple, pear, or orange is 200 grams. This come in handy when you're eating out, can't track, or simply want to save time.

9. It doesn't matter when you eat, and in the menus below, I've only set "noon," "dinner," and so forth.

It's not a bad idea to space them evenly, however—for example, 12:00, 16:00 and 20:00, 08:00–12:00 and 16:00, or 12:00 and 20:00 if you only eat two meals. Regularity *does* matter to some extent. On a strictly physiological level, the kind that makes you more or less hungry at the right times. It's not the end of the world if your eating schedule is upside down from time to time, as long as it's not most of the time. So, keep that in mind.[76]

10. It's an unsolved mystery as to how much fat makes itself into the food when cooking with butter. What's known is that a significant amount doesn't. If I were to take a guess, roughly 25 percent based on the limited data I've seen. But my personal stance on this is that it's better to be safe than sorry, which is why I count every gram as usual, and so should you.

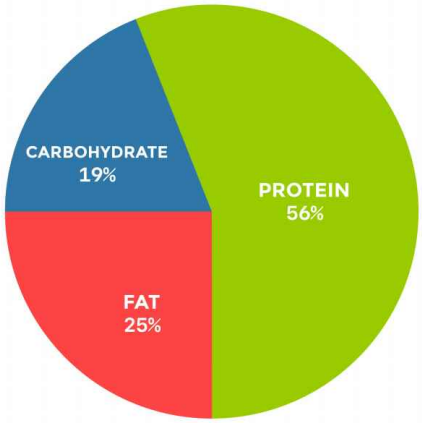
11. I'm not the right person to consult on kitchenware, but do not underestimate the utility of a high-quality meat-cutting knife. You can find reasonably decent ones for $20 or less, and they'll save you a lot of time in the long run if you eat meat and poultry on a regular basis.

On to the meal plans. One thing to note: in these plans, I prioritized variety over fiber intake, so it falls on the low side in some instances. Otherwise, every meal would've been some version of a cruciferous vegetable, a piece of meat, and a fruit or two. Which isn't at all a bad idea for those who value consistency over variety, but it would feel like a bit of a cop-out. Either way, doubling the amount of vegetables from the meals in the "Recipes" chapter, which are used in the sample menus below, solves this.[77]

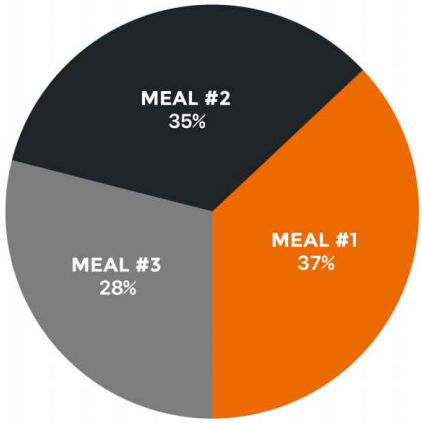
REST DAY: STANDARD

NOON		KCAL	MACROCOMPOSITION
Leangains Basic		638	P 96g C 13g F 24g
Apple	200g	104	P 1g C 25g F 0g
DINNER		**KCAL**	**MACROCOMPOSITION**
Martin's Omelette		505	P 70g C 14g F 19g
Cottage Cheese, Quark or Greek Yoghurt	250g	160	P 30g C 8g F 1g
Strawberries	100g	38	P 1g C 8g F 0g
EVENING		**KCAL**	**MACROCOMPOSITION**
Leangains Fluff		407	P 65g C 28g F 4g
Egg, whole	80g	117	P 10g C 1g F 8g
Egg, white only	100g	46	P 10g C 1g F 0
TOTAL DAILY VALUES		2015	P 282g C 98g F 55g

MACROCOMPOSITION



MEAL SIZE



REST DAY: 2 MEALS

NOON	KCAL	MACROCOMPOSITION		
Leangains Salad	695	P 110g	C 24g	F 17g
Protein Fluff	237	P 34g	C 18g	F 2g
Apple 200g	104	P 1g	C 25g	F 0g
EVENING	**KCAL**	**MACROCOMPOSITION**		
Leangains Basic	638	P 96g	C 13g	F 24g
Protein Fluff	237	P 34g	C 18g	F 2g
Apple 200g	104	P 1g	C 25g	F 0g
TOTAL DAILY VALUES	**2015**	P 274g	C 123g	F 45g

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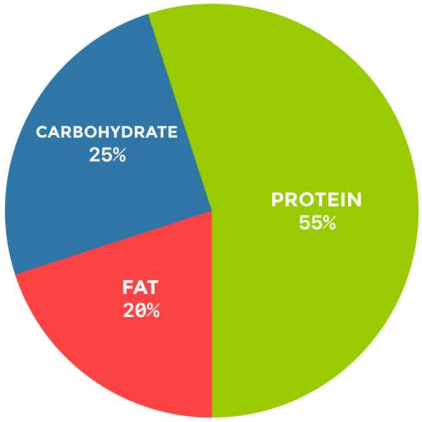
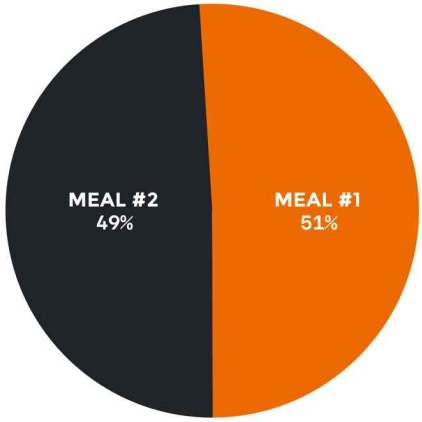
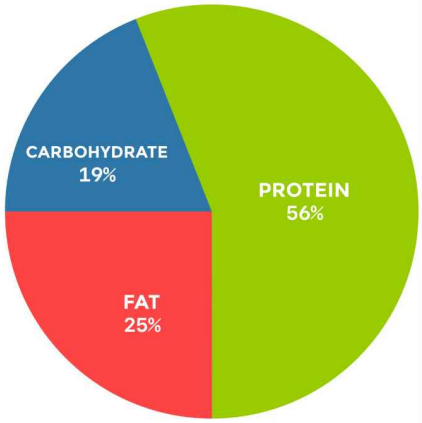


MEAL SIZE

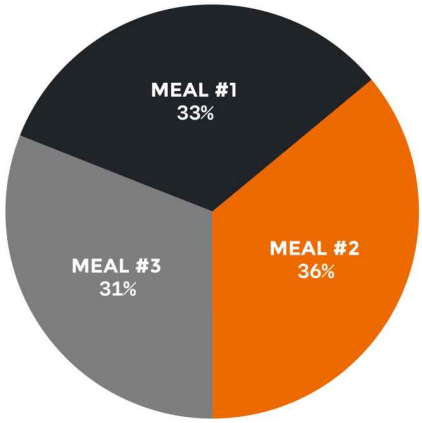


TRAINING DAY: STANDARD			
NOON	**KCAL**	**MACROCOMPOSITION**	
Leangains Salad	695	P 110g C 24g F 17g	
POST-WORKOUT	**KCAL**	**MACROCOMPOSITION**	
Leangains Basic	638	P 96g C 13g F 24g	
Apple 200g	104	P 1g C 25g F 0g	
EVENING	**KCAL**	**MACROCOMPOSITION**	
Late Night Classic	402	P 61g C 32g F 2g	
Two Whole Eggs 160g	234	P 20g C 2g F 16g	
TOTAL DAILY VALUES	2073	P 287g C 96g F 59g	

MACROCOMPOSITION



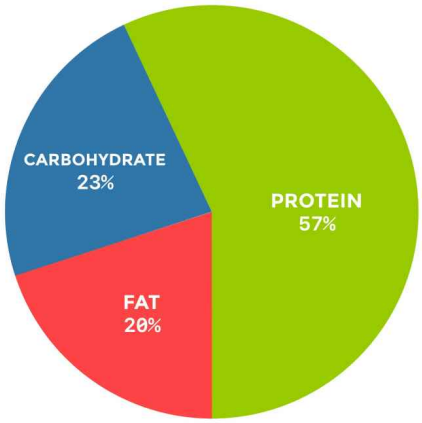
MEAL SIZE



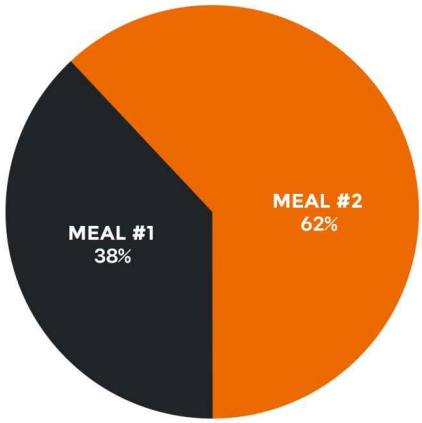
TRAINING DAY: 2 MEALS

NOON		KCAL	MACROCOMPOSITION		
Beef steak, top sirloin, fat trimmed	500g	655	P 111g	C 0g	F 21g
Green beans	250g	53	P 5g	C 8g	F 0g
Apple	200g	104	P 1g	C 25g	F 0g
POST-WORKOUT		**KCAL**	**MACROCOMPOSITION**		
Beef steak, top sirloin, fat trimmed	500g	655	P 111g	C 0g	F 21g
Spinach	250g	45	P 5g	C 1g	F 2g
Cottage Cheese, Quark or Greek Yoghurt	500g	320	P 60g	C 17g	F 1g
Strawberries	200g	75	P 1g	C 8g	F 0g
Two Apples	400g	208	P 1g	C 50g	F 0g
TOTAL DAILY VALUES		**2115**	P 293g	C 117g	F 45g

MACROCOMPOSITION



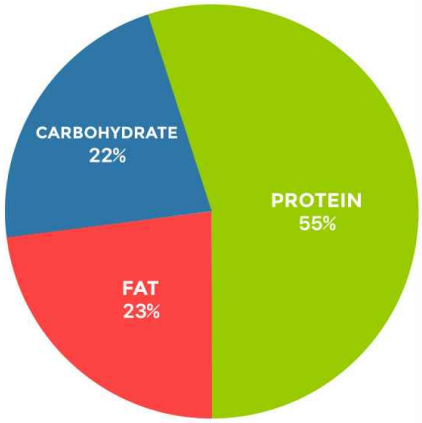
MEAL SIZE



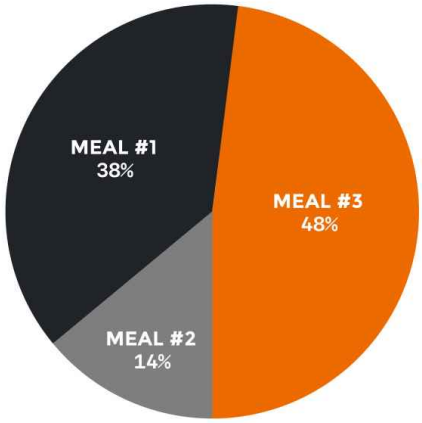
TRAINING DAY: 2.5 MEALS

NOON		KCAL	MACROCOMPOSITION		
Leangains Salad		695	P 110g	C 24g	F 17g
Apple	200g	104	P 1g	C 25g	F 0g
PRE-WORKOUT		**KCAL**	**MACROCOMPOSITION**		
Coconut Protein Shake		175	P 30g	C 1g	F 6g
Apple	200g	104	P 1g	C 25g	F 0g
POST-WORKOUT		**KCAL**	**MACROCOMPOSITION**		
Beef steak, top sirloin, fat trimmed	500g	655	P 111g	C 0g	F 21g
Green beans	250g	53	P 5g	C 8g	F 0g
Apple	200g	104	P 1g	C 25g	F 0g
Egg, whole	80g	117	P 10g	C 1g	F 8g
Cottage Cheese, Quark or Greek Yoghurt	125g	80	P 15g	C 4g	F 0g
TOTAL DAILY VALUES		2087	P 281g	C 113g	F 52g

MACROCOMPOSITION



MEAL SIZE



Chapter 11: Frequently Asked Questions

Q: I have a question about training…

A: For all training-related questions, see the "Reverse Pyramid Training Guide" (ref. 1) and "Reverse Pyramid Training FAQ" (ref. 2).

Q: I weigh 110 kilograms (243 pounds), and would like to lose fat faster. What can I do to accelerate fat loss with the Leangains Method?

A: Men with more than 25 percent body fat can use a 750-calorie deficit instead of 500 calories. This is applied to the maintenance calculation in Chapter 6 as usual. For example:

Maintenance: 110 x 27 = 2,970 calories

Diet: 2,970 − 750 = 2,220 calories

The deeper deficit results in −1 kilogram per week or more, typically.

Corresponding example for an 80-kilogram (176-pound) female with > 33 percent body fat:

Maintenance: 80 x 25 = 2,000 calories

Diet: 2,000 − 500 = 1,500 calories

Females using −500 instead of −350 calories will see fat loss of 0.6 to 0.8 kilograms (1.3 to 1.8 pounds) per week, typically.

Q: I'm already lean. What changes to the Leangains Method do you advise?

A: For men under 10 percent body fat and women under 18 percent body fat, I recommend fat loss of no more than 0.4 to 0.5 kilograms (0.9 to 1.1 pounds) per week and 1 kilogram (2.2 pounds) every third week, respectively. This is achieved by subtracting 350 and 225, respectively, from maintenance, instead of 500.

Those who are very lean may opt for even less. If you're wondering why, grab a notepad. Mathematical models suggest that 69 calories worth of fat per kilogram of body fat can be mobilized without muscle loss (ref. 10,12).

An 80-kilogram (175-pound) man with 25 percent body fat has 80 x 0.25 = 20 kilograms (44 pounds) of fat mass. Theoretically, he can sustain a caloric deficit of 20 x 69 = 1,380 calories without losing muscle mass.

An 80-kilogram (176-pound) man with 10 percent body fat has only 8 kilograms (17.6 pounds) of body fat. He can only mobilize 552 calories from his already depleted fat stores. If his deficit is 652 calories, 552 calories will be mobilized from adipose tissue and 100 calories from muscle. In this case, a 500-calorie deficit could therefore result in muscle loss with the Leangains Method. Because although "only" 500 calories is subtracted from maintenance intake, net effect on deficit exceeds 552 calories due to DIT.

Put differently, body fat protects against muscle loss. More fat equals more fat loss, and vice versa. The same holds true for muscle. The more of it you have, the more your body wants to spend it. This is in fact a brilliant strategy for survival, evolutionarily selected for since time immemorial.

For the average person, death by starvation occurs after the loss of one third of total muscle mass. By this point, the body starts catabolizing heart tissue, which results in death. A similar fate awaits those who fully deplete their fat stores.

Since death occurs in both these examples, the best survival strategy is therefore to make sure these fuel stores are depleted at the same time. This is exactly how our body

functions; once you're lean enough, it's impossible to lose only fat. And if you're very lean *and* very muscular, you will literally burn *only* muscle at a certain point.

It's a bummer, isn't it? I agree. Evolution, however, gives zero fucks.

Q: I'm a rower on the US Olympic team. Even on easy days, my energy requirements are quite high—roughly 4,000 calories. With 50 to 60 percent of those calories coming from protein, I'm supposed to eat 500 to 600 grams of protein per day. This isn't quite practical, so I'm wondering if there are any alternative guidelines for people like me?

A: The downside of percentage-based guidelines is neatly illustrated in this example. They're great for most of us, but don't work well for people with very high energy requirements. In such cases, I recommend using 4 grams of protein per kilogram (1.8 grams per pound) of body weight as an alternative guideline. A 90-kilogram (198-pound) male would thus strive to consume 360 grams of protein per day.

Q: Why is there no cardio in the Leangains Method? And can I do cardio if I want to?

A: My clients typically go for a thirty- to forty-five-minute walk on rest days. That's all the cardio I have them do. With the Leangains Method, however, cardio is entirely optional. You burn fat with diet, not with treadmills or jogging shoes. That doesn't mean cardio is outlawed. On the contrary, some cardio is encouraged, because staying active does wonders for adherence and well-being. This is partly why I tell clients to take a walk outside on rest days. It's not a bad idea to do the same if you have the time or motivation. You can also use it as a strategy to bust through plateaus instead of adjusting calorie intake.

That said, I recommend against high-intensity cardio such as HIIT, or moderate-intensity cardio such as jogging. Why?

Two reasons. One, they're taxing, and interfere with recovery from weight training. Two, people can never provide a good reason for engaging in these activities, and "fun" doesn't count.

The only people who do higher-intensity cardio on my programs are those in need; athletes, military, firemen, and the like—not weekend warriors who just want to look good naked. You can have a lot on the Leangains Method—fat loss, muscle growth, strength gains, and an easy time dieting. But you can't throw cardio into the mix without rocking the foundation.

You're welcome to try, but remember what I said earlier. It's so for a reason.

Q: A doctor on TV said protein is dangerous for the kidneys. Are my kidneys safe with the Leangains Method?

A: High-protein diets are only dangerous to people with preexisting kidney dysfunction. Claiming protein is harmful to healthy people is an age-old myth that refuses to die, probably because it's being kept alive by clueless doctors giving diet advice in news media. Doctors aren't dietitians. But to be fair, all too often, most dietitians aren't the smartest tools in the drawer either.

Studies conclude no negative effects of high-protein diets in healthy people (ref. 3)—not on the kidneys, bones, or any other organs, for that matter (ref. 4,8,9). In fact, health *improves* on a high-protein diet (ref. 5,6). One recent study found no untoward effects of protein consumption of up to 4 grams per kilogram (1.8 grams per pound) of body weight (ref. 7), and this was in people consuming a high-protein diet for one year or more before entering the study.

Case closed. As for nutritional commentary and advice, pay no heed to doctors, mums, friends, the biggest guy in the gym, or the news media. All are equally clueless, or simply regurgitating misinformation.

Q: Is the Leangains Method a ketogenic diet?

A: Thank God, no. Ketogenic diets sap performance and cause unwanted muscle loss. That's according to research and extensive personal experience (ref. 10).

I've done every conceivable version of the ketogenic diet. Standard, cyclical, targeted, you name it. Followed them all to the letter.

My first weight loss experience was a targeted ketogenic diet that took me from 100 kilograms (220 pounds) to 80 kilograms (176 pounds). While it's reasonable to expect *some* loss of strength and muscle after losing 20 percent of your body weight, the ketogenic diet resulted in an unreasonable loss. Years later, I tried a cyclical ketogenic diet, with similar results.

Looking back, two decades later, my experience is hardly surprising. On a ketogenic diet, protein intake is relatively low. Lack of glycogenic precursors, meaning protein and carbohydrate, gradually leads to muscle glycogen depletion. This severely compromises various levels of anaerobic performance. Coupled with insufficient protein to maintain muscle mass, it's a recipe for disaster.

The Leangains Method is like the ketogenic diet, but without the downsides, and with far greater long-term benefits. The high protein intake preserves muscle and fuels performance, while keeping appetite in check. What's not to like?

Q: What supplements do you recommend with the Leangains Method?

A: The only supplement I recommend across the board is a 2,000 IU dose of vitamin D3 daily. If calcium intake is low, however, supplementation is beneficial; it may facilitate protein's positive effects on bone health and speed up fat loss (ref. 9,11).

Recommending a multivitamin is something I've done from time to time, but there's a lack of scientific support, the old "can't hurt" argument feels like a cop-out, I don't use it

personally, and it serves no need in a diet based on meat, fruit, and veggies. That said, if your diet is very one-sided, it's worth considering.

For performance, creatine is worth considering. Aside from caffeine, it's the only legal supplement with proven and significant effects on strength; users typically report an increase of two repetitions in all movements across the board, and that's nothing to scoff at. I wouldn't know, because I'm a nonresponder—part of the one-third of the population who gain nothing from the supplement. The only way to find out is to try it yourself, and that's not a hard decision given how cheap it is.

While I'm a supplement minimalist at heart and often forget to keep vitamin D3 in stock, I'm a heavy user of protein powder—casein, specifically, which I use to boost my protein intake throughout the day.

For details and brand recommendations, see "Supplements You Might Actually Find Useful." (ref. 13)

Q: I'm too full to eat everything on my plan…

A: Well, that's a nice "problem" to have on a diet. Protein is filling. But an easy solution is to swap some whole-food protein, e.g. meat, for a protein shake or two. You can also eat fruit instead of veggies.

Cottage cheese or low-fat Greek yogurt are some high-protein alternatives that make eating less of chore. These are flexible foods that work equally well *au naturale* on an egg white omelet, or as a sweet treat together with sweetener and/or berries. Use your imagination.

Q: I don't want to eat chicken and broccoli.

A: Assuming you're referring to the sample menus in this book, I don't blame you. By all means, make your own menus, and eat whatever you want using the boundaries established in the "The Thermogenic 7" and "Crunching the Numbers" chapters.

Want to use the sample menu template, but don't like a particular food, or prefer something else? Trade chicken for fish or meat, and swap broccoli for cauliflower, green beans, or any similar vegetable you like.

Q: I'm going to dinner with a few friends this weekend. Any advice on how to handle social situations like this?

A: If possible, try to keep it similar to what you would normally eat macro-wise. Go for mostly lean meats and other whole-food protein sources. Fill your plate with mounds of veggies. Think foods, not calories. Have as much meat and greens as you want—but lay off the bread and dessert. You know what you should be eating, so adhere to that as well as circumstances will allow.

Compromises are perfectly acceptable once in a while, especially on holidays with friends, family or loved ones. There's no need to count calories, so long as you don't turn this into a pig-out session. Therein lies the problem with special occasions and "off-diet" eating. All too often, people spiral out of control. As long as you're mindful of this, and it might take practice, you can have social meals every so often and still see good results.

Q: Should I count protein from veggies?

A: Yes, all protein sources count. As a side note, the proteins in veggies and grains are of a lesser quality than those found in meat, eggs, and dairy, the latter being high-quality protein sources. Quality, in this context, simply means the protein has a balanced amino acid profile and contains a good amount of essential amino acids (EAA). And while vegetable and grain protein don't provide an adequate amount on their own, it becomes a moot point when they're combined with protein sources that do.

Q: What should I do when I've reached my goal?

A: First off, congratulations. The diet has ended, and now comes the real challenge: maintaining it all. I'm going to suggest a very specific approach, which requires your full attention for the last month of your diet.

Let's say you've been dieting for twelve weeks. Week 12 is the last week of your diet. Below are your last three weeks, and their respective body weight averages.

Week 10: 81.3 kilograms (179.2 pounds)

Week 11: 80.8 kilograms (178.1 pounds)

Week 12: 80.0 kilograms (176.4 pounds)

The difference between Week 10 and 12 is 81.3 − 80 kilograms (179.2 − 176.4 pounds) = 1.3 kilograms (2.8 pounds).

1.3 divided by 2 gives 0.65 kilograms (1.43 pounds) = average fat loss per week

7,700 x 0.65 = 5,005 calories = total weekly deficit

5,005 / 7 = 715 calories = daily deficit

This means you've been running a daily deficit of 715 calories. Add 715 calories to your current calorie intake, and you'll get your maintenance intake.

An assumed diet of 1,740 calories per day in the above example yields 2,455 calories as maintenance. This is the number of calories you should consume from here on out to keep your weight stable.

Not so fast, however. Over the next two weeks, I strongly advise you to keep the foundation of your current diet setup intact. That means no change in protein intake, and preferably, little change in the foods you eat. The only change is the addition of 715 calories. These calories are yours to choose and distribute as you see fit, as long as protein intake is at least the same as it was during your diet.

During this time period, I'd also advise little to no change in your dietary foundation. Put differently, keep your routine, protein intake, and food selection the same as it was during the initial two weeks of maintenance.

Once the two weeks have passed, you're free to do as you choose. You can have 2,455 calories of whatever you want. But remember, being and staying lean is a lifestyle—not a quick-fix to be over and done with, then followed by same reckless behavior that got you fat in the first place.

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Supplementary Material

In this section, you'll find a plethora of useful tidbits and articles to supplement your knowledge and improve your experience with the Leangains Method.

"The Leangains Guide 2.0" is the long-awaited update of the "The Leangains Guide." Released in 2010, "The Leangains Guide" (ref. 1) became the definitive guide to intermittent fasting for lifters and athletes worldwide. The updated version is based on the new experiences and perspectives of the eight years that have passed since I first wrote it. Intermittent fasting is not a mandatory component of the Leangains Method, but it's a very useful tool to try, use, and dismiss depending on your results.

"Top Ten Fasting Myths Debunked" details why and how many popular diet myths are just that: myths. Written in 2010, it's almost as relevant and informative today, even though I hoped it wouldn't be. Here's an idea—throw it in the face of your doctor, mum, or crazy aunt when they say breakfast is the most important meal of the day or any such ludicrous claim.

"Fuckarounditis" is—well, read it and you'll see. Perhaps my most popular article of all time, and regarded by many as the best article ever written on weight training.

"A Single Quality of Utmost Importance" is a taste of what you'll find on the Leangains Patreon site. It covers a quality everyone knows and talks about, but few actually practice, and even fewer have mastered. Can you guess what it is?

In addition to these articles, you'll also find the following in "Supplementary Material":

"List of High-Protein Foods" is self explanatory, but I'll explain it anyway; it's a list of high-protein foods, ranked in terms of their monetary cost per gram of protein. Quite useful

if you're a poor student or when you run out of ideas of what to eat.

"A Brief History of IIFYM" by Alan Aragon is a set of slides from one of his lectures. To make a long story short, it was the "If it fits your macros" (IIFYM) movement that prompted me to go to such lengths in explaining why a calorie isn't a calorie in the chapters concerning DIT. I therefore thought it fitting to include these slides here, if merely for nonessential but contextually informative purposes. They are included with the author's blessing.

"The Magic Bullet," because there is one. I found it. Now, finally, it's yours too.

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The Leangains Guide 2.0

"The Leangains Guide" (ref. 1), a 2010 blog post on my website, is the official blueprint for 16:8 fasting. Invented in 2006 by yours truly, it's the oldest version of intermittent fasting, and the only one made with lifters and athletes in mind.

"The Leangains Guide" features an in-depth tutorial on how to integrate intermittent fasting and weight training in a strategic and scientifically sound manner. The need for such a system exists due to the restrictions of the former and demands of the latter.

Studies suggest adequate pre- and post-workout nutrition is important to maximize weight training performance and recovery. This presents certain challenges for the ambitious lifter. Since the feeding window is limited, when and how much should he or she eat? Those and other challenges are tackled in the guide.

In the eight years that have passed since "The Leangains Guide" was published, little progress has been made in the scientific fields that provide its foundation. In the same time span, my understanding of intermittent fasting and related subjects has improved by leaps and bounds. These experiences, mostly practical, form the basis for The Leangains Guide 2.0, presented here for the very first time.

The guide is included as supplementary material in *The Leangains Method*. It's not a mandatory part of the method itself. Think of it as a tool—first to try, then to use or dismiss depending on your experience. Simply put, if 16:8 makes fat loss easier, use it. If it doesn't, don't.

16:8: Primer

Why sixteen hours? Because it's the easiest and most sustainable way to fast.

Most people work regular hours. With 16:8, a person with a normal job and life can simply skip breakfast, break the fast at noon for lunch, and eat 'til eight or ten at night (depending on when they had lunch). In contrast to other variants of intermittent fasting, 16:8 blends into life without friction. For lifters and athletes especially, 16:8 is the only reasonable option. There is no other way to combine these activities to maximum benefit.

But why fast? Because fasting takes your mind off food and allows you to focus on what's in front of you: work. Eating is a distraction and time sink that takes you out of your workflow, so why be preoccupied with food when you can eat later—at home, for example? That's one good reason.

Another strong argument for fasting is counterintuitive and doesn't apply to everyone. For those to whom it does, intermittent fasting makes fat loss easier. Studies show that people don't compensate for the energy deficit incurred through fasting, but there are likely more variables at play than merely appetite suppression. Don't underestimate the influence that *knowing* you can't eat has on your mind.

But what about hunger? Not eating for sixteen hours sounds like torture to everyone who hasn't tried it, but it's never as hard as imagined. The body is quick to adapt. Give it days, and it becomes much easier. Give it a week or two, and it becomes second nature. If it doesn't, it's not for you.

Hunger pangs may occur during the fast. Some days nothing, while other days more than once. Best left ignored, they quickly go away and never become intolerable. Cravings, on the other hand, are nonexistent during the fast, and this is a big plus for some people who tend to experience such issues.

So what happens if you can't do sixteen hours? Nothing. Unless you use it as an excuse to go off your diet and eat shit all day. Sixteen and eight are arbitrary numbers at worst, and a

great starting point at best. Until science catches up, there's nothing magic about the sixteenth hour mark. Personally, I stopped paying attention to the clock years ago. I eat when I'm done with a portion of my tasks for the day. That's usually any time between fourteen and eighteen hours after my last meal. When you've gotten the hang of 16:8, that's the approach I recommend for you too. Use intuition, not clocks.

16:8: Rules of Fasting

The two rules of fasting are:

1. When fasting, abstain from calories.

2. If you can't abstain, minimize.

Simple enough, so here's the fine print for those who insist on complicating it.

- You can drink as much as you like, and I suggest you drink plenty when fasting. Any liquid or beverage, including diet soda, is fine as long as it follows the rules.

- Yes, you can have some milk with your coffee, but since common sense isn't enough, 60 calories worth of milk or cream is the upper limit. That's a deciliter (about 3.4 fluid ounces) of 3 percent fat milk or roughly 1.5 deciliters (5 fluid ounces) of 1.5 percent milk. Store this amount in a container in your fridge. When it's coffee time, pour milk from this container. When the container is empty, no more milk for the fast.

- Take vitamins and minerals with meals, not during the fast, because absorption is better that way. Supplements like creatine can be taken on an empty stomach unless stated otherwise on the product label.

- Chewing gum, celery sticks, and "calorie-free" beverages that aren't technically free from calories but contain negligible amounts, fall into a category called *Shit You Don't Need to Think About*. Because I never have and never will, so if you want to eat or drink from this category while fasting, knock yourself out. Don't worry—you won't overdo it. In sufficient quantities, there'll be other concerns long before calories becomes one of them. Rapid transport and access to a secluded bathroom, for example.

16:8: Theory and Practice

Traditionally, 16:8 is a cyclical diet. Calorie intakes vary across the week, according to days, and depending on whether it's a training day or a rest day. More calories on training days, vice versa for rest days.

The logic behind cyclical diets hinges on the belief that calories are better partitioned if consumed around training. Logically, this makes sense, and physiologically, it's a fact. Consider some examples of this from the "Hacking DIT" chapter. There, I mentioned that exercise burns more calories with carbs pre-workout, and that carbs are discounted when consumed in the post-workout meal. Mechanisms involve the activation of the sympathetic nervous system and the cost of converting carbs to muscle glycogen.

Unfortunately, no scientific evidence exists to prove that cyclical diets yield better results in the long term, or that muscle growth or muscle protein synthesis is enhanced or superior compared to a conventional approach (non-cyclical). Most people are surprised when they're informed of this,

likely because it's often repeated as fact. That, and because it *seems* true—it's not hard to think you'll build more muscle if you eat more after training, and burn more fat if you eat less on other days. So what are scientists doing? Not a day goes by without wondering that myself, but this one's no mystery.

Clinical trials are very costly, and governments and other institutions that provide funding aren't interested to know if a cyclical diet is better than a conventional one. We're living in a world where 90 percent of the population can't stick to a diet, any diet, and with a frail elderly population in need of muscle mass. Knowing if and how much better your abs will look on a cyclical diet is very low on the agenda.

But that doesn't mean we can't make an educated guess and judge the results accordingly. That's what I've been doing for the last decade, and I'm done waiting for science to validate everything I do. It's just important for me that you understand that the Leangains Method itself is 100 percent scientifically based, while 16:8 is not.

16:8: Setup

16:8 uses your maintenance intake from "Crunching the Numbers." This number forms the basis for the calculations below. For the examples, I'm using a maintenance intake of 2,000 calories with the standard Monday–Wednesday–Friday split.

1. Determine caloric intake for training days:

Intake + 7.5 percent: 2,000 x 1.0925 = 2,150 calories.

2,150 calories is the amount consumed on Monday, Wednesday, and Friday.

2. Determine caloric intake for rest days:

Intake − 7.5 percent: 2000 x 0.0925 = 1850 calories.

1,850 calories is the amount consumed on Tuesday, Thursday, and Sunday.

3. Consume your unmodified diet intake on one rest day (any day). Your choice.

Saturday: 2,000 calories.

Here's our week:

- Monday: 2,150 calories
- Tuesday: 1,850 calories
- Wednesday: 2,150 calories
- Thursday: 1,850 calories
- Friday: 2,150 calories
- Saturday: 2,000 calories
- Sunday: 1,850 calories

16:8: Protocols

The protocols of 16:8 differ depending on when you train during the day. If you've been following along, elaborating on this point is redundant, so let's not.

All protocols abide by one key principle:

Calorically speaking, eat your largest meal after training.

That said, more is not necessarily better, and extremes are always worse. For this reason, I strongly suggest everyone new to 16:8 start with the 40–30–30 split used below—i.e., 40 percent of your calorie intake post-workout and 30 percent in the other meals.

Continuing with the sample setup, here's the calorie content of each meal:

Training Days: 2,150 calories

- Post-workout meal with 40 percent = 860 calories
- Two meals with 30 percent = 645 calories each

Rest Days, 1,850 calories

- Breakfast with 40 percent = 740 calories
- Two meals with 30 percent = 555 calories each

Make a meal plan, with each entry falling within ± 5 percent of these values, and you're ready to go. And for those in need, I've attached a few meal plans at the end. A word on breakfast. Breakfast literally means "break fast." To most people, it means cereal and orange juice in the early morning, but to us it means a high-protein meal around noon, or whenever we break our fast.

Now that we've cleared that up, I recommend you make breakfast the biggest meal of the day on rest days, calorically speaking. It used to be a rule, but now it's simply a best practice and a good starting point. As you become more familiar and attuned to 16:8, you can start to experiment freely with rest days. There are no rules for the meal split on rest days.

Protocols are named by the time of day weight training takes place. In the Morning Protocol, training takes place in the fasted state, before the first meal (i.e., breakfast), and so on.

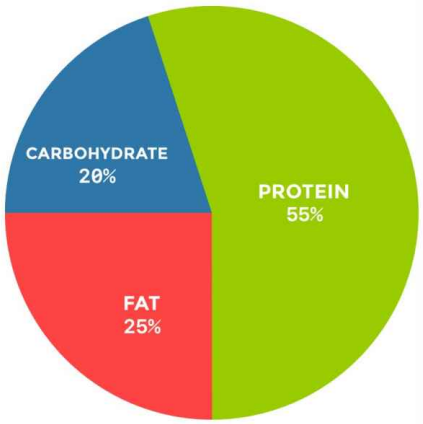
The Noon Protocol

Most people follow regular work hours, and for this reason, Noon and Evening are the most commonly used protocols. In Noon, weight training takes place after breakfast, which usually means right after work.

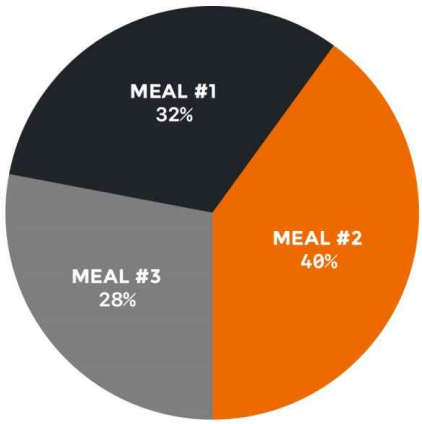
- Noon (12–2 PM): 30 percent
- Post-Workout: 40 percent
- Evening (8–10 PM): 30 percent

THE NOON PROTOCOL						
12-2 PM		**KCAL**	**MACROCOMPOSITION**			
Leangains Salad		695	P 110g	C 24g	F 17g	
4-6 PM: POST-WORKOUT		**KCAL**	**MACROCOMPOSITION**			
Leangains Basic		638	P 96g	C 13g	F 24g	
Two Apples	400g	208	P 1g	C 50g	F 0g	
8-10 PM		**KCAL**	**MACROCOMPOSITION**			
Roast Beef	200g	236	P 42g	C 0	F 7g	
Spinach	250g	45	P 5g	C 1g	F 2g	
Egg, whole	80g	117	P 10g	C 1g	F 8g	
Cottage Cheese, Quark or Greek Yoghurt	250g	160	P 30g	C 8g	F 1g	
Strawberries	100g	38	P 1g	C 8g	F 0g	
TOTAL DAILY VALUES		**2137**	P 294g	C 105g	F 58g	

MACROCOMPOSITION



MEAL SIZE



The Evening Protocol

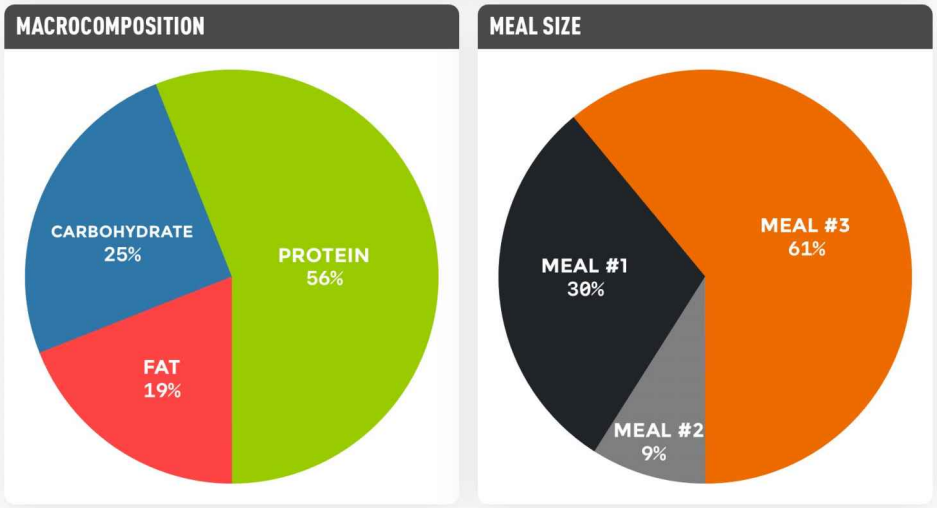
If you prefer to wind down when you come home, or maybe eat another meal or train when the gym is less crowded, opt for the Evening Protocol.

- Noon (12–2 PM): 30 percent
- Second Meal: 30 percent
- Post-Workout (8–10 PM): 40 percent

As you can see, the only difference between Noon and Evening is the number of meals before training. For this

reason, the meal plan that follows shows an alternate take on the Evening protocol. Here, the second meal is a quick snack, and the post-workout meal is gigantic.

THE EVENING PROTOCOL					
12-2 PM		**KCAL**	**MACROCOMPOSITION**		
Leangains Basic		638	P 96g	C 13g	F 24g
4-6 PM		**KCAL**	**MACROCOMPOSITION**		
Cottage Cheese, Quark or Greek Yoghurt	250g	160	P 30g	C 8g	F 1g
Blueberries	100g	39	P 1g	C 8g	F 1g
8-10 PM: POST-WORKOUT		**KCAL**	**MACROCOMPOSITION**		
Leangains Salad		695	P 110g	C 24g	F 17g
Two Apples	400g	208	P 1g	C 50g	F 0g
Late Night Classic		402	P 61g	C 32g	F 2g
TOTAL DAILY VALUES		2142	P 298g	C 135g	F 43g



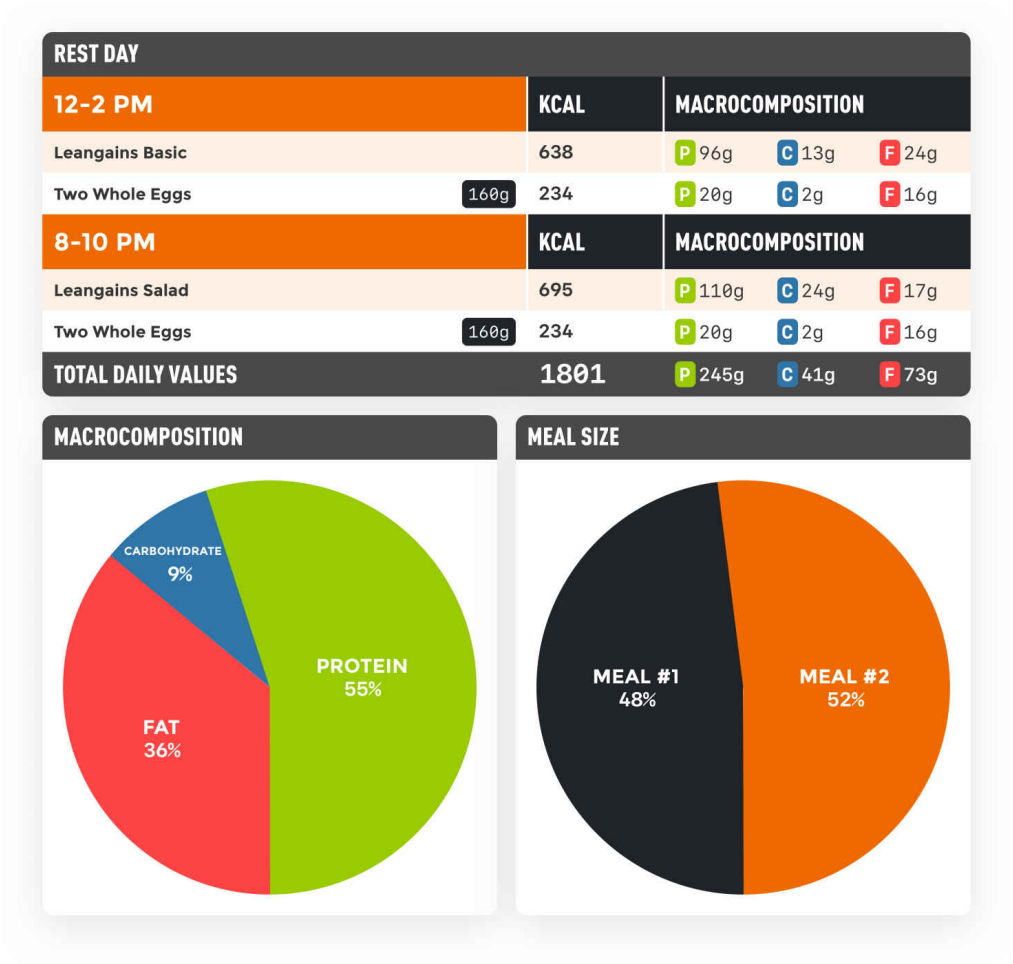
2-Meal Alternatives

Some people feel three meals are excessive on 16:8, or that two meals and one pre-workout snack is a better option. They may find a suitable fit in these protocols. I find two meals perfect for rest days, personally.

50/50

- Noon (12–2 PM): 50 percent
- Post-Workout (8–10 PM or earlier): 50 percent

Half at noon, half in the evening. Easy enough—and a personal favorite during the writing of this book.



50/50 Alternative

An alternate version includes a quick pre-workout meal, e.g., a fruit and a protein shake.

- Noon (12–2 PM): 40 percent
- Pre-Workout: 10 percent
- Post-Workout (8–10 PM or earlier): 50 percent

The Morning Protocol

For optimal results, amino acids need to be available during and after weight training. This means you shouldn't train entirely fasted, and that's why pre-workout protein is given in the fasted protocols.

Pre-workout protein is either 15 grams of essential amino acids (EAA) or 30 grams of whey protein. If supplements are out of the question, 30 grams of well-chewed meat will produce the same effect as the above.

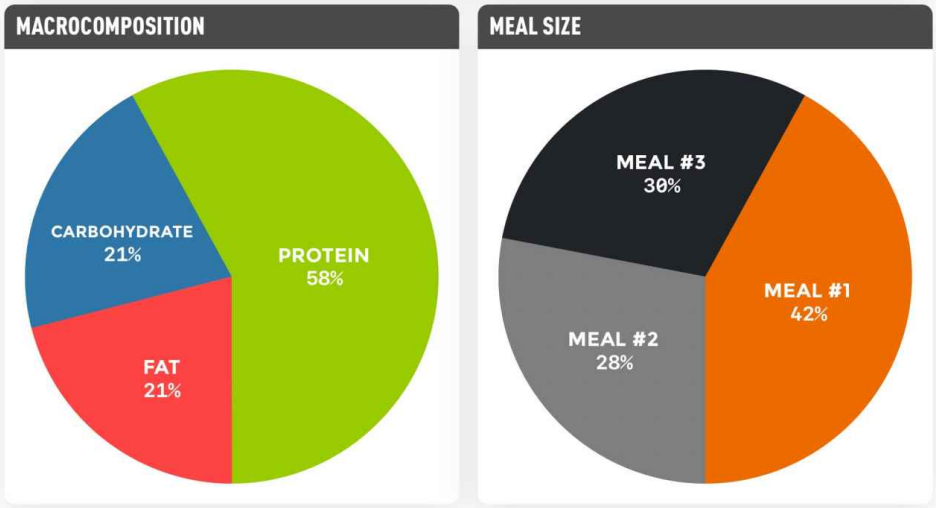
Note that pre-workout protein does *not* start the clock on your feeding window. That starts with breakfast.

Morning

- 10–30 minutes before training: Roughly 5 percent (15 grams EAA or 30 grams whey)
- Post-workout (12–2 PM): 40 percent
- Second Meal: 30 percent
- Evening (8–10 PM): 25 percent

This is the most common application of the fasted protocol. Fast, eat some protein, hit the gym on your lunch break, and make it back in time to enjoy a big breakfast. And draw envious looks from your colleagues, as they sit and wonder how you can eat so much but stay so lean.

THE MORNING PROTOCOL					
12-2 PM: POST-WORKOUT		**KCAL**	**MACROCOMPOSITION**		
EAA	15g	60	P 15g	C 0	F 0
Leangains Basic		638	P 96g	C 13g	F 24g
Two Apples	400g	208	P 1g	C 50g	F 0g
4-6 PM		**KCAL**	**MACROCOMPOSITION**		
Martin's Omelette		505	P 70g	C 14g	F 19g
Apple	200g	104	P 1g	C 25g	F 0g
8-10 PM		**KCAL**	**MACROCOMPOSITION**		
Roasted Turkey Breast	250g	338	P 75g	C 0	F 3g
3 Egg whites	100g	46	P 10g	C 1g	F 0g
Spinach	500g	90	P 10g	C 3g	F 4g
Cottage Cheese, Quark or Greek Yoghurt	250g	160	P 30g	C 8g	F 1g
TOTAL DAILY VALUES		**2148**	P 307g	C 113g	F 49g



Early Morning

This protocol looks similar to the former, but here the lifter trains in the early morning, presumably before work. To provide building blocks for muscle protein synthesis during the hours between training and breakfast, another dose of EAA or whey is included.

- 10–30 minutes before training: Roughly 5 percent (15 grams EAA or 30 grams whey)
- 5–7 AM training
- 8–10 AM: Roughly 5 percent (15 grams EAA or 30 grams whey)
- Post-workout (12–2 PM): 40 percent

- Second Meal: 30 percent
- Evening (8–10 PM): 20 percent

The pre-workout protein is repeated three hours after the first.

This begs the question, why not have breakfast post-workout? That would make it a bit less complicated, and the option exists. One could simply feed between 6:00 AM and 2:00 PM, for example.

While this looks fine on paper, it's far more challenging to fast through the afternoon compared to the morning. People who gravitate toward intermittent fasting tend to be breakfast skippers by nature. They're simply not hungry in the morning, and more likely to be hungry in the afternoon.

Not being able to eat after two o'clock poses a challenge. When the work day is over and there's nothing but Netflix on the agenda, the mind wanders and thoughts of food become harder to tackle.

Conclusion

It bears repeating that 16:8 is *not* the Leangains Method. The former is optional and not needed to succeed. The latter is how you succeed. If 16:8 helps in that regard, use it. If it doesn't, don't. Your choice. Just like you can choose cottage cheese and protein powder over chicken and meat, you can choose to apply 16:8 to the Leangains Method.

Choices. They're good to have. Now you can make every conceivable choice worth choosing.

Good luck. You won't need it.[78]

References

1. Berkhan, M. “The Leangains Guide.” *Leangains*, 14 Apr. 2010, https://leangains.com/the-leangains-guide/

“Top Ten Fasting Myths Debunked” (2010)

Martin’s Commentary: *I’ve been debunking meal frequency and other diet myths on leangains.com since 2007. But it wasn’t ‘til 2010 that the message finally went viral with “Top Ten Fasting Myths Debunked.” It garnered a massive amount of attention, opened people’s eyes, and put intermittent fasting on the map.*

Since the article’s conception, the only minor update to the facts mentioned concerns meal frequency and TEF. As covered in “Hacking DIT,” new data suggests fewer meals produce higher TEF. Which is funny, because it’s the exact opposite of what everyone believed back then.

The title doesn’t do the article justice—it could’ve just as well been named “Top Ten Diet Myths Debunked.” The only missing piece concerns the late-night eating myth, which I covered in “Is Late Night Eating Better for Fat Loss and Health?” (ref. 1) the following year.

Or “Top Ten Diet Myths Debunked.” That would have fit almost as well. Okay, so in retrospect, I think I screwed up on the title. Many myths just happened to be connected to intermittent fasting (meal frequency, breakfast skipping, etc.). Well, live and learn.

Everyone who learns about nutrition through the usual channels, be it fitness magazines, mainstream diet books and forums, gets cursed with the prevailing belief system of what constitutes a good diet.

Though specific dietary recommendations vary slightly depending on who you listen to, there are many common denominators and "rules" that you are told you must adhere to. Call it broscience, incompetence, or ignorance, same thing. We've all been there, and we've all followed these rules. Led like sheep, not knowing better. Trusting that those we listen to knew what they were talking about. While these dietary myths run rampant in the bodybuilding and fitness community, you'll find that many are being endlessly propagated in the mainstream as well.

Upon closer scrutiny, the great majority lack scientific basis. They are born out out of half-truths, faulty conclusions drawn from poorly conducted studies or created when a study gets cited out of context.

Sometimes, what's claimed is even in exact opposition to what really occurs at a physiological level. Many people believe that alcohol is fattening, more so than any other macronutrient. Yet, if you look at how inefficiently the body converts ethanol to fat, you'll find that it's completely backwards. I talked about this in "The Truth about Alcohol, Fat Loss and Muscle Growth" (ref. 2). Also note how the proposed negative effect of alcohol on muscle growth doesn't even exist in the scientific literature.

You'll see similar examples in this article. For example, in short-term fasting, it's often claimed that metabolic rate slows down—yet looking at the studies, the opposite is true.

The myths I'll debunk today are being kept alive by:

1. Repetition. Repeat something often enough and it becomes the truth. If everyone is saying the same thing, it must be true. No need to look into it and think for yourself. The fact that bodybuilders and fitness celebrities keep propagating these myths doesn't help either. Most people reason that if these people do it, it must be great. Unfortunately, bodybuilders and fitness celebrities might just be one of the last people on earth you should listen to if you want objective and accurate opinions in nutrition.

Batman and the Joker talk about metabolic fire

2. Commercial forces. For example, the supplement industry benefits greatly from people believing that frequent feedings provide a metabolic advantage. People don't have time to eat six cooked meals a day. Instead, they turn to meal replacement powders, shakes and protein bars. The cereal and grain industry benefits by preaching about the virtues of breakfast for weight control, health and fat loss. There's no commercial incentive in telling people that they would do just fine with three squares a day.

3. Few people have the knowledge or interest needed to interpret the scientific evidence and draw their own conclusions. In order to do this, you would need an academic background that included critical examination of studies and study methodology as part of the learning process.

However, an academic background, or an extensive education in nutrition or physiology, seems to correlate very poorly with truthfulness and objectivity in the field of dietetics in my experience. The advice and claims I have seen made by many RDs (Registered Dietitians) has been so shamelessly wrong that I put little stock in anything they have to say. The same goes for many "diet gurus" and so-called health experts with a solid list of academic credentials.

That people who should know better keep repeating the same myths is somewhat puzzling and strange. Perhaps they lose interest in keeping up with research. What we know today is a bit different from what we knew twenty years ago after all. Or maybe they're afraid that their credibility would be questioned if they change the advice they have been giving for years. I'm not sure. I've been thinking about it quite a bit. But I digress. Back to the topic.

The Top Ten Fasting Myths Debunked

The dietary recommendations and advice given in mainstream media and most fora will have you believe that fasting is a hazardous practice. On top of wrecking your metabolism, you should expect ravenous hunger, fat gain, muscle loss, and severe mental impairment. Or so you are told.

Needless to say, people who are introduced to Leangains (ref. 3) and the intermittent fasting diet concept have many fears that will make them think twice before embracing it. Fears grounded in years of a dietary indoctrination based on faulty ideas and lies. We've all been there.

I've listed the ten most common fasting and diet myths that exist to make people resistant to intermittent fasting. I've explained why they're wrong and linked out to references and other resources for those who would like to read a more detailed review of the issues. I've also listed their origins, or what I believe to be their origins.

I've dealt with each myth many times before on this site but it would be good to have everything in one place. Even if you've been following me for a while, you'll find some new information here I haven't discussed in the past. It's a long read, but it'll be worth your while.

1. Myth: Eat frequently to "stoke the metabolic fire."

Truth:

Each time you eat, metabolic rate increases slightly for a few hours. Paradoxically, it takes energy to break down and absorb energy. This is the thermic effect of food (TEF) (ref. 4). The amount of energy expended is directly proportional to the amount of calories and nutrients consumed in the meal.

Let's assume we're measuring TEF during twenty-four hours in a diet of 2,700 calories with 40 percent protein, 40 percent carbohydrate and 20 percent fat. We run three different trials where the only thing we change is the the meal frequency.

A) Three meals: 900 calories per meal.

B) Six meals: 450 calories per meal.

C) Nine meals: 300 calories per meal.

What we'd find is a different pattern in regards to TEF. Example "A" would yield a larger and long-lasting boost in

metabolic rate that would gradually taper off until the next meal came around; TEF would show a "peak and valley" pattern. "C" would yield a very weak but consistent boost in metabolic rate; an even pattern. "B" would be somewhere in between.

However, at the end of the twenty-four-hour period, or as long as it would take to assimilate the nutrients, there would be no difference in TEF. The total amount of energy expended by TEF would be identical in each scenario. Meal frequency does not affect total TEF. You cannot "trick" the body into burning more or less calories by manipulating meal frequency.

Further reading: I have covered the topic of meal frequency (ref. 5) at great length on this site before.

The most extensive review (ref. 6) of studies on various meal frequencies and TEF was published in 1997. It looked at many different studies that compared TEF during meal frequencies ranging from one to seventeen meals and concluded: "Studies using whole-body calorimetry and doubly-labelled water to assess total 24 h energy expenditure find no difference between nibbling and gorging."

Since then, no studies have refuted this. For a summary of the above cited study, read this research review by Lyle McDonald (ref. 7).

Earlier this year, a new study (ref. 8) was published on the topic. As expected, no differences were found between a lower (three) and higher (six) meal frequency. Read this post (ref. 9) for my summary of the study. This study garnered some attention in the mass media and it was nice to see the meal frequency myth being debunked in the *New York Times* (ref. 10).

Origin

Seeing how conclusive and clear the research is on the topic of meal frequency, you might wonder why it is that some people, quite often RDs in fact, keep repeating the myth of "stoking the metabolic fire" by eating small meals on a frequent basis. My best guess is that they've somehow misunderstood TEF. After all, they're technically right to say

you keep your metabolism humming along by eating frequently. They just missed that critical part where it was explained that TEF is proportional to the calories consumed in each meal.

Another guess is that they base the advice on some epidemiological studies that found an inverse correlation between high meal frequency and body weight in the population. What that means is that researchers may look at the dietary pattern of thousands individuals and find that those who eat more frequently tend to weigh less than those who eat less frequently. It's important to point out that these studies are uncontrolled in terms of calorie intake and are done on Average Joes (i.e., normal people who do not count calories, and just eat spontaneously like most people).

There's a saying that goes, "Correlation does not imply causation" (ref. 11), and this warrants further explanation since it explains many other dietary myths and fallacies. Just because there's a connection between low meal frequencies and higher body weights, doesn't mean that low meal frequencies cause weight gain. Those studies likely show that people who tend to eat less frequently have:

- Dysregulated eating patterns; the personality type that skips breakfast in favor of a donut in the car on the way to work, undereats during the day, and overeats in the evening. They tend to be less concerned with health and diet than those who eat more frequently.

- Another feasible explanation for the association between low meal frequencies and higher body weight is that meal skipping is often used as a weight loss strategy. People who are overweight are more likely to be on a diet and eat fewer meals.

The connection between lower meal frequency and higher body weight in the general population, and vice versa, is connected to behavioral patterns—not metabolism.

2. Myth: Eat smaller meals more often for hunger control.

Truth:

Given the importance of finding the most favorable meal pattern for hunger and appetite control, there's a surprising scarcity of studies on the topic. The most widely cited study (ref. 12) is one where obese males were fed 33 percent of their daily calorie requirement ("pre-load") in either one single meal or five meals before being allowed to eat ad libitum five hours later (meaning as much as they desired).

1. One single meal was consumed. Five hours later, they were free to eat as much as they desired, "buffet" style.

2. Same setup as above. However, the single meal was now split into five smaller meals, which were consumed every hour leading up to the ad libitum meal.

The results showed that subjects undergoing "A" ate 27 percent more calories when given the ad libitum meal. The same setup was used by the same researchers on lean males, and showed similar results (ref. 13). However, upon closer scrutiny, it's clear how little real-world application those results have. The macrocomposition of the pre-load was 70 percent carbs, 15 percent fat, and 15 percent protein; given as pasta, ice cream, and orange juice. The situation created was highly artificial and abnormal. Who sits around nibbling on pasta and ice cream, sipping orange juice, every hour leading up to a regular meal?

The latest research (ref. 14), performed under conditions that more closely resemble a real-world scenario, shows the opposite result. In this study, three high-protein meals lead to greater fullness and appetite control when compared to six high-protein meals. You can read my summary of the study here: "Three Meals Superior for Appetite Control" (ref. 15).

There's no doubt that meal frequency is highly individual. However, absolute statements claiming smaller meals are superior for hunger and appetite control are untrue and are based on studies using methods that greatly differ from real-world meal patterns. Current research with a normal meal pattern and protein intakes that are closer to what can be seen in a typical non-retarded diet, suggests superior appetite control when eating fewer and larger meals.

Origin

This myth might have originated from the limited data from studies on meal frequencies and appetite control. It's also likely that it's another case of mistaking correlation for causation from studies and meal frequencies and higher body weights; if people who eat more often weigh less, then it must mean they can control their hunger better, etc.

3. Myth: Eat small meals to keep blood sugar levels under control.

Truth:

According to legions of diet and health "experts," eating small meals every so often will help you avoid hunger pangs, provide you with stable energy throughout the day and keep you mentally sharp. Contrary to what many people seem to believe, blood sugar is extremely well regulated and maintained within a tight range in healthy people. It does not swing wildly up and down like a chimpanzee on meth, and it doesn't plummet from going a few hours without food. Or even a full day without food. Or a week without food, for that matter.

People seem to believe they will suffer severe hunger and mental impairment from not eating every so often. Consider for a second the evolutionary consequences for survival if this were true. Given that regular periods of fasting, even famine, were a natural part of our past, do you think we'd be here today if we were unable to function when obtaining food was most critical? I have seen healthy young males, bodybuilders nonetheless, complain of lethargy and mental haze if they

didn't get to eat for a few hours. It's completely absurd. But I digress…

Maintaining blood sugar (ref. 16) is of very high priority, and we have developed efficient pathways (ref. 17) that will make it happen even under extreme conditions. If you were to fast for twenty-three hours and then go for a ninety-minute run at 70 to 75 percent VO2 max (ref. 18), your blood sugar after the run would be identical to the same run performed in the fed state. It would take no less than three days or eighty-four hours of fasting (ref. 19) to reach blood sugar levels low enough to affect your mental state; and this is temporary, as your brain adapts to the use of ketones. During forty-eight hours of fasting (ref. 20), or severe calorie deprivation, blood sugar is maintained within a normal range no measure of cognitive performance is negatively affected.

For more on blood sugar, read my review of *Eat Stop Eat Expanded Edition* (ref. 21), which includes a relevant excerpt. Also, keep in mind that the above cited studies are all performed under conditions that are much more extreme than the fasting protocol I, or Brad Pilon, recommend.

What about blood sugar and hunger? Blood sugar is one of many short-term feedback mechanisms used to regulate hunger, and the notion that exists to say that low blood sugar may cause hunger is correct. Low" just means lower range. This is subject to numerous confounders, such as your habitual diet, energy intake, and genetics. Most importantly, perhaps, it's subject to entrained meal patterns (ref. 22), regulated by ghrelin (ref. 23) and other metabolic hormones. In essence, this means that blood sugar follows the meal pattern you are used to. This is relevant for those who fear blood sugar issues and hunger from regular periods of fasting, as it serves to explain why people can easily adapt to regular periods of fasting without negative effects.

Origin

Not sure how people came to believe that skipping a meal would dumb them down. There is some truth to blood sugar and hunger, but this is often taken out of context. There's no

need to eat regularly to "maintain" blood sugar, as it maintains itself just fine and adapts to whatever meal pattern you choose.

4. Myth: Fasting tricks the body into "starvation mode."

Truth:

Efficient adaptation to famine was important for survival during rough times in our evolution. Lowering metabolic rate during starvation allowed us to live longer, increasing the possibility that we might come across something to eat. Starvation literally means starvation. It doesn't mean skipping a meal not eating for twenty-four hours. Or not eating for three days, even. The belief that meal skipping or short-term fasting causes "starvation mode" is so completely ridiculous and absurd that it makes me want to jump out the window.

Looking at the numerous studies I've read, the earliest evidence for lowered metabolic rate in response to fasting occurred after sixty hours (ref. 24) (−8 percent in resting metabolic rate). Other studies show metabolic rate is not impacted until seventy-two to ninety-six hours have passed. (George Cahill has contributed a lot on this topic.)

Seemingly paradoxical, metabolic rate is actually increased in short-term fasting. For some concrete numbers, studies have shown an increase of 3.6 to 10 percent after thirty-six to forty-eight hours (Mansell PI, et al, and Zauner C, et al) (ref. 25,26). This makes sense from an evolutionary perspective. Epinephrine and norepinephrine (adrenaline/noradrenaline) sharpens the mind and makes us want to move around. Desirable traits that encouraged us to seek for food, or for the hunter to kill his prey, increasing survival. At some point, after several days of no eating, this benefit would confer no benefit to survival and probably would have done more harm than good; instead, an adaptation that favored conservation of energy turned out to be advantageous. Thus metabolic rate is increased in short-term fasting (up to sixty hours).

Again, I have chosen extreme examples to show how absurd the myth of "starvation mode" is—especially when you

consider that the exact opposite is true in the context of how the term is thrown around.

Origin

I guess some genius read that fasting or starvation causes metabolic rate to drop and took that to mean that meal skipping, or not eating for a day or two, would cause starvation mode.

5. Myth: Maintain a steady supply of amino acids by eating protein every two to three hours. The body can only absorb 30 grams of protein in one sitting.

Truth:

Whenever you hear something really crazy, you need to ask yourself if it makes sense from an evolutionary perspective. It's a great way to quickly determine if something may be valid, or if it's more likely a steaming pile of horseshit. This myth is a great example of the latter. Do you think we would be here today if our bodies could only make use of 30 grams of protein per meal?

The simple truth is that more protein just takes a longer time to digest and be utilized. For some concrete numbers, digestion of a standard meal (ref. 27) is still incomplete after five hours. Amino acids are still being released into your bloodstream and absorbed into muscles. You are still "anabolic." This is a fairly standard "Average Joe" meal: 600 calories, 75 grams of carbs, 37 grams of protein, and 17 grams of fat. Best of all? This was after eating pizza, a refined food that should be quickly absorbed, relatively speaking.

Think about this for a second. How long do you think a big steak, with double the protein intake of the above example, and a big pile of veggies would last you? More than ten hours, that's for sure. Meal composition plays an important role in absorption speed, especially when it comes to amino acids. Type of protein, fiber, carbohydrates and prior meals eaten all affect how long you'll have amino acids released and being taken up by tissues after meals.

Origin

I think this "30 grams of protein"-nonsense started to circulate after a classic study from 1997 by Boirie and colleagues. "Slow and fast dietary proteins differently modulate postprandial protein accretion" (ref. 28) was the first study to quantify the absorption rate of whey and casein protein and gave birth to the concept of fast and slow protein. After that, whey protein came to be known for its ability to rapidly elevate amino acids in the bloodstream, and casein for its ability to create a sustained release of amino acids. Whey was anabolic, and casein anti-catabolic.

Given that 30 grams of whey protein was absorbed within three to four hours, I guess some people believed that meant 30 grams of protein can only be used in one sitting. Or that you had to eat every three to four hours to stay "anabolic." Unfortunately, people missed a few facts that made these findings irrelevant to real-world scenarios. First of all, this study looked at the absorption rate of whey protein in the fasted state. On its own, and with no meals eaten beforehand, 30 grams of whey protein is absorbed within a mere three to four hours. With meals eaten earlier in the day, or if you were to consume a whey shake after a meal, absorption would be much slower.

Second of all, whey protein is the fastest protein of all, and digests at 10 grams per hour. Casein is much slower; in Boirie's study, the casein protein was still being absorbed when they stopped the experiment seven hours later. Most whole food proteins are absorbed at a rate of 3 to 6 grams an hour. Add other macronutrients to that, and they'll take longer.

Male showing results of Leangains approach.

One of my clients, showing symptoms of profound catabolism by impaired protein absorption and daily sixteen-hour periods of fasting

Further reading:

- "Is There a Limit to how Much Protein the Body can Use in a Single Meal?" by Alan Aragon (ref. 29).

- What Are Good Sources of Protein? – Speed of Digestion Part 1 (ref. 30)
- What Are Good Sources of Protein? – Speed of Digestion Part 2 (ref. 31)

6. Myth: Fasting causes muscle loss.

Truth:

This myth hinges on people's belief that it's important to have a steady stream of amino acids available to not lose muscle. As I explained earlier, protein is absorbed at a very slow rate. After a large, high-protein meal, amino acids trickle into your bloodstream for several hours.

No studies have looked at this in a context that is relevant to most of us—for example, by examining amino acid appearance in the blood and tissue utilization of amino acids after a large steak, veggies, and some cottage cheese with berries for dessert. That's easily 100 grams of protein, and a typical meal for those who follow the Leangains approach. We are left to draw our own conclusions based on what we know: that a modest amount of casein, consumed as a liquid on an empty stomach, is still releasing amino acids after seven hours. With this in mind, it's no stretch to assume that 100 grams of protein as part of a mixed meal at the end of the day would still be releasing aminos for sixteen to twenty-four hours.

Few studies have examined the effects of regular fasting on muscle retention and compared it to a control diet. None of them are relevant to how most people fast, and some are marred by flaws in study design and methodology. Like this study (ref. 32), which showed increased muscle gain and fat loss, with no weight training or change in calorie intake, just by changing meal frequency. While I would love to cite that study as proof of the benefits of intermittent fasting, body composition was measured by bioelectrical impedance analysis (BIA), which is notoriously imprecise.

Only in prolonged fasting does protein catabolism become an issue. This happens when stored liver glycogen becomes depleted. In order to maintain blood glucose, conversion of

amino acids into glucose must occur (DNG: de novo gluconeogenesis). This happens gradually, and if amino acids are not available from food, protein must be taken from bodily stores such as muscle. Cahill looked at the contribution of amino acids to DNG after a 100-gram glucose load. He found that amino acids from muscle contributed 50 percent to glucose maintenance after sixteen hours, and almost 100 percent after twenty-eight hours (when stored liver glycogen was fully depleted). Obviously, for someone who eats a high protein meal before fasting, this is a moot point, as you will have plenty of aminos available from food during the fast.

Origin

An example of severe exaggeration of physiological and scientific fact, not relevant to anyone who's not undergoing prolonged fasting or starvation.

7. Myth: Skipping breakfast is bad and will make you fat.

Truth:

Breakfast skipping is associated with higher body weights in the population. The explanation is similar to that of lower meal frequencies and higher body weights. Breakfast skippers have dysregulated eating habits and show a higher disregard for health. People who skip breakfast are also more likely to be dieting, thus by default they are also likely to be heavier than non-dieters. Keep in mind that most people who resort to breakfast skipping are not the type who sit around and read about nutrition. They are like most people dieting in a haphazard manner—the type to go on an 800-calorie crash diet and then rebound, gaining all the weight back (and then some).

Sometimes, an argument is made for eating breakfast, as we are more insulin sensitive in the morning. This is true; you are always more insulin sensitive after an overnight fast. Or rather, you are always the most insulin sensitive during the first meal of the day. Insulin sensitivity is increased after glycogen depletion. If you haven't eaten in eight to ten hours, liver glycogen is modestly depleted. This is what increases insulin sensitivity—not some magical time period during the

morning hours. Same thing with weight training. Insulin sensitivity is increased as long as muscle glycogen stores aren't full. It doesn't disappear if you omit carbs after your workout.

Origin

First of all, we have the large-scale epidemiological studies showing an association with breakfast skipping (ref. 33) and higher body weights in the population. One researcher from that study, commenting on the association with breakfast skipping or food choices for breakfast, said:

"These groups appear to represent people 'on the run,' eating only candy or soda, or grabbing a glass of milk or a piece of cheese. Their higher BMI would appear to support the notion that 'dysregulated' eating patterns are associated with obesity, instead of or in addition to total energy intake per se."

Kellogg's and clueless RDs love to cite them over and over again, so people are led to believe that breakfast has unique metabolic and health-related benefits. In reality, these studies just show breakfast eaters maintain better dietary habits overall.

Other frequently cited studies claiming that breakfast is beneficial for insulin sensitivity are all marred with methodological flaws and largely uncontrolled in design.

In one widely cited study (ref. 34), subjects were entrusted to eat most meals in free-living conditions. The breakfast-skipping group ate more and gained weight, which affected health parameters negatively.

From the abstract: "Reported energy intake was significantly lower in the EB period (P=0.001), and resting energy expenditure did not differ significantly between the 2 periods." (EB = eating breakfast.) In essence, people who ate breakfast could control their energy intake better for the rest of the day. They didn't gain any weight, but the breakfast-skipping group did. Fat gain always affects insulin sensitivity and other health parameters negatively. Thus, what people took this to mean is that breakfast is healthy and improves insulin sensitivity. Which isn't at all what the study showed.

8. Myth: Fasting increases cortisol.

Truth:

Cortisol is a steroid hormone that maintains blood pressure, regulates the immune system, and helps break down proteins, glucose, and lipids. It's a hormone that's gotten quite a bad rep in the fitness and health community, but we have it for a reason. The morning peak in cortisol makes us get out of bed and get going. A blunted morning cortisol peak is associated with lethargy and depression. Cortisol is elevated during exercise, which helps mobilize fats, increase performance, and experience euphoria during and after workouts. Trying to suppress acute elevations of cortisol during exercise, or the normal diurnal rhythm, is foolish. Chronically elevated levels of cortisol, resulting from psychological and/or physiological stress, is another thing, and unquestionably bad for your health; it increases protein breakdown and appetite, and may lead to depression.

Short-term fasting has no effect on average cortisol levels, and this is an area that has been extensively studied in the context of Ramadan fasting (ref. 35). Cortisol typically follows a diurnal variation, which means that its levels peak in the morning at around eight o'clock and decline in the evenings. What changes during Ramadan is simply the cortisol rhythm (ref. 36); average levels across twenty-four hours remain unchanged.

In one Ramadan study on rugby players (ref. 37), subjects lost fat and retained muscle very well. And they did despite training in a dehydrated state, without pre-workout or post-workout protein intake, and with a lower protein intake overall nonetheless. Quoting directly from the paper:

"Body mass decreased significantly and progressively over the 4-week period; fat was lost, but lean tissue was conserved…"

"…Plasma urea concentrations actually decreased during Ramadan, supporting the view that there was no increase of

endogenous protein metabolism to compensate for the decreased protein intake."

In one study on intermittent fasting (ref. 38), the fasting group even saw "significant decrease in concentrations of cortisol." However, this study should be taken with a grain of salt as it had some flaws in study design.

In conclusion, the belief that fasting increases cortisol, which then might cause all kinds of mischief such as muscle loss, has no scientific basis whatsoever.

Origin

Prolonged fasting or severe calorie restriction (ref. 39) causes elevated baseline levels of cortisol. This occurs in conjunction with depletion of liver glycogen, as cortisol speeds up DNG, which is necessary to maintain blood sugar in absence of dietary carbs, protein, or stored glycogen. Again, it seems someone looked at what happens during starvation and took that to mean that short-term fasting is bad.

9. Myth: Fasted training sucks. You'll lose muscle and have no strength.

Truth:

A large body of research on sports performance during Ramadan (ref. 40) concludes that aerobic activity, such as sixty minutes of running (ref. 41), has a small yet significant negative impact on performance. A very large confounder here is dehydration, as Ramadan fasting involves fluid restriction. That said, anaerobic performance (ref. 42), such as weight training, is much less impacted.

However, more relevant and telling studies, which don't involve fluid restriction, show that strength and lower-intensity endurance training is unaffected—even after 3.5 days of fasting (ref. 43). New research on fasted training (ref. 44) supports this. If you read my review of that study, you'll see that the only parameter the fed group did better on was improvements in VO2 max, which is likely explained by the fact that the carbs allowed them to train at a higher intensity.

However, note the other interesting results obtained in the fasted group. Also note that a review I did of another fasted endurance training (ref. 45) study showed no negative effect of fasting on endurance or VO2 max (quite the contrary, in fact). This can be explained by the lower intensity.

In conclusion, training in the fasted state does not affect your performance during weight training, which is what most people reading this are interested in. However, training in a completely fasted state is still not something I recommend for optimal progress. Research is quite clear on the benefits of pre-workout and post-workout protein intake for maximizing protein synthesis. For this reason, I suggest supplementing with 10 grams of BCAA prior to fasted training.

Another weak and frail physique. No wonder—Andreaz does most of his training fasted. Also worth mentioning: Richard Nikoley trained almost exclusively fasted (and basically doubled his deadlift, while losing fat).

Read more about pre-workout protein and fasted training here: "Pre-workout Protein Boosts Metabolism" (ref. 46) and "Fasted Training Boosts Muscle Growth?" (ref. 47)

Also read: "Early Morning Fasted Training" (ref. 48).

Specific protocols for fasted training are covered in "The Leangains Guide" (ref. 49)

Origin

It's actually intuitive that a big pre-workout meal would help with performance, so it's not surprising that people have their doubts about training on an empty stomach.

10. Myth: "Eat breakfast like a king, lunch like a queen, dinner like a pauper."

Truth:

Also connected to this saying, is the belief that you should reduce carbs in the evening as they will be less likely to be stored as fat. While this might sound good on paper, there's nothing to support it, and a lot that shows it to be wrong.

The strongest argument against this are the numerous studies available on body composition and health during and after Ramadan fasting. This meal pattern of regular nightly feasts has a neutral or positive effect on body fat percentage (ref. 50) and other health parameters. This is quite an extreme and telling example. People literally gorge on carbs and treats in the middle of the night to no ill effect. And yet, in the bizarre world of bodybuilding and fitness, people worry whether it's OK to eat 50 grams of carbs in their last meal.

If the scientific data on Ramadan fasting aren't enough, there are plenty of other studies showing no effect on weight loss (ref. 51) or weight gain from eating later in the day.

In one study (ref. 52) comparing two meal patterns, which involved one group eating more calories earlier in the day and one group eating most calories later in the day, more favorable results were found in the group eating large evening meals. While those who ate more in the AM lost more weight, the extra weight was in the form of muscle mass. The late evening eaters conserved muscle mass better, which resulted in a larger drop in body fat percentage.

Origin

Just like breakfast skipping is associated with higher body weights in the general population, you will find associations with late-night eating and higher body weights. If you have been reading this far, you'll understand the logical fallacy of saying that late-night eating must cause weight gain based on such studies. People who engage in late-night eating, such as snacking in front of the TV, are likely to weigh more than others. It's not the fact that they are eating later in the day that causes weight gain; it's their lifestyle. No controlled studies show larger evening meals affect body composition negatively in comparison to meals eaten earlier in the day.

Sometimes studies on shift workers are cited to claim that late-night eating is bad. These are all uncontrolled (in terms of calorie intake) and observational studies confounded by the fact that shift work has an independent and negative effect on some health parameters like glucose tolerance and blood lipids. Keep this in mind. Context is always relevant.

While I normally don't cite studies on animals, *Science Daily* featured an article dispelling the late-night eating myth based on findings in rhesus monkeys (ref. 53). It's worth citing, since monkeys are metabolically closer to humans than rodents.

I should have written this article post a long time ago. Would have saved me tons of time.

If you found this worthwhile reading, I'd appreciate if you could refer those unlucky people, who have been misled into believing some of the junk that's out there, to this article. Based on my own and others' experiences, these false beliefs lead many into an obsessive dietary pattern, which can do a lot of harm to your physical and psychological well-being. Let's try to put an end to that and save people from such misery.

November 4th Addendum

First of all, I appreciate the support and help with spreading this article around. I've received dozens of emails

from people who've told me that this was a great eye opener for them; a seed for a new way of critical thinking—in place of blind acceptance of these dubious claims that are often made. So for those who have assisted me in the fight against broscience and diet myths, thanks. Good karma will come your way.

As I read through the article, I didn't find anything that needed to be clarified further or worth changing. Well, nothing that would change the conclusions, at least. Since I like this stuff, I could easily devote a full article to each one of the different myths and delve deeper into the nuances and methodological problems that plague some of the widely cited data from which they are born. But this article is already long enough as it is.

However, I do have a few addendums I'd like to make. I've added them here, so those who didn't read the article when it first appeared have to sift through it again.

1. Myth: Eat frequently to "stoke the metabolic fire"

One of the most ridiculous arguments against a low (or should I say normal?) meal frequency is the one of sumo wrestlers' eating habits. Since sumo wrestlers eat two times a day, it must be the best way to get fat and exactly what you shouldn't be doing for fat loss, or so the logic goes. I wouldn't have blamed anyone for bringing this argument into the discussion thirty-four years ago—because it was actually what some researchers (ref. 54) believed at that time.

The methods and logic used to arrive at such a conclusion was completely retarded. For example, as a "control group," they used healthy Japanese males weighing 105 to 130 pounds eating three meals a day. Brilliant. It's fair to say that nutritional science and research wasn't exactly stellar at that time (Ancel Keys, anyone?) (ref. 55) but this "study" was terrible even by medieval standards. Yes, it must be meal frequency that's to blame. Never mind the 5,000+ calories consumed on a daily basis.

The traditional dish consumed by sumo wrestlers, *chankonabe* (ref. 56), is actually not bad at all in terms of calorie density and food composition. Seems it's even popular among thin Japanese women. However, since chankonabe is so deeply entrenched into sumo culture, wrestlers will only count a dish served with chankonabe as a meal. Snacks eaten in between the two daily chankonabe meals, which are events that are treated like rituals of great importance, simply aren't considered as meals or reported as such. This quote is pretty telling: "…I eat hamburgers and foods I purchase at convenience stores as snacks." (From "Sumo meal now what the petite eat.")

I found the tidbit about chankonabe tradition interesting, but it's also one very big confounder that was not considered in that old, worthless study. The reported mean intake of the wrestlers, 5,100 to 5,600 calories is quite a lot for a 230-pound male (average weight in the study,) but considering the daily training sumo wrestlers go through, it's certainly not a mind-boggling amount. It's safe to say that calorie intake was probably significantly higher given the exclusion of snacks. There was no tracking of the sumo wrestlers' diet by the researchers. It's amazing that this study passed its peer review.

5. Myth: Maintain a steady supply of amino acids by eating protein every two to three hours. The body can only absorb 30 grams of protein in one sitting.

I forgot to mention one critical study that often comes up in the context of a high meal frequency being beneficial when dieting. In "Effects of meal frequency on body composition during weight control in boxers" (ref. 57), it was found that boxers eating two meals a day on a 1,200-calorie diet lost more muscle than the six-meal-group. There are many errors with this conclusion. Lyle McDonald summarized them nicely:

In this study, boxers were given either 2 or 6 meals per day with identical protein and calories and examined for lean body mass lost; the 2 meal per day group lost more lean body mass (note: both groups lost lean body mass, the 2 meal per day

group simply lost more). Aha, higher meal frequency spares lean body mass. Well, not exactly.

In that study, boxers were put on low calories and then an inadequate amount of liquid protein was given to both groups and the meals were divided up into 2 or 6 meals. But the study design was pretty crappy and I want to look at a few reasons why I think that.

First and foremost, a 2 vs. 6 meal per day comparison isn't realistic. As discussed in The Protein Book, a typical whole food meal will only maintain an anabolic state for 5-6 hours, with only 2 meals per day, that's simply too long between meals and three vs. six meals would have been far more realistic (I would note that the IF'ing folks are doing just fine not eating for 16 hours per day).

Additionally is the use of a liquid protein that confounds things even more. Liquids digest that much more quickly than solid foods so the study was basically set up to fail for the low meal frequency group. They were given an inadequate amount of rapidly digesting liquid protein too infrequently to spare muscle loss. But what if they had been given sufficient amounts of solid protein (e.g. 1.5 g/lb lean body mass) at those same intervals? The results would have been completely different.

As discussed in The Protein Book in some detail, meal frequency only really matters when protein intake is inadequate in the first place. Under those conditions, a higher meal frequency spares lean body mass. But when protein intake is adequate in the first place (and again that usually means 1.5 g/lb lean body mass for lean dieters), meal frequency makes no difference. And that's why the boxer study is meaningless so far as I'm concerned. An inadequate amount of liquid protein given twice per day is nothing like how folks should be dieting in the first place.

From "Meal Frequency and Mass Gains" (ref. 58).

So in summary, a low calorie intake coupled with an inadequate amount of liquid protein. Liquid protein is rapidly absorbed. This would leave the low meal frequency-group without dietary protein available in between meals, causing

DNG, de novo gluconeogenesis, of endogenous protein stores (muscle). The large energy deficit and leanness of the boxers are also factors to consider.

None of this is apparent if you look at the abstract (ref. 59) of the study; no protein intake or protein type is mentioned. Details that are critical to know in this context.

I should also point out that I was wrong about the origins of this myth which several people have pointed out. This is what Lyle McDonald wrote in comments:

The 30 g/meal thing has been around for decades, much older than the 1997 paper. A few gut hunches on where it came from.

- *Marketing: I base this on the fact that the value has changed over the years. When Met-RX sold products with 30 grams protein, 30 g/meal was the cutoff. When they moved to 42 g/meal, 42 grams was the cutoff. Weider probably did it before then.*

- *Bodybuilders looking to rationalize their desire to eat lots of mini-meals after the fact. So take an average male bodybuilder, 180 lbs eating 1 g/lb who has decided that 6 meals/day is optimal and….*

- *Even there, I think Gironda had written this. It probably came out of some bullshit paper in the 50's that was taken out of context and just got repeated long enough to become dogmatic truth.*

So that's that.

7. Myth: Skipping breakfast is bad and will make you fat.

A new study on breakfast and health (ref. 60) came out a few weeks ago. It brings nothing new to the table; the conclusions drawn are similar to those of older studies that

found correlations between body weight and breakfast skipping.

However, since it's such a beautiful example of everything that is wrong with epidemiology, I will devote a separate post to it, instead of dissecting it in this article, which is long enough as it is. I will have a detailed analysis up soon. Not because I believe that I need to make my point any clearer, but because it will be a lesson in critical thinking.

My biggest frustration

Unfortunately, while this article might have opened a few people's eyes, I fear that it might be for naught when it comes to the great majority. At least for the mainstream crowd who prefers anecdotes and muscle magazines over science-based articles such as this one. Just have a look at the comments in a thread on comedian Joe Rogan's forum:[79]

"He 'debunked' those ideas by his own logic and his interpretation of various studies. It wasn't very convincing."

The only reason it wasn't convincing enough for this clown was that he could not understand the abstracts my links pointed to. That's assuming he even took the time to read the article (likelihood: 0.01 percent).

However, I'm not surprised. The Average Joe (or should I say "Average Bro"?) seems to think everything is up for "interpretation," which is a load of bullshit. There are objective truths to be found, if you look for them. But finding them takes time, requires some effort. Most people shy away from it. Getting spoon-fed is more comfortable. That's OK, because not everyone wants to read some basic nutrition and physiology textbooks. But at least be humble enough to understand that your opinion is not one that you have formed on your own.

As I see it, the problem is twofold in the sense that outliers, the majority of which have severe methodological flaws, often get all of the attention (i.e., the boxer study). The other problem is that many accepted "truths" are based on the

conclusions drawn from correlational studies (i.e., meal frequency and breakfast skipping). This is what trickles down and is presented to the mainstream, and they swallow it—hook, line, and sinker.

And even then, when the mass media for once debunks a myth, some people just cover their ears and go "lalalala," saying things like:

I just read it. I'm still not buying it though.

From the Joe Rogan forum thread, in response to the *New York Times* article that debunked the meal frequency myth. What a sheep.

There are plenty of more comments along those lines. Makes for some half-decent entertainment. For someone stranded on an abandoned island, that is. Note that no one presented evidence that contradicted this article and the conclusions I have presented. Critique is fine, but not when it cannot be backed by anything else than gym lore. Fortunately, some people are smarter than that.

This is my biggest frustration with this industry. Those that scream loud enough win—the supplement companies, mass media "health experts," and diet gurus with Magic Pills and Secret Methods to sell.

Someone who is unfamiliar with my background may easily mistake me and my writings for the latter and believe I have presented evidence that would somehow favor my methods, which I have not. This is unfortunate but understandable, since almost everyone else in this industry tends to do it. It leads to much confusion, as laypersons think everyone is trying to sell them something. For them, finding objective facts is like looking for a needle in a haystack.

But remember: never once have I said, or claimed, that I believe everyone needs to convert to intermittent fasting—or even that it is proven to be superior to a regular, healthy diet. The research surrounding intermittent fasting is very interesting, but it's too early to draw any definitive conclusions.

I am still of the opinion that the best diet is the one you can stick to in the long term. However, the decision should be based on personal preference and not neurotic adherence to a diet built on faulty and bad science.

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“Fuckarounditis” (2011)

Martin’s Commentary: *What “Top Ten Fasting Myths Debunked” did for nutritional enlightenment in 2010, “Fuckarounditis” did for weight training the following year. The article is a personal favorite and recognized as one of, if not the best, articles on training ever written.*

So what is fuckarounditis? As the entry in Urban Dictionary aptly puts it, “A behavioral disorder characterized by a mediocre physique and complete lack of progress, despite significant amounts of time spent in the gym.” (ref. 1)

And seven years later, not a day goes by without someone using the term in reference to questionable or misguided training practices.

Dear readers, it is with troublesome news I break my three months of silence.

The statistics all point towards the same conclusion: we have a global outbreak of fuckarounditis.

Fuckarounditis is a behavioral disorder characterized by a mediocre physique and complete lack of progress, despite significant amounts of time spent in the gym.

Fuckarounditis most commonly manifests itself as an intense preoccupation with crunches, curls, cable movements, belts, gloves, balance boards, Swiss Balls, and Tyler Durden. Fear of squats and deadlifts is another distinguishing trait. Physical exertion is either completely lacking or misapplied (towards questionable or unproductive training practices).

Despite an alarming increase of fuckarounditis in recent years, prevalence may vary greatly depending on location. However, in most commercial gyms, it has been estimated that

90 to 100 percent of individuals are afflicted to varying degrees.

Environment and social networks are crucial factors for triggering the disease. It has been proposed that the roots of the disease stems from misinformation and counterproductive training advice found in popular media ("fitness magazines") and information hubs on the internet.

Human nature and the so-called "laziness," "magic bullet," and "complacency" genes play a permissive role for allowing the disease to take hold.

The disease spreads rapidly, as carriers of the disease communicate with other individuals in locker rooms, Internet discussion forums, and other arenas of interaction and information exchange in real life or otherwise.

The onset of symptoms typically occurs in young adulthood and may go undiagnosed for a lifetime. Diagnosis is set by a professional and based on observed behaviors and physique progress.

Symptoms, preventative measures, and intervention strategies are reviewed and discussed.

—Berkhan, M. (2011) "Targeting The Fuckarounditis Epidemic: Preventative Measures and Intervention Strategies."

Fuckarounditis: A Serious Threat

I have been trying to cure people of fuckarounditis since the late '90s, starting from the day I was first cleansed from it myself. Ever since I recognized the disease, I have acknowledged it as a serious threat to physique development and mental well-being. It is therefore with shock and horror I have watched an increasing number of people fall victim to the disease and the dubious training practices it inspires.

In educating myself of good strength training practices, I was very lucky. Yes, I wasted some time with the usual bench'n'curl/bodybuilding magazine-inspired crapola all my friends were doing, spending my time in the gym joking

around more than doing any actual training. I was sixteen or so when I first set my foot at the gym. (See "My Transformation" (ref. 2) for pictures from this time period.)

However, I did not spend more than a few months fooling around with my friends. I found that I enjoyed strength training, so I started to take an increasing interest in the topic. I started to explore and I eventually came across an excellent resource that set the tone for my entire approach and attitude. The resource was the book *Beyond Brawn* (ref. 3) by Stuart McRobert, and it taught me the value of working hard at the right things.

However, I may have never been lucky enough to find this tome of wisdom if I had first lost myself in the malicious maze that resides behind…the illusion of complexity.

The Illusion of Complexity

The internet provides a rich soil for fuckarounditis to grow and take hold of the unsuspecting observer. Too much information, shit, clutter, woo-woo, noise, bullshit, loony toon theories, too many quacks, morons, and people with good intentions giving you bad advice and uninformed answers. Ah yes, the information age.

Some of it is bullshit wrapped up in a fancy paper with scientific terms, elaborate detail, promising cutting-edge strategies based on the latest research. This makes it easier to swallow for intellectuals and those seeking a quick fix; two different groups, both equally susceptible to bullshittery and easy prey for scam artists.

Yes, if anything has surprised me so far in my work, it's the complete disassociation between IQ and "exercise intelligence" (essentially common sense and knowledge in regards to training fundamentals). I have many clients from academic circles, many clients that are very successful financially and in their each respective field, but some were complete idiots with regards to their training before they came to me.

The problem at the core of the fuckarounditis epidemic is the overabundance of information we have available to us. If there are so many theories, articles and opinions on a topic, we perceive it as something complex, something hard to understand. An illusion of complexity is created.

We must read everything. Think long and hard about our choices. Only then can we hope to make an informed choice, we reason. And there are so many choices. Finally, that which we perceive as a good and informed choice is often the complete opposite, usually the result of whatever fad routine is trendy at the moment. Sometimes we do a little bit of everything— "can't be bad trying to be 'well-rounded' now, can it?" we foolishly argue.

When it comes to strength training, the right choices are limited and uncomplicated. There are right and wrong ways to do things, not "it depends", not alternative theories based on new science that we need to investigate or try. Basic do's and don'ts that never change. Unfortunately, these fundamental training principles are lost to many, and stumbling over them is like finding a needle in a haystack.

Isn't it the same with nutrition? Do we have diet-related fuckarounditis? Sure enough, there's diet-related fuckarounditis; people who live in the fear of insulin faeries, avoid carbs like the plague for a few days and then binge the hell out of a few boxes of cereal, and never manage to get lean, for example.

However, in contrast to training-related fuckarounditis, rates of diet-related fuckarounditis have remained fairly stable. The lipophobes have merely been replaced by carbophobes. On the whole, I might even venture to say that people have been getting a bit smarter with regards to nutrition. Not so with training practices, unfortunately.

Yes, the global prevalence of fuckarounditis is increasing at an alarming rate. The plethora of bad choices increases at a much higher rate than the good choices. Soon the bad choices will all but drown out the good ones, I fear.

“I See Weak People”

In my dreams? No. In gyms? Yes. Walking around like regular people. They don’t see each other. They only see what they want to see. They don’t know they’re weak.

The afflicted are everywhere; the *Shape Magazine*-reading receptionist who greets you at the gym, the 135-pound skinny-fat PT who tells you that deadlifts are off limits, the bandana-wearing bro in the cable-cross machine and the guy with entire day devoted to “abs.” All of them suffer to varying degrees of the debilitating disorder known as fuckarounditis. Yes, even you might be among the afflicted. Today you shall find out if there is cause for alarm.

Keep in mind that this is a disease that sneaks up on you and then progresses gradually. Some people walk around with a mild case of fuckarounditis that do not completely impair their results in its initial stages. In others, the disease has reached a severe state, which dramatically interferes with their progress and usually stalls it completely.

Finally, there are those who are all but lost and for whom there is little hope of a cure. Unfortunately, these people will probably never read this. They are too busy emulating the latest bodybuilding pro, doing the Biceps Blaster routine, or rolling around on a Swiss Ball somewhere.

How can you tell if you are suffering from the fuckarounditis? Ultimately, it boils down to your results and whether your progress is reasonable relative to the time you put in.

Let’s be concrete and talk numbers. After all, there needs to be some overarching and objective way of judging whether you are afflicted or not.

Progress and Goals

For someone interested in aesthetics, which I assume most my readers are, relative strength is the single best measure of

progress and the quality of your physique. Before seeing a picture of a client, I can easily get a very good idea of his or hers body composition by simply knowing three stats: weight, height and strength. Relative strength is therefore the parameter that will be used to determine reasonable rates of progress, which will then tell you whether you might be suffering of fuckarounditis or not.

Within two years of consistent training on a decent routine, the average male should be able to progress to the following levels of strength (one rep max):

Strength Goals: Intermediate

These numbers are for a raw (no straps, belt or knee wraps) single repetition.

- Bench press: bodyweight x 1.2
- Chin-ups or pull-ups: bodyweight x 1.2 or 8 reps with bodyweight.
- Squat: bodyweight x 1.6
- Deadlift: bodyweight x 2

The progress towards the intermediate strength goals should be fairly linear, meaning that there should be no plateaus that cannot be solved in an uncomplicated manner. By "consistent" training I do not mean never missing a training day, nor do I consider taking two to three months off from training consistent.

By "decent training routine", I mean "not doing blatantly stupid shit" (training five to six days a week, twenty to twenty-five sets for chest and arms, etc.). I do not mean optimal and flawless.

Strength Goals: Advanced

Under the exact same conditions as the previous example, three out of four of the following goals should be reached

within five years, along with all of the strength goals listed under “intermediate”:

- Bench press: body weight x 1.5
- Chin-ups or pull-ups: body weight x 1.5 or 15 reps with bodyweight.
- Squat: body weight x 2
- Deadlift: body weight x 2.5

Strength Goals: Highly Advanced

Under the exact same conditions, all of the following goals should be reached within ten years. Alternatively, three out of four should be reached, and one should be “elite”:

- Bench press: body weight x 1.5, or x 1.8 (elite)
- Chin-ups or pull-ups: body weight x 1.5 or 15 reps with bodyweight, or x 1.8 / 20 reps (elite)
- Squat: body weight x 2, or x 2.4 (elite)
- Deadlift: body weight x 2.5, or x 3 (elite)

“Elite” denotes one lift that is often ahead of the others. For example, people who are natural pullers (long arms) may very well hit a 3 x bodyweight deadlift before a 1.5 x bodyweight bench, and vice versa for the presser (short arms, stocky and barrel-chested) benching 1.8 x bodyweight but not being able to pull 2.5 x bodyweight in the deadlift.

The highly advanced strength goals falls in line with what could be considered the pinnacle of physique and strength development for most average and natural trainers (ref. 4). At this point, progress is very slow.

A 185-pound male who has been training consistently for five to ten years should therefore be expected to:

- Bench press 275–280 pounds.
- Do a chin-up with 90–95 pounds hanging from his waist.
- Squat 370 pounds.
- Deadlift 460–465 pounds.

Respective goals for women:

For women in the 115-to-155-pound range, the corresponding advanced strength goals are 0.9 x bodyweight bench, 1.1 x body weight chin-up, 1.5 x bodyweight squat and 1.8 x bodyweight deadlift. Relative to men, women have much less muscle mass around the chest area and shoulder girdle (men have much higher androgen-receptor density in this particular area), but the lower body is comparatively strong to the upper body.

A 135-pound woman who has been training consistently for five to ten years should then be expected to:

- Bench press 120–125 pounds.
- Do 4–5 chin-ups with body weight, or do one with an extra 10–15 pounds hanging from her waist.
- Squat 200–205 pounds.
- Deadlift 225–230 pounds.

So where do you fall in regards to these goals? If you've met them, you've received a reasonable return on the time you've invested in your training and it's safe to say that you do not suffer from fuckarounditis—even if you have some of the symptoms, remember that it's not fucking around if what you're doing is working for you.

If you have not met them, then something is amiss. And if you can't do eight good chin-ups or struggle with being able to bench press your body weight after a decade of working out … something is horribly amiss.

This is no laughing matter. I've had clients that spent ten to fifteen years working out with little or nothing to show for it and some made very basic mistakes that could have been fixed at an early stage. But as fuckarounditis took root, they seemed to only have succumbed deeper, eventually losing that last shred of training sense.

Taking early preventative measures is key. Where this is not possible, rapid intervention can save the situation. Enter

the Fuckarounditis Test.

The Fuckarounditis Test

Please review these twenty-five common symptoms and behaviors associated with fuckarounditis. If you recognize yourself in any of these, and have not met the strength standards recently discussed, you must immediately cease the behavior and implement the necessary changes. There is no time to waste.

1. You don't keep track.

How much can you bench, squat and deadlift? How many chin-ups? You need to be able to answer those questions right now. Don't let me hear "I THINK I can" or "I'm not sure but…". You need to know how much weight you can maximally lift in one set when you're fresh.

Whether it's a set of one, four, six, or eight reps doesn't matter. You need to have concrete reference points in order to evaluate your progress. Keep track of them in a training log. Not "in your head", write it down. The single act of writing it down is more important than you think, whether you keep those data points in a notebook, on your computer or on Post-it notes like me.

With tracking comes the motivation to train, the results and everything else. I can't even imagine where people get their motivation from if they don't keep track and just choose weights at random based on whatever feels good that day.

You should at all times be aware of the best performance in a few key lifts, your body weight and the conditions under which those sets were performed.

More on tracking progress and "checkpoints" in "How to Look Awesome Every Day" (ref. 5).

Phil Galfond

When I recently evaluated client and American poker pro Phil Galfond's progress after his first month on my training routine, I was pleased to see his bench jump from his old personal best of 225 pounds x 4 to 225 pounds x 8—and he's dieting. Phil says, "The 4- to 8-rep jump is actually bigger than it sounds, since my 4 reps were done with terrible form, bouncing the weight as hard as I could, and the 8 reps were done very controlled." That's outstanding progress, but in order to spot it, you need to keep track.

2. You are not methodical.

The only thing that should be changing from week to week is the load on the bar or the reps with the same load you used last time. If you're doing it right, these should be increasing. Everything else stays the same; the movements and the order you did them in, the sets and the rest periods in between sets. You don't add in new stuff.

This is the only way you can fairly evaluate your progress and see if you're headed in the right direction. It might sound tedious to keep doing the same movements every week and the appeal of "mixing it up" can seem strong.

However, the tediousness will soon be replaced by the much stronger joy you get from seeing your lifts go up on a weekly basis. Don't fall for "muscle confusion" bullshit. The

only ones confused are the people who keep talking about such nonsense.

Mixing together too much shit and being methodical about the process was one of the fuckarounditis symptoms that plagued social media expert Julien Smith, co-author of *Trust Agents*, before I set him straight. Here's what I told him back when he asked me to comment on his "routine" before we started working together:

… Summing it up, I suspect that your laughable progress can be explained by the following:

1. Your bullshit training routine, which is a haphazard mixture of strength and conditioning. Some people get decent results from CrossFit and the like, but it spells death for hardgainers like yourself. If we work together, you will stop flopping around like a fool and start lifting heavy, with plenty of rest in between sets.

2. Not tracking progress, be that in some key movements like chins, bench press, etc., or benchmark CrossFit sessions (which I use regularly for CF clients). Training whatever feels good for the moment is one of the worst ways possible to make progress, not to mention serious progress. It's such a fucking waste of time that I was completely horrified of how you approached it all. That's going to change if we work together.

He has since then gained muscle, added more than a hundred pounds to the main lifts, and has not gained an iota of body fat. I cured him with lots of food and a simple regimen of basic movements done consistently on a weekly basis.

3. You don't plan for progress.

Never choose training weights at random. You look at what you used last session and make the choice based solely on that. Not on your ego. Not because you feel like trying higher or lower reps for shits and giggles.

There are many good progression models, but I will recommend two common models that I use depending on the situation.

Beginners and people who need a "reboot," i.e., they may have training experience but have been fucking around so much they're essentially at the beginner stage (e.g., I used a slightly modified SS routine for Julien), *Starting Strength* (ref. 6) is an excellent model.

This is a very simple three-times-per-week program with frequent training and practice of the Big Three (bench, squat, and deadlift), starting at one to three sets of five. Example:

Squat: 200 x 5 x 3.

When you can complete three sets of five reps with 200 pounds, resting five minutes between each set, increase the weight next session. The training load starts at your seven- to eight-rep max, which means that you do not go to failure initially.

For experienced trainers, I recommend the double progression model of reverse pyramid training (ref. 7). This is what built most of my physique and it's also by far the most common approach I use with clients (ref. 8). Example:

Squat: 200 x 6–8 x 2

Set 1: 200 x 8

Rest 3–5 mins. Reduce the load by 10 percent for the second set.

Set 2: 180 x 8 (however many reps you can get)

When the highest number in the interval (6–8) is reached ("8" in this case), increase the weight by 2.5 percent or 5 pounds the next session. Thus in the above example, you would use 205 and 185 pounds for your sets the next time. All sets are to be performed with maximal effort and movements

are only done once a week (3x/week training frequency). “Double progression” means that you progress both in reps and load; first you hit the reps you need, then you increase the load.

RPT is very time-efficient. It’s also far superior to anything else I’ve tried for strength/muscle retention/muscle gain during a diet.

4. You’re doing too much shit.

Be a minimalist, like me.

I snapped this yesterday, and stay in this condition all year round.

I built my physique with these movements primarily: squats, deadlifts, bench presses, chin-ups, triceps extensions, and calf raises. These have remained staples throughout the years. I have flirted with other movements, but these were brief periods.

On the whole, that’s one movement per muscle group, with the exception of abs and biceps, which I never really trained

except for early in my training career, and then very sporadically every once in a while.

The point is that most people are doing too much shit. This dilutes the focus and effort that they are able to put into that which really delivers.

5. You think more about supplements than squats.

No single factor in strength training receives so much attention, yet delivers- so little in return. Don't play the fool who chases magic pills, thinking it will compensate for a lack of effort, a fundamentally flawed training routine, or a poor diet.

There are supplements that you might actually find useful (ref. 9), but they won't turn the tide if what you're doing right now is not working without them.

6. You're lifting weights for the calorie burn.

Strength is strength. Cardio is cardio. Don't mix, keep them separate, and use cardio sparingly on a diet or if your primary goal is strength and muscle gain.

If you're adding two to three sessions of HIIT to your three sessions of weights, it is almost comparable to adding two to three days of weights. Keyword is "almost"; I'm obviously not drawing direct comparisons. That's all fine and dandy if you think working out five to six days a week is a good idea on a diet. But I don't think anyone—no matter what level of experience—needs more than three days a week in the gym when cutting. (Yes, this goes for competitors and beginners alike.)

In conclusion, if conditioning is not terribly important for you, if your goal is really about getting shredded while keeping your muscle, I highly suggest limiting moderate to high intensity cardio on a diet – or ditch it completely. Save it for some other time when your recovery is good and not limited by your diet.

A calorie deficit is a recovery deficit. Avoid deficit spending.

My full answer here (ref. 10).

Richard Nikoley (ref. 11) is one of those I saved from fuckarounditis. Before I intervened, Richard was flopping around like a monkey in the gym. Nothing good came from that. There's nothing primal or Paleo about being weak. I cured him (ref. 12) with squats, bench presses, deadlifts and proper rest periods. That way he could put up the effort when it counted.

7. You're looking a bit too happy in there.

If you're not grimacing, grunting, or experiencing some sort of discomfort, you're not training hard enough. One good set where you have to fight for the reps is better than a week of half-ass sets.

8. You spend more than 5 minutes on abs.

If you can't see your abs, you need to un-fatten yourself. Simple as that. You can't spot reduce (ref. 13) and you'll get plenty of ab work with squats, deadlifts, chin-ups and overhead presses. Let me see someone at 5 to 6 percent body fat deadlift 2.5–3x bodyweight for reps with with weak abs and underdeveloped abs. It ain't happening.

I'll allow you one set of "abs." Beyond that, don't waste your time with crunches, ab machines, hanging leg raises, or whatever the hell you're doing. It won't give you shit, and it will only suck time and energy from what you should be doing.

9. Is this you? (ref. 14)

10. You're afraid of "bulky muscles," and use terms like "toning."

Women, you need to put down those pink dumbbells, throw that *Shape Magazine* in the trash can and stop with this nonsense. You seem to believe that the modest amount of strain will cause you to wake up looking like a bodybuilder in the morning. Horseshit. You're not using enough drugs to ever come close to looking muscle bound. With the training intensity I see most women apply in the gym, they might as well skip weight training altogether and stay on the treadmill.

https://www.youtube.com/watch?v=Ia-IdX3DIDg (ref. 15)

Jenn has actually gotten stronger since she shot that video; she's now up to 27.5 pounds added weight. That's more than 99 percent of the guys at my gym…and I bet it's more than many male readers of this site as well. Her routine?

Day 1 (Monday)

- 5-min walk for warm-up.
- Deadlift 2–3 sets of 4–5 reps reverse pyramid style.
- Rest 5–10 mins.

- Leg extensions: Same setup as deadlifts, but reps a bit higher (6–8).
- Rest 5-10 mins.
- Chins: Same as deads.

Day 3 (Wednesday)

- 5-min walk for warm-up.
- Bench press 2–3 sets of 5–7 reps reverse pyramid style.
- Rest 5–10 mins
- Pull-ups 2–3 sets with body weight.
- Rest 5–10 mins

Day 5 (Friday)

- Squats 2–3 sets of 5–7 reps reverse pyramid style.
- Rest 5–10 mins
- Walking lunges 2–3 sets same as squats.
- Rest 5–10 mins.
- Overhead press 2–3 sets of 5–7 reps reverse pyramid style.
- Rest 5–10 mins

That's the routine Jenn was doing when she sent me the video and the one she gained all that strength on. This is a solid routine, regardless of gender, and it's vastly superior to what you're doing if you're in the fuckarounditis camp. Why not try it and see for yourself? Throw in a set or two of curls, triceps and calves if you want but don't mess with it beyond that.

11. You're "training the core"… and it involves a Swiss ball, Bosu ball, or something else that makes you look like an idiot.

"Training the core" is a phrase that is all too often used by people who are afraid to squat. You don't need special

movements for the core, because it comes with the territory if you squat, deadlift, press, and chin. No one squats 2 x body weight with a weak core.

12. You want that Tyler Durden look.

Whenever I hear a client say this, alarm bells go off. There's nothing wrong in having ideals. The problem is all the pain I feel after seeing the dumb shit that follows in the questionnaire, under the part where I ask them about their current training routine. I'll often see some horrifying cardio/pump'n'tone hybrid, some celebrity workout variety or the kind you'd expect to see in those kind of routines. Nothing more faddish than made-up "celebrity workouts." God damn, how I hate those.

Want to look like Tyler Durden? Then you need to build up some modest amount of muscle and then you need to lose fat, period. The muscle is best built with heavy weight training, not fifteen-to-twenty-five-rep set flyes followed by an hour in the pec deck machine. Your gut is best lost with a good diet, not "fat burning workouts"/tons of cardio/pump'n'tone crapola. All those will do is leave you under-muscled, weak and with a severe case of fuckarounditis.

The Tyler Durden look, brought to you by squats, deadlifts, bench, chin-ups and a good diet. When this client told me that he was "closing in on his goal" of achieving a

physique similar to that of Brad Pitt, aka Tyler Durden in *Fight Club*, I told him to gain some fat, start smoking, get into a fight, and stop training his arms and shoulders. (The implication of that being that he had already surpassed his goal.)

13. You're using belts, gloves and straps for no good reason.

What is your reason, exactly? Don't use equipment as a crutch.

14. You avoid squats and deadlift, because you think they'll give you a wide waist.

Bitch, please. Yes, squats and deadlifts will put muscle on your obliques and thicken up your lower back. But weighted chin-ups or pull-ups will give you wider lats, and if you train all these movements, your waist-to-shoulder ratio will develop very favorably. Training all these movements will also help you grow some balls, so you can finally stop making up bullshit excuses for why you shouldn't train hard (aka squat and deadlift).

Petter, the Tyler Durden lookalike, was squatting and deadlifting regularly on my routine. Last time I checked, he was squatting 2 x bodyweight (300 pounds) for nine reps. He was also close to being able to complete a one-arm pull-up. Does it look like he has a wide waist? Are my clients notable for their wide waists? Take your "wide waist" argument/excuse and shove it up your ass right now.

What's funny is that this argument is usually brought up by guys who want a "Hollywood"/underwear model-type physique. They're often a) dieting, b) not training legs and c) likely doing tons of cardio. That particular combination will strip off whatever little leg muscle they have faster than Gary Busey can do a gram of coke off his dog Chili's back. It leaves them looking pathetic and weak, and if that sounds good to you, then go ahead.

15. Doing this? (ref. 16)

16. Are you still warming up? I can't tell.

A warm-up is a warm-up. Treat it as such. It should be light, just enough to get the blood flowing and prepare the nervous system for the real stuff. It should never cause fatigue or interfere with your performance in the work sets. All the time, I see people doing sets of ten to fifteen reps before they get to something that remotely resembles their real set. Which is completely retarded, because you will be fatigued and glycogen-depleted, and your performance in the work sets will be limited for metabolic reasons, and not limited by your actual strength.

The only standing recommendation I have regarding warm-ups is for compound movements: one to three sets of four to six reps of 40 percent to 80 percent of target weight for the first work set. Warm-ups for assistance movements is whatever you feel is needed. Personally, I only warm up for squats, deadlift, bench press, and chins. If you do these at the start of your workout, which you should, you'll find that they usually get your whole body warmed up, which makes warm-ups redundant or entirely unnecessary for the rest of the workout.

17. Are you still warming up? I can't tell. What's that? You're already done and I can take the bench?

Let's see some fucking effort next time. Don't take up precious space here when you can get a better workout from walking your dog through the park outside.

You can be doing everything perfectly, but you will not go anywhere if you're not willing to experience discomfort on a regular basis. If you're in the gym five or six days a week, lack of effort might actually be the explanation for your lack of progress. If you were actually in there training hard, most

people wouldn't be coming back for more, five to six days a week.

18. Was this you? (ref. 17)

Learn good form early, so you don't have to pay for it with injuries and shitty results later down the road. Don't let your ego screw you, and don't slap on weight indiscriminately. Be methodical and patient.

No need to be a form nazi either. People who "practice" form in all eternity are sometimes just afraid to train hard. Striving for picture-perfect form on your final reps can be counterproductive when taken to the extreme.

19. Your workout buddy gets a set of barbell rows on the house when he "spots" you benching.

Tell him to keep his fingers off the damn bar and assist you as little as possible, and only when it's truly needed; meaning only if you are about to fail on the very last rep in the set. Don't be one of those clowns slapping on twice of what they could lift by themselves to stroke their ego. It looks pathetic, and it will make it impossible for you to properly evaluate your progress.

And for me, an unwanted spotter can make it hard to evaluate the progress of the client, like I had to explain to this actor/client:

I am your trainer, the guy who follows you around and is only there to make sure your form is not completely retarded. His function right now should be redundant. I assume you know how to perform most movements well by now. If he interferes with your sets, he is counterproductive to the outcome.

You're my only client right now with a personal trainer on top of the help you receive from me. I imagine he is eager to "correct" your form and tinker with your training in any way he can in order to not feel useless. Make sure he stays out of it beyond spotting you on some sets where it's warranted (i.e.,

when and if you are about to fail). Some PTs can't even get that part right, and go way overboard with the helping part.

This is another danger of having him around, as it gets impossible for me to measure your progress (strength gains) accurately (i.e., did you gain strength since the last session or did he just help you more this time?). Make it very clear to him when and how he should help (last rep you can't complete by yourself).

This actor played a key role in an award-winning and Oscar-nominated movie last year. I'm preparing him for a new movie with some very big names that start shooting early next year. I can't tell you more beyond that, but rest assured that his "celebrity workout" does not include Mickey Mouse curls supersetted with cable flys, or anything of the usual variety you read about in magazines.

20. You obsess about "tempo."

Forget about tempo. Tempo takes care of itself if you're working with heavy weights (80 percent one rep max/eight reps or fewer), because your control over the load is very limited. Lift the damn weight, repeat, it's that simple. Don't overthink it.

Tempo was hot stuff a few years ago and frequently discusses in articles an on the boards. It seems to have slipped off the radar now. Why? Because it's yet another distraction from the important stuff.

21. You're into "functional" training.

But you can't squat body weight and your "functional" muscle mass is non-existent. Unless you're an athlete with a very good reason, stay the hell away from anything that involves Swiss Balls, balance boards or pogo sticks.

22. You're the guy who sent me these two direct messages five minutes after I tweeted this (ref. 18):

do you think 8×20 abs is enough ?? i do hanging superstrict..really feel working lower abs!!. also i need bcaa if i situps in fasted state??

also how much bcaa u recommend

23. You're working on your "lagging biceps," but you can't even do eight chin-ups with good form.

First of all, you're weak and fat. Second of all, body part specialization has its place, but it's always the ones least qualified that are doing it. Worry about body part specialization after you achieve the major goalposts involving the muscle group that lags behind. Until then, body part specialization is a distraction that will interfere with your development as a whole.

Let's see if your chest and your shoulders are lagging once you can bench 1.5 x bodyweight or overhead press your body weight and if your legs and back are lagging with a 2 x bodyweight squat and 2.5 x bodyweight deadlift. Keep doing targeted work for muscle groups like triceps, hams and calves.

Yes, you can keep a few sets of curls in there, but two to three sets is enough for now. Do you really think your guns will be lagging once you're doing chin-ups with 100 pounds hanging from your waist? My clients have told me they saw more biceps growth from the increased focus on weighted chin-ups than any amount of curls they did in the past. I never spent any time on curls, and they grew just fine from all those chin-ups. I can say for damn sure you'll put on a good deal of size on your arms if you add 50 pounds to whatever you can chin-up right now.

Ask Paul Wilson and his eight reps with 110 pounds of solid chin-up mastery:

https://www.youtube.com/watch?v=qhaJWPTJU5A (ref. 19)

Paul flexing in exclusive LG Gear, only available as an award for excellence and strength.

24. You think ripped abs will get you laid.

I hate to bust your bubble, lil' buddy, but women don't give a shit beyond a guy looking reasonably fit. Lower than 10 to 12 percent body fat won't make an ounce of a difference. If women is your main motivation for dieting, don't bother getting shredded. Women have similar delusions in terms of thinking men like them super-skinny.

Training to be liked by others is a very poor motivational factor in itself. You need internal motivation, not external. No one that ends up making something out of his or her physique, something impressive and head-turning, gets there by training to get liked by others. It might have started out as such, but it changes. I think this quote sums up why and how we make it:

You have to discipline yourself, and through this discipline will come some level of achievement, and from this achievement will come your pride. —David Lee Roth

And then there's the fact that nothing beats the feeling you get from breaking a new personal record. Some of the happiest moments I remember are from walking home after a new twenty-rep squat record way back in the days. Walking up stairs was like being repeatedly stabbed with a blunt and rusty butterknife. But it was still pure bliss.

25. You have all kinds of elaborate excuses for why you don't need to squat and deadlift.

You get your leg training from playing soccer, you're afraid you might hurt your back, you read somewhere that single-leg training is better, you talk about rear-foot elevated split squats with a 45-degree twist during the concentric being the future of leg training, etc. Horseshit, all of it.

Listen carefully. Squats and deadlifts are indisputably the two best full-body movements in the goddamn universe, and that's reason enough to be doing them.

But that's not the whole story. Their true greatness lies in the mental fortitude they foster if you train them hard and consistently. This will benefit your training as a whole and leave echoes in your life outside the gym.

Did I miss something? Well, I actually left a few signs and symptoms out because this article was getting way too long for my own good and it feels like my eyes are bleeding right now. I thought I'd leave it up to you to finish it.

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“A Single Quality of Utmost Importance” (2018)

Martin’s Commentary: *I look at fat loss as having two major components; a hard and a soft science. Hard science includes objective facts; everything mentioned in the article “Top Ten Fasting Myths Debunked” (ref. 1) or the chapter “Hacking DIT,” for example. The hard science also includes formulas and equations like those covered in “Crunching The Numbers”—even if there are many ways to skin a cat.*

Then there’s the soft science of fat loss. This category includes everything about humans and how they behave, think, act. Call it behavioral psychology, if you will. But whatever you do, don’t be fooled by the “soft” in soft science. This one’s far more difficult to master than the hard science.

Hard science can be mastered with smarts, PubMed, and a critical eye. Even a book—the one you’re reading right now, for example—can help someone become well acquainted with hard science.

Soft science, on the other hand, takes years of personal and extrapersonal experience with fat loss and dieting. Don’t bother looking for answers in scientific journals. Answers can only be bought with experience, and the currency is blood, sweat and tears.

“A Single Quality of Utmost Importance” (ref. 2) struck a chord with many, and was published to great praise on Leangains Patreon in 2018.[80] Some called it my best work ever, while the rest agreed it’s my best writing since “Fuckarounditis” (ref. 3) in 2011. The article deals with

patience, something we all could use a little more of. Especially while dieting…

Age brings an increasing obsession with time. The scope and onset is different for everyone. For some, it starts in their thirties. And the forty-year-old crisis is a tired but true cliché. This sudden urge to act works a little differently for women, I suppose. That's beside the point. Sooner or later, it happens.

For me it happened when I turned thirty-five. A subtle feeling of urgency entered and never left. It brought an acute awareness of days, weeks and months passing. And an annoying obsession with the past. Every day, I found myself reflecting upon past misdeeds and failures. Thinking about how much time I would've saved by doing this instead of that, so forth and so on.

Don't get the wrong idea. I don't spend that much time dwelling on the past. But I do it frequently. See, I'm pragmatic. Reasonable according to some. I try not to indulge thinking that can't be realised or acted upon. When I ruminate, it's to motivate myself into action. Or to remind myself not to make the same mistake twice.

But when I think about time and opportunities flushed down the drain by ridiculous dieting practices in my twenties, I can't deny an intense feeling of regret. Fortunately, my work proves good consolation. Without pain and suffering, there would be no Leangains. Or maybe there would, but the person in charge wouldn't be of the same caliber. I'd be a less polished version of myself.

Mark Manson echoes this sentiment in his excellent book *The Subtle Art of Not Giving a Fuck*.

He tells a story about Picasso in his late years. Sitting at a café, doodling something on a napkin. Crumpling up the napkin as he's getting ready to leave, a woman approaches and asks if she can buy it. Sure, the master says, for $20,000. The woman's obviously shocked and says why, it only took you like two minutes to draw that. To which Picasso replies, "No, ma'am. It took me over sixty years to draw this."

The story is followed by a poignant observation.

“Improvement at anything is based on thousands of tiny failures, and the magnitude of your success is based on how many times you’ve failed at something. If someone is better than you at something, then it’s likely because she has failed at it more than you have. If someone is worse than you, it’s likely because he hasn’t been through all of the painful learning experiences you have.”

If you can’t connect the story to the quote, I won’t do it for you. Take your time or read the book. Consider it practice. We could all do with a little more patience.

Reflecting on the past has led me to realise that my pains and struggles back then were a byproduct of impatience. And that’s what I want to discuss today.

Impatience

The nonsense I engaged in as a youth, the yo-yo dieting and constant obsession surrounding diet and the way my abs looked (or didn’t look), resulted from impatience.

In 2010, I wrote “The Marshmallow Test” (ref. 4), based on the study commonly known as such. It’s one of the most famous studies in psychology:

“In the early 1970s, a psychologist named Walter Mischel conducted an experiment involving four-year-olds. He placed each child in a room, where they sat down at a table. In front of them, a marshmallow.

Mischel then made each child an offer. He could eat the marshmallow right away or wait for a few more minutes and receive another one. Almost everyone decided to wait. Mischel then left the room for twenty minutes.

While a few of the four-year-olds were able to resist the temptation for up to fifteen minutes, many lasted less than one minute. Others just ate the marshmallow as soon as Mischel left the room.

This was a test of self-control. If the child wanted to achieve the goal of receiving another marshmallow, then he needed to temporarily ignore his feelings and delay gratification for a few more minutes. What this study showed was that some children at the early age of four were much better at this than others."

I'd then go on and talk about tactics used by successful children, drawing parallels to dieting, and arguing that distractions make dieting easier. Which is true.

But the more important point flew over my head. Or maybe I just choose to talk about distractions, because that's an easier point to make. Honestly can't remember.

Anyway, the study showed that the ability to delay gratification strongly predicts success later in life. This wasn't known back then, but concluded through follow-up studies decades later.

Children who didn't eat the marshmallow right away were better off in almost every conceivable regard. They were more successful, more intelligent, more competent, and better liked than their impatient peers.

These studies showed that the ability to delay gratification is one of the strongest predictors of future success. Some argue that it's actually the single strongest predictor of success.

In modern times, Daniel Goleman, psychologist and author of *Emotional Intelligence*, has reframed delayed gratification as cognitive control.

But we can simply reframe it as patience.

Patience

Throughout my first decade of cutting, I did many stupid things in the name of impatience. Which is partly why I needed a full decade of trying before I finally got there. Wasn't until I tried a simple and boring approach that I was able to see consistent progress.

What did I do? Quit telling myself I'm a special case. Stopped deluding myself I could reach my goal in half the time by doing –1,000 calories per day instead of –500.

More importantly, I started being honest with myself. Which included acknowledging all my past failures as that, failures. Not bad genetics, not lack of steroids and not the fault of someone else. "Someone else" being whoever brought bagels to the photoshoot instead of low-fat cottage cheese and iced protein shakes. Or whoever else I could blame for backsliding and ruining my diet.

This didn't solve everything, but it solved a lot. Intermittent fasting solved the rest. Rest in this case meaning the difference between lean and very lean. Something I always struggled with in the past.

This shouldn't be interpreted as intermittent fasting being the magic bullet. Finding your pattern, a diet that clicks, is the magic bullet. For me it happened to be intermittent fasting. And because the nutritional knowledge back then was still stuck in the middle ages, it just so happened I had to discover it for myself.

Everything else was already in place. I knew calories, macros, and all kinds of rights and wrongs like the back of my hand. More importantly, I had patience. Those who come across intermittent fasting today, don't. Like gifting a Lamborghini to a spoiled brat who doesn't know how to drive, that's a problem.

Error 406

Two decades of coaching and dieting has taught me many things. First decade, learned about diet. Basics and advanced, first half. Patience and what works, other half.

In my second decade, I learned about people. How they work and how they don't work.

My favorite lessons concern letters, sentences, and phrases. Specifically, emails from countless clients throughout the years. With time, you learn the patterns. By reading, you

learn the person. You can tell an awful lot about a person through their personal dictionary and writing style. A fair to middling grasp of psychology helps.

Most revealing of all are questions. Why, what and how people ask these shows far more than concerns and interests. Beneath the exterior, worlds waiting to be explored.

I have a very good grasp about people who want to do things quickly. Because nothing predicts failure as much as impatience. Nothing reveals experience—specifically, lack thereof—like the need to do things fast.

And just to be clear, I'm talking about dieting and to some extent, bulking, because that's what I know. Nothing good ever comes from impatience. I see it everywhere and here's no different. This article started as a response (Q&A) to someone asking about aggressive cuts.

How would I set up a four-week pre-vacation diet? An "aggressive cut." I wouldn't. Not because it can't be done. No, because I teach success, and success doesn't start by indulging stupid and ill-conceived ideas. And I know exactly how this one ends.

The buck doesn't stop at aggressive cuts. After six weeks on Patreon, I've lost count of the times I wanted to wring someone's neck through the screen. Guys eating 1,300 to 1,500 calories a day, wondering if it's too drastic. Mismatched calorie intakes relative to body weight aren't the exception, it's seemingly the norm.

Not for lack of information. The formula for maintenance, BW (in kilograms) x 30, is right there. Literally in front of your face. I could screenshot it, mark it with a red pencil, and insert it below. But that would be pointless.

Because you're not illiterate, and you know basic math. You're just me ten to fifteen years ago. Trying to hack the system. I know how you think, and you're welcome to try. Because learning the hard way is often the only way.

The most important distinction between you and one of my clients lies not in secret macros and perfect calorie intakes. It

lies in me setting the pace and saying no to their dumbass ideas. But since you can't afford the luxury of having me around, there's no one to prevent you from straying. No problem. Let me throw you a rope.

Practice

Start practicing, stop failing. Summer's two months away. Begin now. Count on losing no more than 2 to 2.5 percent body fat per month. If you're 15 percent now, you'll look good at the beach when June comes around. Keep it up and you'll turn heads in August. Even if you're 20 percent body fat now, you'll look great in August.

A few of you will heed this advice and find success. Most won't. Good. Learn the hard way. The best way. Because pain and regret lasts longer than books and words of advice. I'm pained by memories, burdened by regret, because I sacrificed a lot in the name of vanity and impatience. I find consolation here; past failure's writing me a fat check every month and I've more clients than I can handle.

But what consolation will you find in those wasted years? None, because all that bullshit was for nothing. And from now on, you'll remember I gave you a fair warning. Yet you still went ahead and fucked up. With yourself to blame and no valid excuse, here's a "fuck you" from me to the future you. Add it to your regrets.

You have it easy. Back in my day, people thought breakfast and six meals a day was as obvious as the sun and the moon. If you wanted facts, you had to go find them yourself. But you get every conceivable fact and detail served on a silver platter. Yet here you are, asking dumb questions and doing stupid diets.

I have a lot of patience for some things in life. I have zero for lazy.

Summary

You're not special, and you can't hack it. Cut the shit. Stop trying to finesse your way through diets by eating like a girl.

Doing things faster is doing things slower. Time saved on an aggressive cut is time added undoing inevitable failures. Whether those occur during or after the diet is beside the point. That they *do* occur, is the point.

Practice patience. If you need to ask how, read the article again. Don't ask me, because I won't lay it out for you.

Embrace the process. Forget the weeks. That's the way forward, and a way to learn without missing out. Perhaps the best way after all.

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A Brief History of IIFYM

Martin's Commentary: *One chapter I'd originally planned for the book but ultimately left out was a lengthy critique of the "If it fits your macros" (IIFYM) approach, briefly mentioned in Chapter 5. If you're wondering what the term means, Urban Dictionary describes IIFYM (ref. 1) as:*

The phrase If It Fits Your Macros (often abbreviated to IIFYM) refers to meeting the individual macronutrient needs relevant to one's goals and then filling the remaining calories with foods of personal preference. Meaning, eat whatever you want as long as it fits your macros.

What "eat whatever you want as long as it fits your macros" means is basically, eat right, but don't get all caught up in the whole 'clean vs dirty' food debate that seems to still go on. If you want to eat whole grain bread, oats, brown rice, etc. etc. Then do it. If you want to eat white bread, white rice, and pop tarts, as long as it fits in with your other macronutrients and your goals in terms of caloric intake then it isn't going to make much of a difference in the long run. It all comes down to personal preference.

If the above seems like a no-brainer today, it wasn't always that way. Back in the day, people were bickering about whether white rice was OK if they didn't have any brown rice on hand. That is, until IIFYM came around and stated that it doesn't matter.

I've always viewed the IIFYM movement as a counter-reaction to the "Eat Clean" wave of the mid-2000s.[81] *The movement gained momentum right around the time intermittent fasting took off.*

There's no doubt IIFYM played an important role in the wave of nutritional enlightenment that swept through the fitness community back then. Made people think big instead of small. Taught them to think about calories and macronutrients, not the nonsense emphasised by the Eat Clean crowd.

As IIFYM rapidly grew and gained, Clean Eating quickly dwindled away. In the process, IIFYM devolved and became as ridiculous as the movement it replaced. Ice cream and pizza replaced reason and common sense.

White or brown rice? Doesn't matter. But that doesn't mean there's no difference between white bread and whole grain bread, or a difference between processed foods and wholesome foods. Beliefs like these are what IIFYM eventually devolved into harboring and that's what I took issue with.

Because foods do *matter, and a calorie isn't a calorie. As this book proves. Rest in peace, IIFYM. Your service has ended.*

Below, a retrospective by Alan Aragon.

IIFYM History Lesson

By Alan Aragon[82]

The majority of people who throw around the IIFYM (if it fits your macros) moniker have no idea where it came from and what its original intent was. Here's the timeline of IIFYM's history, relayed by one of the guys who was directly involved with its modern inception (me).

1996: The ADA Courier, the newsletter of the American Dietetic Association (now called the Academy of Nutrition and Dietetics) named March National Nutrition Month, and designated its slogan as "All foods can fit."

1997: The "all foods can fit" slogan first surfaced in the peer reviewed literature in the September 1997 issue of the Journal of the American Dietetic Association.

2002: The position stand of the ADA (Jan, 2002) on total diet approach to communicating nutrition information stated that “all foods can fit into a healthful eating style.”

2005: The Dietary Guidelines Advisory Committee of the USDA coined the term “discretionary calories” and defined it as “the difference between total energy requirements and the energy consumed to meet recommended nutrient intakes.” This is the key piece that further laid the foundation of IIFYM. Discretionary calories range 10-20% of total caloric intake, where the inclusion of ‘empty calorie’ foods such as added fats, added sugars, and alcohol will not critically dilute the essential nutrition of the diet. The remaining 80-90% of the diet should come from whole and minimally refined foods. There are fringe exceptions to this in the competitive athletic populations, but the guideline stands for the general population.

2009: Eric Koenreich (username ErickStevens) thought of making an acronym out of an answer we’d give to newbies on the bodybuilding.com nutrition forum. This was due to the high volume of posts asking if various foods can be consumed while cutting (losing fat). The foods in question were everything outside of the narrow range of stereotypical contest prep foods. Our answer was “If it fits into your macronutrient targets, go ahead and have that food.” For example, if someone wanted whole eggs rather than just the whites, we’d give the green light as long as the person was aware of how the yolks impact dietary fat allotment. After a virtually endless number of questions like this, Eric (largely out of frustration) thought of a quick, yet smart-ass way to respond by making an acronym out of the answer. Typing “IIFYM” was a lot easier than typing out the answer in-full, dozens of time a day.

2009-2001-ish to the present (2018 as of this posting): The unforeseen problem was that people who had no clue of its origin & intent turned IIFYM into the name of a diet that gave the green light to fulfilling your macronutrient targets with however much junk food you want. This has led to many people bashing IIFYM. As one of the concept’s originators, it’s been frustrating to watch this confusion unfold and persist.

The purpose of this post is to clear things up, and hopefully I've accomplished that.

IIFYM is not a diet. It's certainly not a junk food diet. It's a fricking acronym we used to drop in forum posts for the sake of saving our fingers. Diet quality absolutely matters. The moderation & judicious control of discretionary calories is necessary for the purpose of preserving diet quality while bolstering long-term adherence.

Now you've got the inside scoop on how a flippant forum response got mistakenly twisted into the name of a careless diet. Share this with anyone you feel needs to be properly schooled on this. You're welcome. :)

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The Magic Bullet

People are always looking for the single magic bullet that will totally change everything. There is no single magic bullet.

—Temple Grandin

The day I discovered intermittent fasting, the tide turned. Fast. I went from desperate and struggling to excited and energized within a week. My woe-is-me-attitude changed to *anything's possible*. In the war against diet and hunger, I stopped losing and started winning. I took back control. And haven't lost it since.

Intermittent fasting was truly one of the life-altering moments I've experienced, and in more ways than one, it changed me into a better person. And as I showed it to the world, it changed others for the better as well. Without it, this exchange wouldn't be taking place. Without it, I'd probably still be dieting. Fasting? Would remain in the domain of those who warned of toxins, did coffee edemas, and consorted with folks claiming communion with the dead. The kind that offer services over Skype, email, or WhatsApp.

Having had such a profound impact on me and many others, it's hardly surprising that Leangains and intermittent fasting became intimately linked. I was fascinated with the topic, wrote furiously, and made it the novelty of a decade in a field rife with conformity. I made it my mission to spread the word and show others like me that there was another way, a better way, to do things. Just because I knew that no one else would and knew what no one else knew.

I've been truthful throughout, so I might as well say that in the back of my mind, I also thought it might help me to get a

foot into the fitness industry. And if not that, at least make me part of the discussion. It did more than that.

You can say I built my career on intermittent fasting. Or you can say my struggles finally paid off. Because it wasn't luck that placed me in the right place at the right time when I found intermittent fasting. It wasn't luck that dropped *Beyond Brawn* in my lap at sixteen. Or directed me toward Livesey's work years later. It was the stuff you need to succeed and excel—and I had it in spades for nutrition, weight training, and the art of being lean.

And now, thirteen years later, I have enough sense to separate truth from wishful thinking. Because things are rarely what they seem at first glance.

Searching for Magic

After years scouring books, papers, and the internet in search of the magic bullet that would solve my problems, it materialized in the form of intermittent fasting. Science came to the rescue—so science holds all the answers and fasting holds the keys, I told myself. Over the years to follow, that's what I believed. I approached my work accordingly.

I told myself and everyone else about the benefits of fasting. Since the literature only contained so much, I reached high and low for items and facts of interest. A few of my theories were speculative, sure, but never technically inaccurate, and I indulged every inane peculiarity 'til the next subject of interest came along. A reference or ten for each and every claim, no matter how obscure.

I told the hopeful masses how intermittent fasting had been my magic bullet and how it might be theirs too, and besides, what harm is there in trying? None, now that we know it's harmless. And try they did.

For many, it was the answer. For others, it wasn't. Some found their way with time, helped by the increasing number of articles and guides, or through the trials and errors that come

with the territory, especially one as unexplored as intermittent fasting.

Others gave up and moved on. But most who stuck around, many of whom became recognizable faces and loyal fans, received a taste of success—but not more. The most they'd had on any diet in the past, but hardly the life-changing event others experienced.

I know this because I've talked to these people every day for the better part of 2018.[83] It's thanks to them that the dots connected for me and the truth came into light.

The Truth about Intermittent Fasting

Thirteen years have passed since I came across the study that started it all.[84] Since then, more than 318 studies have been published on the subject. I estimate that one-third to one-half of that number involves humans in one form or another, but let's skip the reviews and meta-analyses and round down to one hundred clinical trials. One hundred experiments one can look at and use to form a conclusion.

Among these, only *two* studies can demonstrate unique effects attributable to intermittent fasting (ref. 1,2). What kinds? If you're fat or pre-diabetic, intermittent fasting seems to improve blood pressure and insulin sensitivity.

What about studies that can be applied to us—you, me, and everyone else not knocking on death's door, metabolically speaking? Those of us in better shape than the sick and unhealthy subjects used in the aforementioned studies? Two studies qualify, and show marginal differences between intermittent fasting when compared to another eating regimen.[85]

The differences? Better blood pressure and insulin sensitivity if you're obese or prediabetic, but that's a weak argument for why a healthy person should care about intermittent fasting. The only thing that can be said for certain is that it's not worse than a standard approach. That's

something, I guess. For those who don't have enough on their feet in the real world. But that's not me.

So what does it all mean? Two things.

1. The current lack of scientific support for intermittent fasting kept me from writing this book until my balls grew big enough to admit it. It only took thirteen years, but I thank my lucky stars I didn't write what would've surely have been another playbook, one made up of nonsensical rules and rituals that made no sense—and ultimately given birth to the same bullshit I fought so hard to debunk.

2. Scientists can keep looking for as long as they like, because they don't know what I know. Because in their search for a metabolic benefit, they will beat their heads bloody against the wall, grasping for straws and whatever little thing they can find. The same can be said for any scientist looking for metabolic arguments distinct and unique to any one diet.

Benefits found in the controlled settings of clinical trials disappear in the real world. Every one of them. Why? Adherence.

Here's an example. Let's say that eating every other hour actually comes with a metabolic benefit. Let's make it a massive metabolic benefit and pretend that it increases your metabolic rate by 10 percent. That's roughly 200 calories burned off at the end of the day. To put that into perspective, it would be like drinking coffee all day long.

Now ask yourself this: which diet do you think I would have had more success with, intermittent fasting or the six-meal-a-day plan, with the make-believe metabolic boost? Intermittent fasting, of course, because the 1,400 extra calories burned off on a weekly basis wouldn't have been nearly

enough to offset the weekly binge. And I'd still be miserable and hungry in between meals.

That's why this hunt for a metabolic benefit is doomed to fail. Because adherence is everything. All else is window dressing to secure funding for the next useless study.

The Final Lesson

One day, we decide that the fat, pasty, weak-looking thing in the mirror won't do. When and how it happens doesn't matter. Enough's enough.

For most people, the realization is temporary, just like the results. That's because their drive doesn't come from within, but from the external pressures and expectations of peers and society. A New Year, Spring Break, impending wedding, or two-week trip to Hawaii might provide a kick in the ass, but for lasting results, more is required.

And then there are those like you and me, who strive for something more permanent and have precisely that which is required. So we do our due diligence, learn the basics, and start applying. Through trial and error, we find our way, and eventually we get something to show for it.

Your mileage may vary. Mine? Starting out, my approach wasn't perfect, as you very well know by now. But I looked better than most ever will after two years of lifting and a few months of a catastrophic diet where I lost much of what I had built. But since I've trained hard and never fucked around, the equation yielded results, and turned my body into an object of admiration and respect among peers. And not long after, bought me a ticket to Milan and the rest of the world.

My mileage didn't stop until I was as lean as I could ever want, and frankly, it's not the kind of pursuit or attitude I recommend you adopt, but rather warn against. This former fat boy wanted the whole shebang and eventually found it.

The journey was long, and the price was high. But at the end of the road, I found the magic bullet. Not recognizing it for what it was, I called it intermittent fasting. For years.

Until one day, it revealed its true form in all its mystique and glory, leaned in, and whispered on a frequency I was finally attuned to hear.

“Freedom. My name is freedom.”

And that’s how I finally understood what it was all about.

The Perfect Diet

For me, intermittent fasting was the last piece to complete a puzzle called the Perfect Diet. It was a puzzle I had been laying for years. I was able to complete most of it with scraps collected from the internet and a few books here and there. The kind you find in a small-town library, not a university.

Figuring out how to count calories was the first and most basic piece of the puzzle. Knowing how much to eat, the second, and so it went on, piece by piece, until it suddenly stopped. Nothing happened for years. The puzzle wasn’t complete, but there were no more pieces—or so it seemed. It was a confusing and desperate time.

In 2003, I uncovered an important piece while browsing the internet, at a snail’s pace, in a combined bar and internet café in Barcelona, Spain. It was Livesey’s work on NME, and I found the newly released information about the actual worth of calories equally shocking and intriguing.

I knew protein was important before, sure, but was content with 2 grams per kilogram body weight, which was the accepted norm back then. No one spoke about TEF, and if they did, it was in vague terms and always excluding the fact that protein is 3.2 calories, not 4. That this wasn’t a known fact was the part I found shocking.[86]

Now knowing the metabolic benefits of a high-protein diet, to this day the only one in existence, everything became a little easier, a little better, as I took steps to implement it.

So I doubled down on tuna and looked for discount meat and cottage cheese. And as my protein intake increased from 150 grams to 300 grams, so did my results, even if they

weren't much to speak of until I came home and started to train and eat in a more sensible manner.

In 2006, finally, I found the last piece of the puzzle, and it was a big one. I didn't find intermittent fasting. I found a giant tombstone with the words "Broscience R.I.P" inscribed in the stone.

I found a license to skip breakfast without worrying about the consequences. I found the freedom to eat big meals like the man I was, not the bitch they—the so-called diet gurus with their silly small meals—had made me into. To hell with Tupperware. God damn does it ever feel good to sit down and eat yourself full on a diet. It did back then, and it does now. Not that I need to diet anymore, but still.

I found the ability to devour cereal after coming home drunk at some ungodly hour, go to bed without a guilty conscious, and sleep like a baby. Because there's no better pillow than knowledge, and no greater guarantee for success than going after your goals with the conviction it brings. Even with the simple knowledge of how eating cereal in the middle of the night is no worse than eating it during the day.

With the last piece, I discovered that the same diet split different ways and consumed different times, in different portions, makes all the difference. The difference between success and failure.

With the puzzle complete, I was no longer constrained by the rules and rituals that had kept me shackled to a meal pattern my body had never adapted to or accepted. I didn't just advance a level. I leapt up ten levels and hit my head on the ceiling. Maybe that's why I mistook that final piece for intermittent fasting all those years.

The magic bullet wasn't intermittent fasting. It was the sudden understanding, empowered by science, that I now could trust what I knew about myself, the intuition about what worked for my body and didn't. This realization gave me a new freedom. The freedom to choose.

So I took the only real and scientifically proven "diet hack" that exists—the one known as a high-protein diet—

combined it with my newfound knowledge, and molded my diet to my needs ‘til it fit like a hand in a glove. This glove happened to include intermittent fasting, because that’s how I’m wired, and that’s how it’s going to be forever after.

And even though I might wear one type of glove for winter and another one for summer, they’re always a perfect fit. I’ve been wearing them for a decade. You’re going to have to pry them off. And if you think they’re coming off for some new “study,” you’re crazier than a shithouse rat.

I’ve been fasting for twelve years now, and I’m never going back, because I know that finding the perfect diet is about two things—and these are true for nearly everyone, regardless of whether they’re lifting weights or playing beer pong.

1. A high-protein diet. Undeniably the *superior* diet, as evidenced in countless clinical trials. Whenever two or more diets are compared, results always favor the one with the highest percentage of protein intake (all else being equal).

2. The rest is whatever’s needed to stay on course and not overeat. That will vary slightly from person to person. I could tell you why and talk about the variables long enough to make another book, but I won’t, and it’s beside the point.

There, the magic bullet. Promised an answer, and now you have it. Don’t like it? Neither do I. I’d hoped for something more exotic to dazzle the crowds with. Something to complement all those fancy terms I learned. But truth is truth, whether you like it or not. And if you’re dumb enough to wait ‘til science or anyone, anything, finds another answer, *any* answer, keep waiting.

You’ll wait ‘til Hell freezes over.

References

1. Gabel, K., Hoddy, K. K., Haggerty, N., Song, J., Kroeger, C. M., Trepanowski, J. F., et al. (n.d.). (2018). “Effects of 8-hour time restricted feeding on body weight and metabolic disease risk factors in obese adults: A pilot study.” *Nutrition and Healthy Aging*, 4(4), 345–53.

2. Sutton, E. F., Beyl, R., Early, K. S., Cefalu, W. T., Ravussin, E., & Peterson, C. M. (2018). “Early Time-Restricted Feeding Improves Insulin Sensitivity, Blood Pressure, and Oxidative Stress Even without Weight Loss in Men with Prediabetes.” *Cell Metabolism*, 27(6), 1212–21.

List of High-Protein Foods

Don’t know what to eat? Here’s a handy list of foods ranked by percentage of calories from protein. The second column shows the cost of each form of protein in grams of protein per GBP, and the third column shows grams of protein per 100-calorie serving (ref. 1).
The fourth column displays the bioavailability of protein, where such data exists. Think of it as a rough marker of the quality of protein in foods. A high score means much of the protein contained in said food is “absorbed in a form that can be utilized for body protein synthesis and other pathways which constitute the metabolic demand” (ref. 2).

The factors influencing bioavailability are many; essential amino acids (EAA) play an important role, for example. That said, bioavailability is of little to no concern with the Leangains Method, where an abundance of protein is consumed.

FOOD	% CALORIES FROM PROTEIN	g protein/£	100 KCAL SERVING (g)	BIOAVAILABILITY
Soy Milk	36.4	43	290	91
Kale	34.4	10.75	200	
Poached eggs	34	37	86.45	100
Broccoli	33.6	14.6	300	
Parmesan	32.8	33	25	
Red lentils	30.4	35	100	
Edam	29.6	41	29	
Black beans	28.8	22	175	49
Semi-skim milk	28	60	200	91
Black-eyed beans	27.6	26	78	49
Baked beans	23.2	42	24	84
Cheddar	23.2	42	24	84
Stilton	23.2	26	25	
Chickpeas	22.4	22	78	
Sausage	20.8	42	47	
Peanuts	17.6	61	16	
Mixed beans	16.4	17	100	49
Peanut butter	16	84	15	
Cashew nuts	14.8	17	17.2	
Almonds	13.6	21	16	
Quinoa	12	6.1	27	83
Hummus	9.2	15	31	

FOOD	% CALORIES FROM PROTEIN	g protein/£	100 KCAL SERVING (g)	BIOAVAILABILITY
Soy Protein Isolate	97.6	78	26	
Tuna in water	95.2	30	101	83
King Prawns/Shrimp	89.6	9	127	
Chicken Breast	88.4	36	80	79
Egg Whites	88	18.3	200	
Prawns	88	22	149	
Cod Fillet	85.6	15	120	83
Tilapia	80.8	20	78	83
Whey Protein	80	61	25	96
Scallops	80	7.3	120	
Beef fillet steak	78.4	28	70	80
Seitan (Wheat gluten)	78.4	36	70	
Turkey Breast	78	45	63	79
0% Greek Yogurt	70	32	170	
Pork loin steak	66	65	48	
Cottage Cheese	62	54	135	
Quorn mince	55.2	24	95	
Sardines in brine	50	57	58	83
Salmon	45.6	20	46	83
Tofu	44.4	17	161	
Edamame beans	40	25	80	49
Tempeh	39.2	14	52	

References

1. Dietary protein quality evaluation in human nutrition. Report of an FAQ Expert Consultation (2013). Dietary protein quality evaluation in human nutrition. Report of an FAQ Expert Consultation. *FAO Food and Nutrition Paper*, 92, 1–66.

2. Chart adapted from: https://www.reddit.com/r/Fitness/comments/2fa487/foods_ranked_by_protein_per_calorie/

Changes to chart by yours truly:

- Values exceeding 100 (impossible) corrected where necessary.

- Missing values added if data was available.

One Last Thing

Sorry, thought I'd catch you before the glossaries. Who reads that shit anyway, am I right? Well, they're there if you need them.

Here's a quick summary of some extra resources to complement your journey in case you need them—or just want to expand your knowledge a little bit.

1. Leangains.com: my website and first home, where you'll find weeks of reading and learning on everything from hunger hormones to fasting and cheesecake mastery. The site guide can be found at Leangains.com/leangains-site-guide/.

2. Patreon.com/leangains: my second home, and the one that keeps me busy these days. Daily questions and answers, weekly Q&As, exclusive training programs, and extra resources for the Leangains Method are some of the things you'll find here.

And a Single Request

End of summer. Worst time possible for a book like this. Can I ask you for something? If you think I did a good job here, please leave a review on Amazon or Goodreads. Or another place where people can see and learn from it.

Help me get the word out, buddy. It would mean the world, and I'd love to read the review. Whether good or bad, I'm a big boy. I can take it. Just be real with it.

I took that long to make it count. I took that long for you. Let me know if it was worth it.

Glossary

Diet-Induced Thermogenesis (DIT): Also commonly referred to as the *thermic effect of food* (TEF) or *specific dynamic action*. The increase in energy expenditure (caloric burn) above basal metabolic rate. The percentage (higher or lower) is largely dependent on the macronutrients (protein, carbs, fat) consumed in a meal, aka their *thermic effect*.

Each macronutrient requires varying amounts of energy to break down and process; what measures their thermic value and metabolic "boost" that come with eating. Basically, the foods you eat affect your metabolism and speed at which you can lose weight—depending on how you manipulate the macro quantities/percentages consumed.[87]

True, *all* foods are "thermogenic," because the body must use energy to digest them, but some have a higher burn (you lose more calories in the digestive process) than others. Protein burns the most, followed by carbs, then fats.[88] The magnitude and duration of that boost depends not only *where* the majority of calories derive macronutrient-wise, but also how much you eat at any given meal.

The boost does *not* depend, however, on how frequently you eat. A small meal causes a small metabolic spike that doesn't last long, whereas a large meal produces a larger spike that lasts longer.

DIT is also one of three key components required for calculating your *daily energy expenditure*, the total calories used by the body per twenty-four-hour period; these components are:

- Basal metabolic rate (BMR), the rate at which the body uses energy at rest

- Diet-induced thermogenesis (DIT) or the thermic effect of food (TEF)
- Physical activity level (PAL)

De novo gluconeogenesis (DNG): A process responsible for the fate of roughly half of all protein consumed, in which amino acids are broken down to form glucose, incurring a metabolic cost that largely explains the high DIT of protein.

De novo lipogenesis (DNL): A metabolic process required to convert and store carbohydrates as fatty acids in adipose tissue. This "costs" 20 to 25 percent of the energy consumed from carbohydrate; the practical implication thereof is that each gram of carbohydrate is limited to 3 calories of fat storage while providing 4 calories of energy. DNL only occurs when glycogen stores are full (i.e., a few days of stuffing your face, going overboard at the buffet, etc.).

Food and Agriculture Organization (FAO): Created in 1945 with 194 member states, an agency within the United Nations that leads international efforts to fight hunger and malnutrition (often by improving agricultural systems and access to healthier foods).

Metabolizable energy (ME): An estimate of calories (often referred to as "energy" here) available to a human or animal from food after digestion. Expressed in units of megajoules per kilogram or calories per gram. Basically, ME is our current modus operandi for measuring calories/macronutrients or nutritional values in food (as found on labels created by regulating agencies and food producers).

Medium chain triglycerides (MCTs): Also called medium-chain fatty acids or MCFAs. These are saturated fats made up of:

- Caprylic acid
- Lauric acid
- Capric acid

MCTs are primarily derived from and sold in the form of coconut oil (approximately 65 percent of coconut oil is MCTs) and straight MCT oil. Smaller amounts of MCTs are found in butter, cheese, palm oil, whole milk, and full-fat yogurt.

MCTs are an exception when it comes to fats; they are digested quickly and used immediately for energy by the body, and sent directly to the liver instead of being stored as fat.

Net metabolizable energy (NME): An updated formula for metabolizable energy (ME) proposed by British nutritional biochemist Geoffrey Livesey. In 2001, Livesey suggested the prevailing formula for ME (i.e., calories/energy as presently defined and accepted by regulating agencies worldwide) be replaced by NME. Like ME, NME subtracts calories lost from digestive processes, but also subtracts those lost as a result of TEF.

Peptide tyrosine tyrosine (PYY): An anorectic hormone that regulates appetite. A satiety hormone secreted from L-cells in the gut, where it slows digestion to increase the absorption of nutrients. Certain foods and exercise can affect PYY and aid in weight loss.

Physical Activity Level (PAL): A number that reflects physical activity. For example, 1.4-1.69 is the number for "sedentary" while 2-2.4 is the number for "vigorously active." BMR multiplied with PAL equals maintenance.

Resting or Basal Metabolic Rate (RMR/BMR): The minimum amount of energy required to sustain vital functions in the waking state; the sum of metabolic processes required to sustain normal regulatory balance and body functions during the resting state.

Thermic Effect of Food (TEF): Also referred to as **diet-induced thermogenesis (DIT)** (discussed above), **specific dynamic action**, or **thermogenesis**. Certain foods raise body temperature by burning more calories than others during digestion. Their thermic effect or value is the *amount of energy* (measured in calories) required to digest and process these nutrients.

This *thermic effect* is the heat produced during digestion, and it results in a metabolic boost after the consumption of a meal or certain food. Eating requires energy for ingestion, digestion, absorption, transport, oxidation, and deposition of nutrients. Depending on the food consumed, these processes can burn a varying number of calories.

The "heat" (calories burned/energy required) depends on whether the food or meal's macronutrients are primarily in the form of protein, carbs, or fat. Protein, carbs, and fat can have vastly different TEF values, as defined above under **DIT** and elsewhere in this book, which can cause the calories burned to be from 5 percent to 35 percent of a meal's caloric loss (through digestive processes alone).

Acknowledgments

First and foremost, I'd like to thank Alan Aragon for writing a perfect foreword, and lending careful scrutiny of the science in the book. Without his critical eye, I'd still be double-checking references for fear of being wrong, because that's my greatest fear of all. I'm only half-joking. More like a quarter, actually.

Borge Fagerli provided concrete, detailed, and excellent feedback on the fine print. In addition to the thanks I'll give him here, I'm bringing a present for his vaporizer next time we meet.

My two compatriots from the secret Leangains Slack channel, Justin Owings and Raul Rincon, deserve a big thanks for putting up with my shit, and blowing smoke up my ass when I needed it the most.

Last but not least, a big thanks to the loyal Leangainers around the world who gave me another chance when I came back, or another month on Patreon when things got too hectic to be fully present. I greatly appreciate your support and promise to never change. To always ride, shoot straight, and speak the truth.

Endnotes

1. A night during which he had instigated a fight between two females and caused at least one drink to be thrown. If the count had gone higher, the rest of us didn't stay to find out. We were far too tired, and left the scene for the hotel, leaving our mercurial friend and another member of our group to roam the Stockholm club scene undisturbed. We would later learn that this was a wise choice.

2. Another word for hypodermis is subcutaneous tissue, which is an umbrella term for that which lies immediately beneath the skin. For the most part, fat is stored here, the hypodermis of hands and feet being some of few exceptions on humans and other mammals.

3. The first competition was the day before the deadlift event, and my 157.5 kilograms (347 pounds) won the seal row competition by a wide margin. Then again, I also have the world record. And even if nearly no one has tried, heard of, and least of all competed in this underappreciated lift, a world record is still a world record.

4. Ages left to right: sixteen, before I started lifting; twenty, at my thinnest when I modeled; twenty-two, when I came back home from modeling; twenty-five, after I discovered intermittent fasting and got ripped for the first time; thirty-five, last summer; thirty-six, three days ago.

5. Including a few I was a part of; two European records in the deadlift and the overall, and a world record squat. Event: Arnold Classic Sports Festival in Columbus, Ohio, 2018.

6. Can't name many males who have squatted to depth after five months of training either. Or even attempted to squat…

7. Isabella von Weissenberg squatted 200.5 kilograms (442 pounds) weighing 66.8 kilograms (147.3 pounds) on May 21,

2018. You can watch the video on her Instagram account.

8. I loved a good scrap, and was pretty good at it.

9. Mom's Polish, and though you couldn't tell by her accent, she never adopted the sensitivities that characterize Swedish society.

10. My mom had previously attempted to goad me into sports, but that had never worked. I made up all kinds of excuses. In reality, I simply preferred books, video games, and good eating over any form of physical exertion.

11. Internet back then was slow and expensive, so I was only allotted an hour a day unless I had school work. Of course, school work back then was still mostly done offline, but my parents didn't know that.

12. The name of the gym was "Lyftoteket," which is an amalgam of "lifting" and "theque," the way "disco" and "theque" forms "discotheque."

13. I'm from a time when natural was the norm, so I never felt the need to advertise that fact. These days, most people who do so are the exact opposite: steroid users claim "natural" to gain attention, sponsorships, and followers gullible enough to buy useless supplements and questionable coaching services.

14. This is a textbook example of how I wished people approached weight training and diet today in 2018. In the past two decades, however, self-experimentation seems all but gone within the fitness community, including the one I'm in charge of (at Patreon). It's as if today's twenty-somethings can't decide anything for themselves and require validation for the tiniest deviation from the templates they follow. Whether this change can be attributed to laziness, fear of doing wrong, or fear of not doing it optimally, I can only guess. But it's there.

15. The summer before high school was a crucial turning point. Not only did I lose a bunch of weight, but I also ditched glasses for lenses, threw out my old rags, and started to dress like I gave a shit.

16. If pressed about my fondest memories, I'd tell them about long nights playing *Vampire: The Masquerade* or *Kult* in mold-infested cellars in towns like Örtofta and Höör.

17. But who knows—sometimes, I think I'm a lazy piece of shit. Like most high achievers.

18. *Body for Life* by Bill Phillips was the only game in town, but I never gave it a shot. It featured a ridiculous training program that effectively nullified its credibility in my eyes.

19. As outlined in *The Ketogenic Diet* by Lyle McDonald.

20. I claim no expertise in this matter, and rarely do I frequent or engage in any forum or group other than my own. But it's my impression that forums today come in two varieties and none in between: *free*, overrun by trolls and bad advice, and *paid*, accessible to members only.

21. Example: YouTube was better before the "Adpocalypse" occurred in May 2017.

22. *Your* definition of a ketogenic diet may be different, and likely reflects the diluted bullshit everyone else is doing these days.

23. In my coaching practice, I expect no loss and possibly a net gain in a client with comparable stats and similar experience.

24. This was shortly after 9/11, and the worst possible time to be in the fashion industry.

25. My lowest weight ever, 69 kilograms (152 pounds), was recorded after a hellish night of food poisoning in Cape Town. I remember looking at my dehydrated mess of a body thinking food poisoning ain't all that bad, as I looked pretty damn ripped come morning. Crazy, I know.

26. My calorie intake back then was usually in the 2,000- to 2,500-calorie range. For a 70- to 75-kilogram (154- to 165-pound) male, 2,500 calories is a lot. However, modeling is a very active line of work that includes hours of walking every day.

27. Oatmeal and a protein shake, or oatmeal and an egg white omelette were the go-to breakfasts of the day back then. I'm not exaggerating when I say they made the menu for four out of five people, including me.

28. I saw it claimed more than once that every calorie above 1,000 would be stored as fat.

29. There were many versions of this belief, and everyone had a slightly different take on it. Some said the cutoff point was 8:00 PM, while others said only carbohydrates were off limits, but everyone agreed that eating in the evening was a bad idea.

30. If you're wondering why I quit modeling, the answer is simple: boredom. It was fun while it lasted, and I have no regrets. Probably because I left while the going was still good. According to friends who stayed, the coming seasons were some of the worst in the history of the fashion industry.

31. As far as student housing goes, it wasn't bad at all. While people moved in and out, the junkie and I remained, and later developed a friendship of sorts. Turned out he'd had a very successful marketing agency until he discovered heroin.

32. "Intermittent Fasting for Strength Training and Fat Loss" is the name of the thread on bodybuilding.com. The thread received millions of views, and spanned so many pages that it had to be broken up into parts.

33. "Top Ten Fasting Myths Debunked" is included in this book, and can be found in Supplementary Material.

34. For contractual reasons, I am not allowed to divulge some of the more prominent names. To my understanding, the secrecy is mainly to prevent "guilt by association" or interference with said person's image or brand deals. These terms and restrictions are generously compensated for in other ways, however.

35. Is "Fuckarounditis" the best weight training article ever written? You be the judge—find the article in Supplementary Material.

36. I voiced my discontentment in "Consequence and Clarity," published in January 2013. Hardly a seminal article, but my

most personal to date. It would be three years until I wrote something worth reading again.

37. The only thing that set me off was when he acknowledged his approach was "inspired" by mine, while in the same breath he claimed his was better. This lead to a few one-sided exchanges where I called him for the conman he was, but he was smart enough to not engage, and I quickly tired and went back to doing what I was supposed to be doing.

38. Patreon is a platform where creators can offer services and content to paying audiences. The URL for Leangains Patreon is Patreon.com/leangains.

39. Leangains Patreon broke into the Top 10 in the Education category within a month of starting. Three months later, it sits comfortably at number 3 on that list.

40. Aside from the occasional advice or discussion, I usually restricted exchanges like these to clients, and rarely made time for others. Not because I didn't want to, but because the cynic in me saw public discussion and audience engagement as a waste of time and energy. With two decades of experience, twelve years of coaching, and hard-won pedigrees few else can claim, I think my opinions hold weight. This proves little consolation in social media, where everyone with a voice is an expert.

41. According to those who have read it, "A Quality of Utmost Importance" is some of my best—or my best—work done so far, depending on who you ask. Judge for yourself—the article can be found in "Supplementary Material."

42. I'm not a fan of self-help books, and a tad ashamed to say I've read a lot. Mark Manson's book is, by far, the best one. Not because I learned much—I read it this year and I'm thirty-six years old, for fuck's sake—but because he's spot on with everything, and I wish I'd read it in my twenties.

43. *The War of Art* is one of my favorite books, and I recommend it to anyone who wants to take their craft, whatever it is, to the next level. Unfortunately, I can't find a source for the quote.

44. And if not that, they just fucked around and did what they felt like, which always happened to be bench, curls, and sit-ups.

45. Therefore DIT, not TEF, better encapsulates the meaning and implication of this occurrence.

46. Cardio isn't even part of the Leangains Method. To the delight of many, I'm sure.

47. https://leangains.com/faq/

48. Keep in mind that Leangains Patreon is a membership site, so don't go there unless you have ten dollars to spend. But you'll get more value for your money here than anywhere else in the fitness community, guaranteed.

49. Throughout this book, the term "calorie" will be used to refer to a "kilocalorie," a unit of energy of 1,000 calories (equal to 1 "large" calorie). These terms are typically used interchangeably, including on nutrition labels.

50. This depends on the variables, such as the cost of carrying extra weight, which limits weight gain.

51. Sporadically consuming a large amount of carbohydrates, usually in the context of a low-calorie or low-carbohydrate diet.

52. Most fructose is converted in the liver to glucose or glycogen, not fat.

53. This is not necessarily obligatory of glucose, but depends on the lifestyle chosen.

54. Fat is stored and burned after every meal. Whether net result is positive or negative depends on energy balance at the end of the day.

55. The minimal thermic effect of fat may also be due to its slow assimilation and low priority in the oxidation hierarchy. After a meal, fat (the macro itself) burning only occurs to a meaningful degree once other nutrients are sufficiently depleted in the blood.

56. The appetite suppressing or "filling" properties of protein can largely be explained by its impact on PYY, an appetite

regulating hormone.

57. Livesey heads Independent Nutrition Logic Ltd, and is a consultant to the United Nations. See also Food and Agriculture Organization (FAO), 2001.

58. Dr. Livesey, personal correspondence, October 11, 2017.

59. Margriet Westerterp, personal correspondence, November 2017

60. After reviewing the science used to arrive at this conclusion, Alan Aragon noted that these studies measured DIT over a shorter period than would be considered adequate (less than six hours). It's a point of contention I agree with, but you'd be hard pressed to find perfect meta-analyses on any subject in science. Aragon added that a better case for low meal frequency can be argued on the basis of appetite and hunger—which I also agree with, but can't make a case for, since it's not spelled out in a review or meta-analysis; the argument for DIT, however, *is*.

61. Muscle protein synthesis (MPS) is the rebuilding of muscle tissue and result of stresses we place on our body, i.e., repair injury (muscle tear) or intentional (microtrauma from training).

62. Fiber intakes are set 20 percent higher than FDA guidelines, and include both soluble and insoluble fiber. This is on the high side for most people, true, but your stools will thank you.

63. Most of the positive effects of coffee mentioned here can be attributed to caffeine. However, regarding effects on muscle glycogen storage, it cannot be said for certain this is *solely* due to caffeine. It may be that another component in coffee is causing or affecting this result, according to the cited study.

64. But let me also *shamelessly* suggest that you try my dear old friend Jordan Syatt's excellent brew, Unicorn Magic Coffee. While I can't verify that it was "roasted by unicorns," as the label claims, I do contend that it makes a great pre-workout supplement.

65. If people are dumb enough to think they can drink without repercussions, let natural selection take its course.

66. These values represent averages. On weight training days, the number is higher. On weekends spent Netflix bingeing, lower. On days spent working by the computer and doing a few errands, just right.

67. Google ”FFMI calculator.”

68. Per the examples shown, DIT is baked into the math; this is why a 500-calorie deficit results in −0.6 to −0.7 kilograms (−1.32 to −1.54 pounds) instead of -0.5 kilograms (−1.1 pounds) per week.

69. If you’re interested in tools to graph, track, and log your diet and training progress with the Leangains Method, there will be a few on www.patreon.com/leangains by the time this book is out. Keep in mind that these are merely complementary, not necessary, and certainly not crucial to your success.

70. *Mastery: The Keys to Success and Long-Term Fulfillment* by George Leonard (1991). Another favorite book of yours truly. Not to be confused with Mastery by that hack Robert Greene.

71. https://leangains.com/wrapping-up-2007-and-everything-that-was-before/

72. I’ve written about this moment in https://leangains.com/the-secret-benefit-of-being-lean/

73. Muscle: 18 calories per kilogram (8.2 calories per pound) per day; fat: 3.5 calories per kilogram (1.6 calories per pound) per day.

74. Think of every Average Joe and Jane you know who went on a diet at one time or another. Look at them now. Odds are they’ve ballooned back to their old size. Maybe even exceeded it. Did they do any weight training? No. (Jogging or Pilates don’t count, sorry.)

75. For the overhead press, −7.5 percent or −10 percent is more appropriate if you’re unable to match or exceed the amount of repetitions performed in the previous set. The same

can be said for any movement, but the overhead press is one that calls for these adjustments most frequently.

76. You can think of "noon" as breakfast in the menus below. I admit that a certain personal bias crept in during their conception.

77. For meal plans with specialized needs, e.g., low-carb or 16:8-based menus, see https://www.patreon.com/leangains.

78. Not with this book by your side.

79. The forum was taken down in early 2018.

80. https://www.patreon.com/leangains

81. The "Eat Clean" movement was obsessed by eating "clean" food, and their definition thereof was questionable at best; brown rice was clean, white rice wasn't, etc.

82. Posted March 20, 2018, on Alan Aragon's Instagram account: https://www.instagram.com/p/BgiLzGTFnsF/.

83. In reference to www.patreon.com/leangains, where I answer questions on a daily basis.

84. In reference to *Effect of intermittent fasting and refeeding on insulin action in healthy men* by Hallberg et al. Mentioned in the introduction.

85. The study is reviewed on my site: https://leangains.com/the-leangains-study-oct-25th-update/

86. And while the intrigue is long gone, the shock remains. How governments justify studies we already know the answer to instead of informing the public about how many calories their food contains, the most basic and fundamental knowledge of all, is beyond me. I find no words for this perverse handling of priorities.

87. Research shows thermogenesis accounts for approximately 10 percent of total daily energy expenditure—but it can go far higher depending on the foods you choose. Protein is the highest of all the macronutrients, requiring about 20 to 35 percent of the calories it contains just for digestion and processing.

88. Unless you're doing so for therapeutic reasons, such as treating cancer, epilepsy, or the like, fat bombs and pounds of butter are not the way to lose weight. So you can stop obsessing over those grapes you just ate, or your Ketostix results. When weight loss occurs on a keto diet, it's likely due to all *the crap one eliminated* from their usual intake.