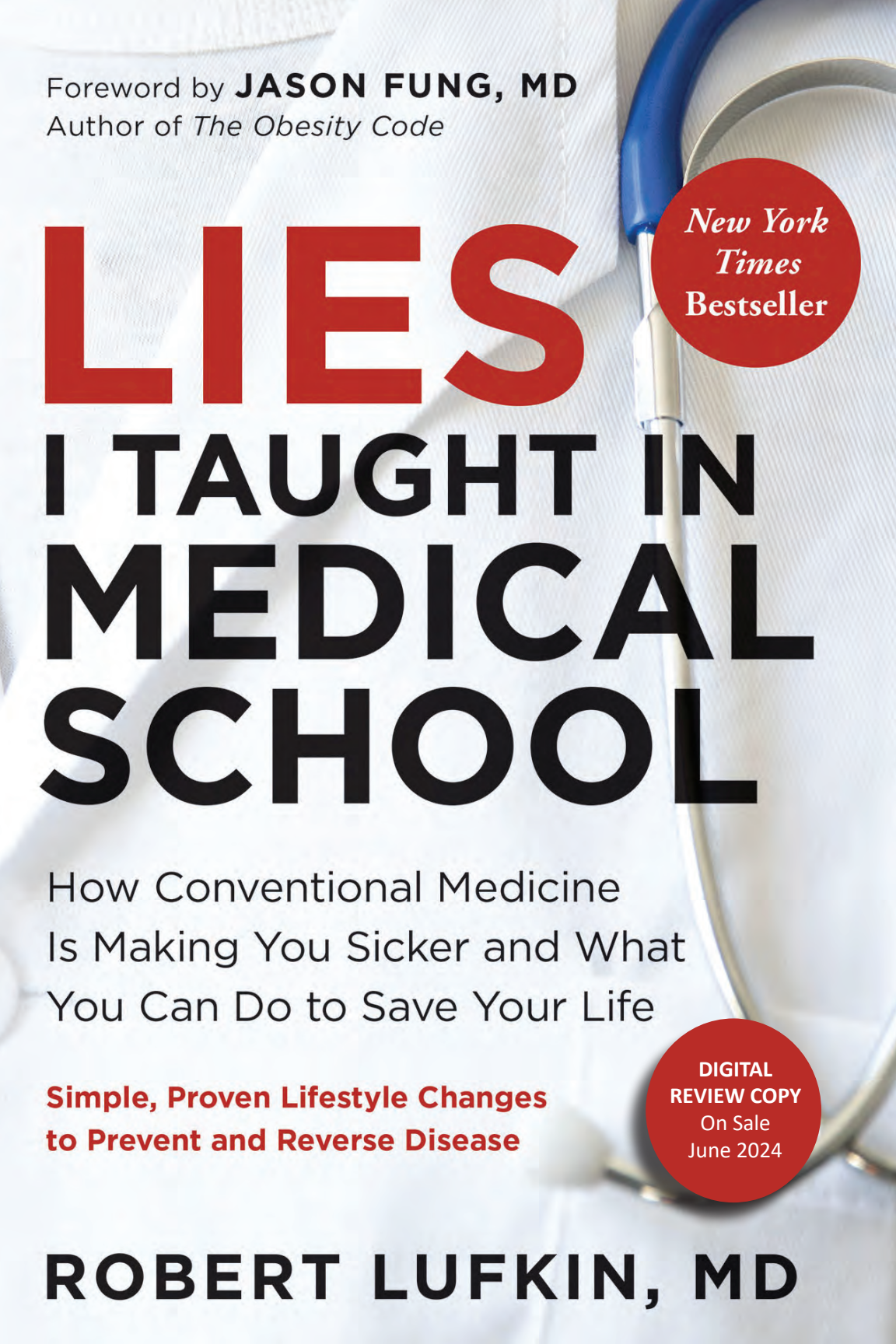
Foreword by JASON FUNG, MD
Author of The Obesity Code
New York Times Bestseller
LIES I TAUGHT IN MEDICAL SCHOOL
How Conventional Medicine Is Making You Sicker and What You Can Do to Save Your Life
Simple, Proven Lifestyle Changes to Prevent and Reverse Disease
DIGITAL REVIEW COPY
On Sale June 2024
ROBERT LUFKIN, MD

PRAISE FOR *LIES I TAUGHT IN MEDICAL SCHOOL*

"Dr. Lufkin's *Lies I Taught in Medical School* is a provocative and insightful assessment of many paradigms in the medical field that are failing to improve the health of far too many people. If you are struggling with your weight, diabetes, cardiovascular disease, or any other condition linked to metabolism, this book is a must read."

—Christopher Palmer, MD; assistant professor of psychiatry, Harvard Medical School; author, *Brain Energy: A Revolutionary Breakthrough in Understanding Mental Health—and Improving Treatment for Anxiety, Depression, OCD, PTSD, and More*

"Standard of care medicine is outdated, often barbaric, and based on recent revelations, in some cases even fraudulent. Yet the New Medicine is not being taught in most medical schools, leading to unnecessarily poor outcomes for many patients. Dr. Robert Lufkin has the fortitude to reconsider everything he learned about medicine and pursue the new model—something I wish every caring physician would do. I recommend this book highly for anyone interested in what real medicine can achieve."

—Dale E. Bredesen, MD, professor and author of the *New York Times* bestseller *The End of Alzheimer's*

"As an actor deeply invested in my health and longevity, *Lies I Taught in Medical School* by Dr. Robert Lufkin was a revelation. Dr. Lufkin exposes the outdated truths in medicine with courage and clarity, urging a much-needed shift in how we view health and disease. His critique of conventional medical practices, especially regarding chronic diseases, is not only eye-opening but also empowering. This book is a must-read for anyone seeking a deeper understanding of health in today's world."

—Josh Duhamel, actor and longevity enthusiast known for his performances in films such as *Shotgun Wedding* and the *Buddy Games* franchise

"Dr. Robert Lufkin thinks outside the box of what most doctors believe but haven't thought to question. Dr. Lufkin did his homework with *Lies I Taught in Medical School*. This well-sourced work explores the newest findings in medicine and the science of aging that upset the status quo. I've known Rob for over thirty years and observed his own personal health transformation, which coincided with his rejection of popular falsehoods and embrace of good science. I wish every physician worldwide would read this book!"

—Michael Sinel, MD, associate clinical professor, UCLA School of Medicine; author, *Back Pain Remedies for Dummies*

"In his new book, *Lies I Taught in Medical School*, Dr. Robert Lufkin exposes defective energy metabolism as the common pathophysiological mechanism underlying the majority of chronic diseases that afflict people living in Western societies. Dr. Lufkin reviews decades of scientific evidence linking abnormal metabolism to chronic disease. The linkages are addressed for a broad range of chronic diseases including cardiovascular diseases, type 2 diabetes, cancer, hypertension, Alzheimer's disease, aging, and mental disorders, among others. Unfortunately, the evidence Dr. Lufkin reviews is at best misunderstood and at worst ignored by the medical institutions that are training the next generation of physicians thus indirectly perpetuating the prevalence of metabolic diseases. I can strongly recommend this important book to anyone interested in knowing the truth regarding the origin and the nontoxic options for managing chronic diseases."

—Thomas N. Seyfried, PhD, professor of biology, Boston College; author, *Cancer as a Metabolic Disease: On the Origin, Management, and Prevention of Cancer*

"In the fast-paced music industry, maintaining health is crucial yet challenging. Dr. Robert Lufkin's *Lies I Taught in Medical School* is a groundbreaking read that challenges outdated medical beliefs, especially about chronic diseases. His insights offer a new perspective on health, crucial

for anyone. This book is a must-read for those looking to harmonize their health with a demanding lifestyle."

—Paul Oakenfold, superstar DJ, music producer, and health enthusiast. His music shaped an entire genre and is one of the leading forces in the global music scene today.

"I'm glad to see mainstream medicine correcting course after many decades of perpetuating myths about disease, nutrition, and longevity. Dr. Lufkin's *Lies I Taught in Medical School* exposes some of the most common lies once taught as absolute truth, such as the doctrine that elevated LDL cholesterol is the primary cause of heart disease. This is an important book with new, valuable information readers won't find anywhere else."

—Philip Ovadia, MD, board-certified cardiac surgeon and award-winning author, *Stay off My Operating Table: A Heart Surgeon's Metabolic Health Guide to Lose Weight, Prevent Disease, and Feel Your Best Every Day*

"Dr Lufkin tells an important story that is well known to those of us dirtied and sweating in the trenches. While true science is absolute, the science we are taught is based on the interpretation of data and often requires modification or rejection as new data comes in. Acceptance of new interpretations are easiest for those not vested in the field, for the old guard tends to defend the castles they built. Thus science is constantly moving as great wars replace one kingdom with another. Eventually, and if we are lucky, we may find Camelot."

—Richard J Johnson, MD, Professor of Renal Diseases and Hypertension and author of *Nature Wants Us to Be Fat*

"*Lies I Taught in Medical School* reveals the newest scientific findings that displace old paradigms. Specifically, Dr. Lufkin shows how most of what the mainstream medical establishment taught about diet, fitness, and disease is wrong. He also offers a proven, accessible plan to improve health and

increase longevity. Getting older is inevitable; aging is not. *Lies I Taught in Medical School* explains why."

—Kara Fitzgerald, ND, IFMCP; first-ever recipient of the 2018 Emerging Leadership Award from the Personalized Lifestyle Medicine Institute (DNA Methylation); author, *Younger You: Reduce Your Bio Age and Live Longer, Better*

"Dr. Robert Lufkin and I share the combination of a career in science and impaired health by following dietary recommendations from 'health' organizations that promoted the 'food pyramid,' which emphasized whole grains, beans, cereal, and rice, with limited consumption of saturated (animal-based) fat. We were both influenced by Gary Taubes and his big reveal that low-fat diets aren't healthy. This was an epiphany for me as I sought to understand why I was at such a high risk for developing heart disease as my career in neuroscience progressed. The lies Robert taught in medical school were the same lies I had believed, that dietary saturated fat and cholesterol cause heart disease and lowering cholesterol with statins saves lives. This book documents how Robert, like so many others, was misled by the false consensus on diet and heart disease. It is an impressive source of research-based information on diet, cholesterol, and heart disease, as well as cancer and Alzheimer's disease. It is of great value to laypeople and healthcare providers who are interested in thinking outside the box created by financially conflicted organizations that place profit ahead of healthy, evidence-based, recommendations."

—David Diamond PhD, professor of molecular pharmacology and physiology, University of South Florida

"Dr. Lufkin clearly and utterly convincingly explains how medical doctors have gotten it so wrong. He gives you the tools you need to reverse diseases like type 2 diabetes and prevent metabolic-related cancers."

—Megan Ramos, *New York Times* bestselling author of *Life in the Fasting Lane*

"Dr. Robert Lufkin is a conscientious objector to mainstream medical advice. With *Lies I Taught in Medical School*, he puts the pen where his heart is: challenging outdated dogma in a search for the truth. Dr. Lufkin has been quietly sharing the latest research on metabolic syndrome, chronic diseases, and longevity within the medical community. Now, he tells all, and not a moment too soon. This is an important and timely book. At the same time that science has given us powerful new health-span-extending technologies, Western populations are sicker than ever, due in large part to a healthcare system that is severely broken. Something is wrong with modern medicine, and Dr. Lufkin reveals what that is."

—Matt Kaeberlein, PhD, professor of laboratory medicine and pathology, University of Washington and director, Healthy Aging and Longevity Research Institute

"*Lies I Taught in Medical School* exposes outdated beliefs about health, aging, and nutrition and offers a compelling alternative—the truth. Dr. Robert Lufkin offers an expansive, holistic view into the diseases of aging and a cause they all share—metabolic dysfunction. This is a longer, more detailed book than most ever written on the topic, yet Dr. Lufkin's writing style is easy to read, friendly, and leaves you feeling empowered to take back control of your health."

—Doug Reynolds, president, Society of Metabolic Health Practitioners; founder and CEO, LowCarbUSA

"I've had the privilege of reading an advance copy of *Lies I Taught in Medical School*, and it's the best distillation of knowledge on metabolic health I've seen. Dr. Robert Lufkin not only tells you what was wrong and what the current understanding is but how to make use of it for better health."

—James W. Clement, founder, Supercentenarians Aging Project; bestselling author, *The Switch: Ignite Your Metabolism with Intermittent Fasting, Protein Cycling, and Keto*

"Dr. Lufkin's new book, *Lies I Taught in Medical School*, is a very interesting and clear assessment of the true causes of many of the chronic diseases of modern life, conditions like type 2 diabetes and essential hypertension. Only if we know the true causes of illness can we be confident in our treatments. I found the book to be bang up-to-date and well referenced. Both the clinician and educated general reader will find much of interest. I honestly believe the wisdom in these pages is life changing."

—David Unwin, MD, Diabetes Fellow of the UK Royal College of General Practitioners, 2016 National Health Service Innovator of the Year

"Dr. Lufkin's book is a bold, hard-hitting presentation of the real facts about our health. It pulls no punches, protects no sacred cows in telling it like it is. It shows the reader where the government and medical profession got it wrong and where special interests have chosen profit over the health of the population. People who want the real facts and who want to save their own lives need to read this book."

—Stephen Sideroff, PhD, professor of psychiatry and behavioral sciences, UCLA Geffen School of Medicine and author, *The Resilience Response*

"Dr Lufkin's new book, *Lies I Taught in Medical School*, represents an honest and critical appraisal of the current medical paradigm. Yet he balances his criticisms with a sincere and optimistic vision of an alternative, health-oriented paradigm with the potential to help many people live better lives. This book is a really nice read, with an important message."

—Matthew CL Phillips, MD, neurologist, Waikato Hospital

"In *Lies I Taught in Medical School*, Dr. Robert Lufkin takes us on a journey through a multitude of both misrepresented and misguided ideas on what it means to be "healthy" and what it means to be "sick." In his extensively researched book, Dr. Lufkin explains how our number one health issue is chronic disease, much of which is self-imposed and continues to kill millions each year. He provides detailed reframing of how we've been given some

pretty unsound advice regarding our health, even by many well-meaning experts and physicians year after year. But most importantly, Dr. Lufkin not only explains the science behind why so many of our so-called 'healthy' practices are actually making us sick, he also gives actionable practices we all can do that could change our lives for the better. While this book gives us a hefty dose of science, Dr. Lufkin presents it in a digestible way, which is both savory and sweet, all the while smartly holding the sugar."

—Nina Shapiro, MD, professor emerita, David Geffen School of Medicine at UCLA; author of *Hype: A Doctor's Guide to Medical Myths, Exaggerated Claims and Bad Advice—How to Tell What's Real and What's Not* and *The Ultimate Kids' Guide to Being Super Healthy*

"*Lies I Taught in Medical School* is the controversial new exposé from the last person you'd expect to author such a book, an active physician and medical school professor. Dr. Robert Lufkin pulls back the curtain on more than a century of outright lies, half-truths, and 'for the public's own good' claims that have made more people sicker with preventable diseases they never should have developed in the first place. Corporations continue to profit off debunked claims about nutrition and the root causes of chronic illnesses. *Lies I Taught in Medical School* is a brave book, and I believe every physician on the planet should read it."

—Lucia Aronica, PhD, Stanford University

LIES I TAUGHT IN MEDICAL SCHOOL

LIES I TAUGHT IN MEDICAL SCHOOL

How Conventional Medicine Is Making You Sicker and What You Can Do to Save Your Own Life

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This book is dedicated to all who will never settle for anything less than the best possible health, wherever their lifestyle journey takes them.

Most importantly to Jenny, Raine, and Eden, my muses, who bring the ultimate meaning to my life.

And, of course, Butter, our puppy.

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FOREWORD BY JASON FUNG, MD

Soon after my third book, *The Cancer Code,* was published, I received a congratulatory email from Dr. Robert Lufkin. He also told me about two of his interesting new MRI studies. One detected Alzheimer's disease ten years prior to a typical clinical diagnosis using biomarkers in the brain. The other MRI study tracked liver fat content changes to better monitor metabolic diseases and insulin resistance, which Robert will tell you all about in the coming pages. A mutual colleague, Dr. Charlene Lichtash, was testing all of her patients free of charge.

All these anecdotes fascinated me, given my research on fasting—a most useful tool for improving people's metabolic health. Megan Ramos, coauthor of the *New York Times* bestseller *Life in the Fasting Lane,* and I created a program to encourage sustainable, intermittent fasting for lasting weight loss (www.TheFastingMethod.com). I've also authored three books—*The Obesity Code, The Diabetes Code,* and *The Cancer Code,* over a million copies sold in total—on metabolic health and how the medical establishment got it all wrong.

A hallmark of my work has been this connection between metabolic health and chronic diseases such as diabetes, obesity, and cancer. Dr. Lufkin

brought up this new research and these new technologies, knowing this was in my wheelhouse. It's in his, too.

And it turns out, our fascination with the relationship between metabolism and disease wasn't the only thing we shared. In the late 1990s, we were both employed at the same institution, the University of California, Los Angeles (UCLA). Dr. Lufkin was a professor in radiology. I was studying nephrology. I spent my time at Cedars-Sinai Medical Center and the West Los Angeles VA Medical Center. In my practice, I treated numerous cases of type 2 diabetes, easily the leading cause of kidney disease. And most of these type 2 diabetics *also* suffered from obesity.

Dr. Lufkin and I took different paths, but we both arrived at the same destination—metabolic health is the key to unlock lasting health and longevity. I approached metabolic health in terms of those three diseases—obesity, diabetes, and cancer—while Robert comes from a different angle. I was struggling to keep up with the cases of kidney diseases stemming from type 2 diabetes and obesity and was starting to make the connections between these chronic illnesses and metabolic health. Robert was approaching the root of the cause—metabolism, a subject that, before now, was rarely studied in the institutional environment except for a few lectures in a basic science class. Metabolism is for dietitians, we thought.

How wrong we were. Now, Robert is setting the medical field straight. His book, *Lies I Taught in Medical School*, hopes to change what future doctors learn—and what the general public believes to be true. Metabolism is the *most* important factor in preventing these chronic diseases, and Robert "shows his work" and demonstrates just that.

Dr. Lufkin shares my appreciation for the simple but effective tool of fasting. As I've written:

> *There is one thing that the teachings of Moses, Jesus, the Buddha, Muhammad, and Hinduism appear to all agree on. Fasting is part of a healthy life.*

We also agree that lifestyle and metabolic factors play a huge role in cancer, type 2 diabetes, and obesity. Fixing your diet, rather than taking drugs, is the way to handle these diseases. As I argue in *The Obesity Code,* obesity isn't a disease of "calorie imbalance" but *hormonal* imbalance.

Saying that "a calorie is a calorie" implies that the only important thing about a food is the caloric energy intake. A calorie of olive oil and a calorie of sugar prompt very different metabolic responses, ones we can easily measure. Sugar increases blood glucose and drives up insulin production in the pancreas. Olive oil will do none of that. It's the hormonal response that is key to understanding—and treating—obesity. It's why *just* cutting calories and exercising more doesn't actually work.

But the number one thing that Dr. Lufkin and I agree upon is that, at the root of all of these chronic diseases, they are largely driven by growth factors. Especially insulin.

Lies I Taught in Medical School replaces the outdated paradigms we all followed (and got no results from) with the latest research, the newest findings, and the controversial conclusion I had to discover myself.

I couldn't recommend it more.

—Jason Fung, MD

Author of *The Obesity Code*,

The Diabetes Code*, and *The Cancer Code

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PREFACE

I've spent my career writing scientific papers and textbooks for a narrow academic audience. My natural tendency is to drill down and include lots of detail and references. I realize that this can be unnecessary, intimidating, and even counterproductive in the sort of book that I hope will reach a larger general audience.

The message I hope to communicate with this book is too important to be buried in a technical text—and it's time for people to have the information to be able to make their own choices about health and longevity. I believe the message of this book needs to reach a greater audience. In doing so, I struggled with keeping the information simple without oversimplification. My coauthor, Joshua Lisec, is responsible for making the book readable, enjoyable, and entertaining.

He gently steered me clear of making this just another textbook. He helped me resist my natural urge to include more (perhaps too much?) detail. He was able to guide me to thread the needle and walk the line between oversimplification and just enough simplification for a general audience to understand.

Anytime the book errs too far on the simplification side and misses key points of truth, or just gets things flat wrong, I am the one to blame. Since the stories, insights, and opinions herein are mine, Joshua kindly agreed to

a first-person singular author voice throughout this book—*I, me, my,* and so on, all referring to my perspective. This ensures continuity throughout the reading experience.

When the book resonates with a particularly memorable passage that illustrates complex ideas with crystal clarity, then Joshua is the one responsible. It's our hope that, between us, we have written a book that will be an enjoyable read while adding useful, actionable items anyone can use to improve their health and longevity.

Each of the "lies" we describe could be a book in themselves. In fact, there are much better and deeper books on the topics we cover. (We've listed some of these at the end of this book.) We intentionally aimed for simplicity in explanations, even when we left out technical details, if we didn't think the added complexity would help in the understanding.

It's good to remember that the "lies" I talk about and the alternatives I suggest to be true are all mere hypotheses—imperfect models attempting to explain the clinical experience of improving health.

The lies I taught in medical school have been replaced in this book by what I am hoping will be borne out as more accurate models. Of course, if you follow the logic and the way that science works, much (or all) of what is presented in this book as "truth" will be pointed out by some future author as the lies *she* was taught in the first quarter of the twenty-first century.

Finally, if I've learned nothing else through this whole process, I have learned hubris. Even the best "lies" that we come up with as explanations will never fully capture the complexity and beauty of the way that our reality truly works.

MEA CULPA

To be clear, I have not personally published any peer-reviewed research in most of the areas this book covers, which is both good and bad. It's bad because I don't have a lab full of mice that I can run experiments on to gain

firsthand knowledge. On the other hand, it's good to be more of a generalist. I can integrate broader concepts to a broader audience in a way that a specialist might not.

The hypotheses I am presenting as "lies" (or conversely, "truth") are almost certainly all "lies" at some level, in that any hypothesis is just an approximation or model of reality that at some future date will be usually replaced by a superior version that somehow gets closer to truth, as best as we can know it.

As a medical school professor, I don't have any special access (for the most part) to any information that is not available (thankfully) to everyone. We live in the age of the internet, where the access to scientific information in the form of primary publications is unprecedented. Where paywalls still exist for some publications, they can usually be accessed via a physical visit to a local institutional library, although that is more difficult.

All I am doing is reading the scientific literature the best that I can. The ideas are not mine. They have all originated with deeper scholars than yours truly. I'm trying to recapitulate the ideas that seem to me closest to the truth into some sort of overall coherent narrative. I try to reference each of the sources the best that I can without overwhelming the reader. I try to exclude articles that fail on a scientific level to make their arguments.

I almost certainly have made many errors. If I made errors in the past and taught lies before, then some (all?) of what I am teaching now may also be suspect. I urge you to be suspicious of every claim that I make—and any claims others make, too. Look critically at the arguments for and against a hypothesis.

Presenting information is always a balance between information and entertainment. In the past, I have written textbooks aimed at a more technical audience with an emphasis on information. With this book, I aim to communicate complex ideas to a more general audience. I have tried to make it entertaining. My first impulse is to drill down the rabbit hole to very basic details on any subject, but I realize that is not the best way to

communicate ideas. So I have tried to simplify complex concepts whenever possible.

Finally, for better or worse, I have no "dogs in the race" other than wanting to understand the best ways that people can achieve health and longevity for themselves and their loved ones. I have been a high consumer of processed foods, a vegan, a carnivore, a low-fat dieter, a low-carb dieter, and most in between. Today, I consume as few processed foods as possible because this is the way I interpret the evidence I read. This means few processed carbohydrates and sugars, processed fats and oils (vegetable and seed oils), and grains. If the evidence came out tomorrow that drinking only Coca-Cola was the best way to health, I like to think I would apologize to the Coke company and order it by the case.

I no longer take any funds from drug companies. Some of the perspectives I'm presenting have, like all things, become politicized. I'm not against Big Pharma, Big Food, the government in general, or the medical establishment. I've learned that some policies can be best implemented by large organizations. I also realize that large institutions can succumb to biases or blinders in knowledge, just as individuals can. When there are vast sums of money and great resources involved, those (open or implicit) biases can have a lasting impact on public health. We need to examine that impact closely. That's what *Lies I Taught in Medical School* aims to do.

Chapter 1

I DID EVERYTHING RIGHT AND (ALMOST) DIED ANYWAY

Fifty percent of what you learn in medical school will turn out to be either outdated or dead wrong within five years of your graduation. The trouble is no one can tell you which half, so you have to learn on your own.

—Professor David Sackett, the father of evidence-based medicine

We followed the science . . . into disease.

My mom was a dietitian. She worked in a hospital as a professional medical nutritionist into her eighties. I grew up steeped in that environment. We followed the food pyramid, dietary recommendations, and popular nutritional wisdom. Every meal was low fat and high carb. We carefully replaced saturated fats with margarine, canola, and other industrial seed oils. The only omelets we ate were the "egg whites only" version to minimize the cholesterol.

I thought I was getting healthier. We all did.

My mom and me

Meanwhile, my mom worked in a hospital. Naturally, I became interested in medicine. I worked hard and was fortunate to be able to go to an Ivy League university, then medical school. I loved it so much, I stayed there and became a professor. That led to me teaching and learning from other doctors what I'd first learned from my mom and then again in medical school. We all believed the same nutritional and health facts. The science was settled.

From there, I learned and taught radiology. With radiology or medical imaging, as it is sometimes called, you need to be able to talk one-on-one with a neurosurgeon and also communicate with a heart surgeon, an ob-gyn, and all different types of medical specialists. You need general expertise in all areas because radiology deals with every system in the body and the ailments patients can suffer. Medical imaging plays a role in almost all diseases, so as a radiologist, you've got to have a working knowledge of them all.

In addition, I saw patients, treated patients, and prescribed medications. I did all the basic work of a doctor and then some.

I also did research. So much research. My laboratory received millions of dollars in grants from the National Institutes of Health (NIH)

as a principal investigator on medical devices, as well as grants from drug companies (of which I will be critical later in this book).

I was 100 percent a medical establishment person. I was all for organized systems, and my background shows that. I'd served as president of major international medical societies, lectured worldwide, and been paid by universities, drug companies, and research institutions. My credentials were and still are clean. I was an unofficial spokesperson for the establishment.

Then I developed four diseases that I had been taught (and had taught others) were aging related with possibly a genetic component:

- Hypertension, which needed high blood pressure medicine;
- Gout arthritis, which I was prescribed drugs to control;
- Dyslipidemia (abnormal blood lipids), for which I was prescribed statins;
- Prediabetes (where glucose levels fall in a prediabetic range), for which I was prescribed another drug.

My late father had developed all those diseases by his eighties. They eventually killed him. I was getting these diseases, but I still had daughters under ten years old. I wasn't going to survive long enough to see them in high school! That made it personal.

Obviously, I was concerned. And confused. How could this be happening? All the settled science told me this was impossible. I had been raised by a professional nutrition specialist, a certified dietitian, so I had eaten exactly as recommended by health organizations and the food pyramid. I'd been raised from birth in a system that assured me this couldn't happen to someone my age.

I did everything right, and I was going to die.

That shock raised the alarms in my head. There was something deeply wrong in the medical system. I'd been fed lies, and I needed to know the truth.

I TRUSTED SCIENCE THAT COULDN'T BE TRUSTED

Despite early death approaching, I was fortunate for two reasons.

First, I happened to have a friend who was an acclaimed science journalist who had made his reputation pointing out bad science in physics and from Nobel laureates. We would pass each other at breakfast in a café in Santa Monica as he worked on his latest investigation while I went off to my medical school to teach the students and other doctors what I thought to be the truth. As it turns out, he was just turning his attention to medical nutrition science as the ultimate example of science gone wrong and its resulting devastating public health consequences. His name is Gary Taubes, and his resulting series of bestselling books on nutrition science have revolutionized the thinking of a generation of medical professionals and made me reexamine my own closely held beliefs.

For more about my friend Gary and his research, check out *Good Calories, Bad Calories: Fats, Carbs, and the Controversial Science of Diet and Health* and his many other books. His biggest reveal was that low-fat diets don't help us stay healthy. In fact, they might be making us sicker in ways that most people don't suspect, even as we think we're getting better. That realization was like a bomb going off in my brain. I'd been raised my whole life to believe the opposite. What else had been wrong?

Second, my medical area of expertise is radiology. In this field, I was fortunate to deal with many different types of chronic diseases. Most other specialists such as neurosurgeons, obstetricians, cardiologists, nephrologists, endocrinologists, neurologists, and ophthalmologists often don't see the bigger picture because they are focused on a narrow area of expertise. Also, as a radiologist, I could see the actual disease: a coronary artery narrowing, the blood in a hemorrhagic stroke, visceral fat, liver fat, malignant neoplasms, brain atrophy in Alzheimer's patients, diabetic ulcers, and other complications. So, the direct manifestations of these chronic conditions were a part of my daily work.

With these tools in my hands, I began digging into the literature to reeducate myself. I started to notice things that I had been teaching were now known to be wrong.

The ample evidence that my friend Gary presented went against everything I'd believed about nutrition, health, and longevity. Against what I learned from my dietitian mother and from medical school. Even against what I had been teaching for decades in medical school, the David Geffen School of Medicine at the University of California, Los Angeles (UCLA), as a professor of radiology. I saw how Gary's new health paradigm mapped onto the systems in the body I knew well from radiology.

How could I have been so wrong? How could the medical establishment have been so wrong? And for so long? For decades, Alzheimer's, heart disease, diabetes, and arthritis had been thought of as separate diseases. But the evidence Gary and other subsequent books, papers, articles, and studies purported to show is that *all* are metabolic diseases. In fact, eight of the top ten leading causes of death in the United States every year are directly correlated with metabolic syndrome.[1]

We are in a medical crisis much worse than COVID-19, and most people aren't even aware of it. While chronic disease rates have been steadily climbing for the last hundred years, their growth has vastly accelerated in the last twenty. Between 2000 and 2010, the percentage of middle-aged adults with two or more chronic diseases jumped from 16 percent to 21 percent, and only four years later in 2014, it had increased to 32 percent.[2,3] Today, a full 40 percent of adults nationwide have multiple chronic diseases.[4]

As a result, our healthy life expectancy is decreasing for the first time in recorded history![5]

We'll get into why I believed and taught lies about disease, health, human anatomy, and physiology—and how they became the predominant, unquestioned worldview of the medical establishment.

For now, I've made what many both inside and outside mainstream medicine might consider an extraordinary claim—that the medical

establishment in general and I as a medical school professor taught "lies." That requires extraordinary evidence, and it's unfair to make you read one hundred, fifty, or even five pages of material to see that evidence. So this section is a teaser into what you'll be learning more about in this book.

By "lies," I do not mean an error with intent to deceive, manipulate, or drive the public to an unnecessary early grave. Some "lies" are just the result of honest mistakes. Others are deliberate errors, some of which had financial incentives. For example, the American Heart Association is funded by sugar companies even as it gives advice that can harm the people it claims to want to save. More on that later.

First, I must make clear where I stand: *I am the establishment*. I'm not a renegade, rogue, maverick, or conspiracy theorist. It is crucial that you remember this as I lay out the evidence of fraud, deception, incompetence, and ignorance. I will sound like I'm on the fringe, but I'm the face of the establishment. My laboratory received millions of dollars in grants from drug companies. I wrote papers for drug evaluations that the drug companies wouldn't let me publish unless they were positive. That is the expected norm, by the way. I have published hundreds of peer-reviewed scientific articles and over a dozen textbooks that are available in six languages. I have been elected the president of two international scientific societies. I have held the highest academic rank of professor at two of the top medical schools in the world. I continue to hold that rank. Above all, I am a scientist. That means I must follow the science wherever it leads, even if that's away from everything I thought was true.

I have also practiced medicine, seen patients, and helped train hundreds of medical students, doctors, and other health professionals. The notion that we could have been teaching them incorrect things is an unpleasant possibility but also a definite reality when our understanding of knowledge is fluid and ever evolving. The idea that we could be teaching them incorrect things in the face of scientific evidence to the contrary, however, is deeply troubling. Unfortunately, both of these occur. That's why we must tear back the cover to reveal the corruption underneath.

THREE DEADLY LIES I BELIEVED (AND TAUGHT) IN MEDICAL SCHOOL

Here are three teaser lies to get started. Don't worry, if you find these troubling, prepare yourself—the ones later in this book are even worse.

1. The Obesity Lie: "A Calorie Is Just a Calorie"

We are now in the worst global epidemic of obesity that the world has ever known.

Being "overweight" means having more body weight than is considered normal or healthy for one's age or build. "Obesity" is an even more severe state of having an excess amount of body fat—and it's not just affecting older people. Statistics show 42.5 percent of adults ages twenty and over are obese, and 73.6 percent are at least overweight.[6] Almost half of Americans are now obese, and most are overweight![7] Obesity is unhealthy and a marker for metabolic dysfunction, which manifests as hypertension, diabetes, heart attack, stroke, Alzheimer's, cancer, and other chronic diseases.

Our understanding of the causes of this epidemic and the approaches to treating it is based on a simple lie: that "a calorie is a calorie," implying that obesity is caused by eating too many calories.

This is wrong for two reasons. First, calories in themselves are not sufficient to create obesity. Some other cause is needed. Also, different types of calories have different effects on this controller of obesity.

To say that obesity is caused by eating too many calories is like saying that alcoholism is caused by drinking too much alcohol or that a heart attack is caused by the heart muscle not receiving enough oxygen. These are all true, strictly speaking, but they give us little insight into any ultimate cause that can meaningfully affect the outcome.

A calorie is defined as a measure of the energy that food provides. We all need energy and calories to live. The lie is that it doesn't matter which foods provide them because all calories are created equally. Therefore, if you want to lose weight, just eat fewer calories.

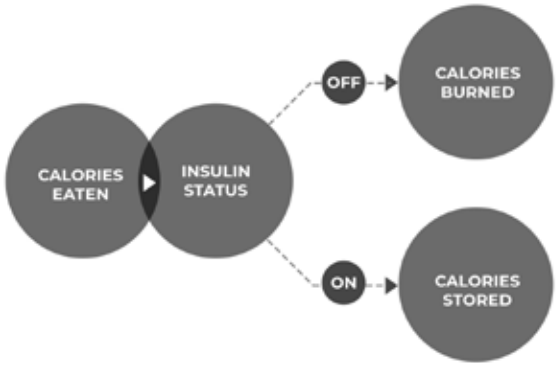
This lie came from the idea that all our energy comes from the calories of the food that we consume, which is correct. The first law of thermodynamics—that energy and calories are conserved—is also used as a line of support for the lie. For example, a recent paper argued: "Thermodynamics dictate that a calorie is a calorie regardless of the macronutrient composition of the diet."[8] This is also referred to as the "energy balance theory of obesity."

But the equation **calories eaten = calories burned** is an oversimplification. Because, as any person who has struggled with extra pounds knows, calories eaten can also go to fat (and glycogen) storage instead of being directly burned. So, the equation really should look like this: **calories eaten = calories burned + calories stored**.

The key control point for weight gain is how many of the calories we consume are sent to be stored versus those burned. That number doesn't depend on the total number of calories but instead on a biochemical signal in our bodies.

That signal is produced by a hormone called *insulin*. Insulin tells the cells to store calories primarily as fat. If no calories are stored as fat, then they will be burned.

There will be no weight gain. If insulin is turned on and fat storage occurs, fewer calories will be burned.



Insulin status directs calories toward either fat storage or burning for energy.

Also, if the insulin is not activated, a person will not store calories as fat, no matter how many they consume. They won't gain weight but will burn all the calories.

One example is this child (pictured below) who is unable to produce sufficient insulin in his pancreas because of type 1 diabetes.[9] No matter how many calories he ingested, he was unable to gain weight (left image). After eight weeks of added insulin treatment, he had gained weight (right image). Unless type 1 diabetics receive supplemental insulin treatments, they have little body fat, no matter how many calories they consume.

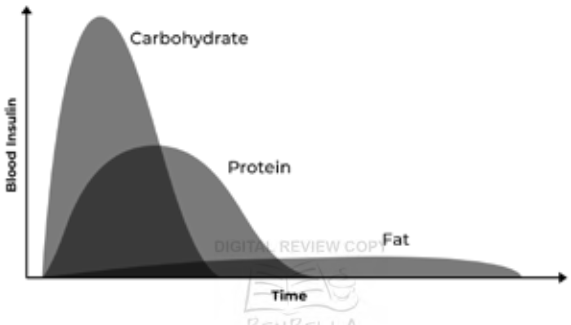
Two views of a child with diabetes before and after treatment with insulin in 1922 by Frederick Banting and Charles Best. The right image is after two months of treatment.[10]

As a physician, I also know from personal experience that I can make anyone gain weight or fat just by giving them extra insulin. This is seen in both type 1 and type 2 diabetics as soon as they begin taking extra insulin as a medication.

To put it another way, calories are necessary but not sufficient to drive obesity. Insulin is required. Obesity is not just a calorie problem; it's an insulin problem.

If all foods stimulate insulin equally, then a calorie is just a calorie. That's not a lie. But all foods don't trigger insulin the same way.

Of the three dietary macronutrient categories that we will cover in detail later, carbohydrates strongly stimulate insulin, proteins mildly do, and fats hardly stimulate insulin at all (see graph below).[11]



This graph shows the effect of each macronutrient on blood insulin levels over time.

So, a calorie from carbohydrates will drive more insulin (and weight gain) than a calorie from protein, which will drive more insulin than any fat calories. All calories do not have the same effect on weight gain. Therefore, weight loss is not just about fewer calories.

The truth here is that in order to lose (or gain) weight, the most important thing is not the number of calories consumed but rather the types of calorie that affect the insulin levels and direct our bodies to store energy as fat.

As every rancher knows, to fatten livestock, simply feed them large amounts of refined carbohydrates that will turn on insulin and drive energy storage into fat.

Feeding livestock fatty foods will not have the same effect.

What is the reason for our growing numbers of obesity? The conventional wisdom and medical advice are that to lose weight and prevent

obesity, we need to exercise more and eat less. This assumes that it doesn't matter what you eat, just how many calories. Obesity is viewed as some sort of defect in willpower in an individual by not being able to control their impulses.

This is based on the acceptance of the "energy balance model of obesity," which is taught in medical schools around the world. But as the "success" of Jenny Craig, WeightWatchers, Nutrisystem, and innumerable other weight-loss companies demonstrate, it doesn't work. Just look at their recurring customers.

How did we get to this situation? During the 1970s, when attention became focused on heart disease and there was a slight increase in obesity, American politicians held hearings about how to best advise the public about their diet as a national health policy.

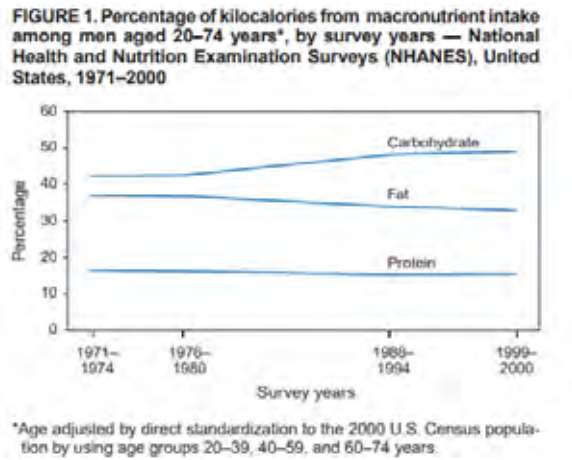
In 1977, a group of scientists issued the first set of Dietary Guidelines for Americans, which the US Department of Health and Human Services (HHS) and the US Department of Agriculture (USDA) update roughly every five years. They urged Americans to increase their carbohydrate intake to 55 percent to 60 percent of their total daily calories and to reduce fat intake to 30 percent to 35 percent. This was done primarily to reduce what they considered the risk of heart disease (also a lie—more on that later).

This guidance meant people should eat more sugars and carbohydrates and cut back on saturated fat from meats, eggs, butter, and whole milk. Rather than consume what they called "bad" saturated fats, we were told to eat low-fat foods (such as skim milk) and replace saturated fats in animal products with polyunsaturated fats from inflammatory vegetable oils (such as soybean oil) and trans fats. Interestingly, 95 percent of the members of the US Dietary Guidelines Advisory Committee over the past decade have had conflicts of interest with the food industry.[12]

In 1992, these first flawed guidelines were replaced by even worse recommendations—the food guide pyramid.[13] At the base of the pyramid were carbohydrates, especially refined ones such as breads, pasta, rice, and cereals, of which we were told to eat six to eleven servings a day!

The 1992 food pyramid, which recommended eating six to eleven servings of carbohydrates per day while avoiding fats and oils

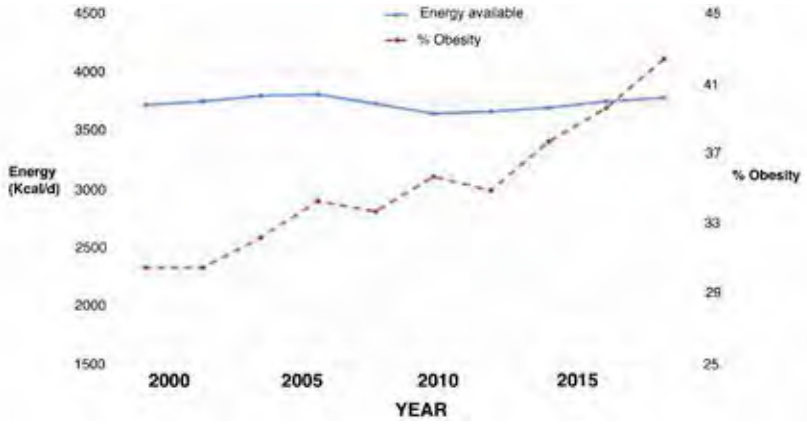
By replacing the consumption of fats (which have little effect on insulin) with carbohydrates (which strongly stimulate insulin release), the metabolism for most Americans who followed this advice changed from burning calories to storing them as fat.



Replacement of fat calories with carbohydrates in the US population beginning in the 1990s

The number of calories from fat was reduced, and the number of calories from carbohydrates increased. By replacing the fat calories with carbohydrate calories, we turned up insulin and sent the message to store fat.

And store fat we did. At about the same time that we substituted carbohydrates for fat in our diets, the obesity rate skyrocketed—and it hasn't slowed down since.



Increase in US adult obesity percentage versus total energy intake[14]

The medical system doesn't fully agree on the actual reasons why obesity is happening or how to stop it. Yet the problem is getting worse—and people are dying.[15]

2. The Diabetes Lie: "Type 2 Diabetes Is Best Treated with Insulin"

Diabetes is an abnormality of insulin that results in elevated levels of blood sugar or glucose.

In type 1 diabetes, the pancreas, the organ that makes insulin, is damaged, so insulin levels are abnormally low. This used to be the most common type of diabetes but has since been overtaken by another type of diabetes, type 2, which now represents over 90 percent of cases.

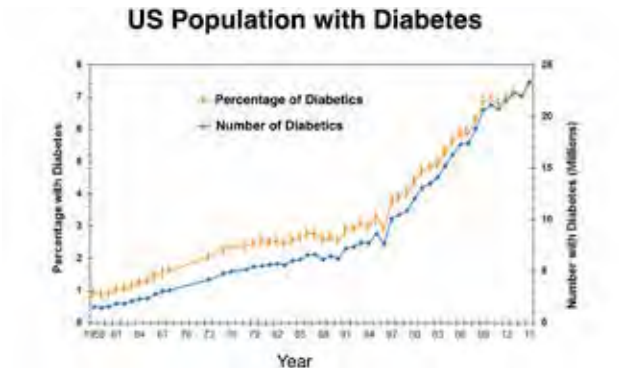
Type 2 diabetes is caused by carbohydrates in the diet, which stimulates insulin. *Insulin resistance* occurs when there are chronic high levels of insulin, which results in cells being less sensitive to a given dose of insulin. This requires even higher levels of insulin, which can make the resistance worse—a vicious circle.

According to the CDC, one in three adult Americans is either diabetic or prediabetic, and 80 percent of them don't know it.[16]

Type 2 diabetes now comprises at least 90 percent of diabetes cases.[17] This disease results in abnormally high levels of blood sugar and insulin, which in turn damages the body. This results in blindness, renal failure, and increased rates of heart disease, stroke, cancer, and Alzheimer's disease.

We also happen to be in the beginning of the worst epidemic of diabetes that the world has ever known. Ten percent of American adults have type 2 diabetes, and as I said before, about 38 percent have prediabetes.[18] That means for the first time in history, 48 percent or nearly half the population has the same metabolic disease!

Remember the effect of the dietary recommendations on carbohydrate consumption and the resulting increase in insulin levels and obesity over the last decades? Well, those factors also drive the diabetes epidemic, although it takes a bit longer to get diabetes from chronic elevated insulin and the resulting insulin resistance.



Diabetes in the US population from 1958 to 2015[19]

Note that the above graph is similar to the previous graph about obesity because many of the same factors drive both diseases. As we will see, common metabolic dysfunction, including insulin resistance, is the root cause for obesity and diabetes, as well as most chronic conditions that we all face.

The diabetes lie declares that the best way to treat type 2 diabetes is with insulin. Giving insulin will help control the immediate effects of too much glucose in the blood by telling our cells to remove that blood glucose and store it as fat. But it will also raise the body's overall insulin levels, which will worsen insulin resistance, the underlying cause of type 2 diabetes. Also, elevated insulin levels drive other chronic diseases (which we will discuss later).

If type 2 diabetes and chronic insulin elevation are caused by a diet of too much insulin-producing refined carbohydrates and sugars, would simply switching to a low-carbohydrate diet reverse type 2 diabetes?

A man photographed before and after removing refined carbohydrates from his diet and starting intermittent fasting. Photos courtesy of @thebeardedtenor.

This man in these photos was obese and had type 2 diabetes (left). His hemoglobin A1C test, which measures the average level of blood sugar over two to three months, was abnormally high at 9.6 percent. (We'll talk more

about glycation later.) According to standard medical recommendations, he would be started on injected insulin soon. Instead, he decided to try intermittent fasting and removed refined carbohydrates and sugars to make his diet ketogenic. He lost about 100 pounds, and his HA1C dropped to 5.2 percent, which is normal. His diabetes is in remission, and he is off all drugs. (Thanks to Chad @thebeardedtenor for sharing his story.)

Knowing what we now know about the effect of insulin on weight, what do you think would have happened to this man if he had followed the standard medical treatment for his type 2 diabetes and started injecting insulin?

Our healthcare system is sadly much more optimized to deliver prescriptions for insulin and other drugs for managing type 2 diabetes than giving instructions on how to reverse it by changing our nutrition to avoid the causes. To be fair, many people would rather take a pill or a shot instead of changing their lifestyles. But most people don't know how powerful and effective lifestyle choices can be. Plus, there is some evidence to show that merely improving glucose control with drugs such as insulin or pills might not prevent some of the long-term complications these patients all face. (We'll delve into those in the other chapters.)

There also are financial incentives. In 2013, sales of insulin and other diabetes drugs reached $23 billion, according to data from IMS Health, a drug market research firm. That was more than the combined revenue of the National Football League, Major League Baseball, and the National Basketball Association.[20]

Even the American Diabetes Association (ADA), which recommends the use of insulin and other drugs rather than primarily restricting dietary carbohydrates, received over $1 million from each one of five of its top pharmaceutical company sponsors in 2022.[21]

The ADA routinely gives advice like this, from 2008: "Sucrose-containing foods [foods containing sugar] can be substituted for other carbohydrates in the meal plan or, if added to the meal plan, covered with insulin or other glucose-lowering medications."[22]

We'll dive deeper into insulin and even more diabetes lies later in the book.

3. The Heart Disease Lie: "Dietary Saturated Fats and Cholesterol Cause Heart Disease"

Heart disease is the number one killer in America. It makes diabetes, COVID-19, and almost every other medical complaint look insignificant by comparison. It's also called *coronary artery disease* because those are the arteries that supply the blood to our hearts. When these arteries narrow, that results in a heart attack.

From early on, medical professionals knew that the atherosclerosis (or narrowing) in the arteries causing most cases of heart disease contained a type of fat called cholesterol. There was a correlation but not necessarily a causation, similar to how many people with lung cancer have yellow fingers from using tobacco. While yellow fingers are associated with lung cancer, yellow fingers don't cause lung cancer or vice versa.

Then, in 1913, Russian pathologist Dr. Nikolai Anichkov fed high-cholesterol diets to rabbits and found they developed high blood cholesterol levels and classic atheromatous fatty plaques. This experiment was specifically designed to demonstrate causation rather than a mere association or correlation.

Nikolai Anichkov (far left) and coworkers in front of his laboratory, circa 1913[23]

Anichkov's work has since been recognized as one of medicine's ten greatest discoveries. Another author called it one of "cardiology's ten greatest discoveries of the twentieth century." In 1958, Dr. William Dock, who at that time was chairman of the department of pathology at Stanford University School of Medicine, wrote in an editorial, "Thus the early work of Anichkov bears comparison with that of Harvey on the circulation and of Lavoisier on the respiratory exchange of oxygen and carbon dioxide."

The accolades are impressive, except that the work is based on an error. These authors overlooked the fact that rabbits are herbivores (or plant eaters), for which cholesterol was a foreign material in their diets. Cholesterol comes only from animal sources. When researchers attempted to replicate the experiments on omnivores such as dogs (and humans) who had cholesterol as part of their normal diets, the results were mixed (as we will discuss later).

Next, in 1953, Ancel Keys reported in a landmark study that calories from dietary fat were linked to the incidence of death from coronary artery disease in middle-aged men from six countries.[24]

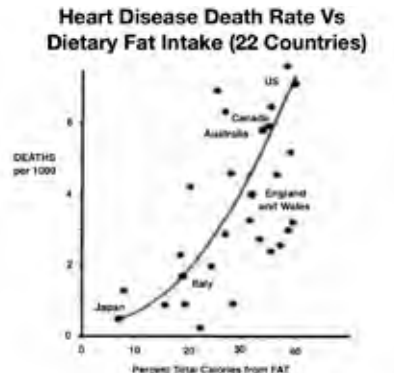
Graph of death rate versus fat calories as a percentage of total calories

The data beautifully demonstrated a striking, near-perfect correlation between dietary fat and heart disease mortality, ranging from fewer than

1/1,000 deaths among Japanese people (eating <10 percent fat) to over 7/1,000 deaths among Americans (eating roughly 40 percent fat), with people from Italy, England, Wales, Australia, and Canada falling neatly along the curve between them.

This work was reproduced in later publications by Keys and would form the basis of Keys's diet-heart hypothesis: "that dietary fat increases cholesterol in the blood and elevated cholesterol causes heart disease; hence, dietary fat causes heart disease." This model went on to define medical thinking and public health policy about diet and heart disease for the next seventy years.

The reasoning was clear-cut and made perfect sense except that the data was wrong and the conclusions of the study were incorrect. It was later revealed that there were twenty-two countries with data available, of which Keys chose only six to make his point. There was little correlation when all twenty-two studies were included. If he had chosen six different countries, he could have come to the opposite conclusion.[25] The conclusion of the study was obviously incorrect in the face of all the data available.



Graph of death rate versus fat calories as a percentage of total calories with additional data

Next, in 1967, Fred Stare, MD, professor of nutrition and chair of the Harvard School of Public Health, Department of Nutrition, and his

colleagues produced a comprehensive review, "Dietary Fats, Carbohydrates and Atherosclerotic Disease," in the prestigious *New England Journal of Medicine*. The review concluded there was "no doubt" that the only dietary intervention required to prevent coronary artery disease was to reduce dietary cholesterol and substitute polyunsaturated fat for saturated fat in the American diet.[26]

It wasn't until 2016 that it was discovered that Stare and his group secretly had been paid a large amount of money by a sugar trade group to incorrectly shift the blame for heart disease from sugar to fat, which the authors of the study failed to disclose. This was a clear conflict of interest and scientific misconduct.[27] At the time, there was growing suspicion that sugars and refined carbohydrates were the real cause of heart disease, and that the sugar trade groups had an interest in making sure that this message did not get out. We will cover this in greater detail later.

For all these reasons, the world rapidly switched to a low-fat, high-carbohydrate diet to prevent heart disease. Dietary saturated fats were replaced with trans fats, seed oils, starches, cereals, and sugars. By the 1980s, few physicians believed that added sugars played a significant role in coronary heart disease (CHD), and the first 1980 Dietary Guidelines for Americans focused on reducing total fat, saturated fat, and dietary cholesterol for CHD prevention.

This was all wrong. We will examine why this belief is flawed and how the truth can save your life.

At about the same time, the most profitable class of prescription drugs ever made was introduced: statins. Today, this has resulted in a trillion-dollar pharmaceutical and food industry based on the assumption that dietary fat and elevated LDL (or "bad") cholesterol are the cause of heart disease. (Again, we will get into that later.)

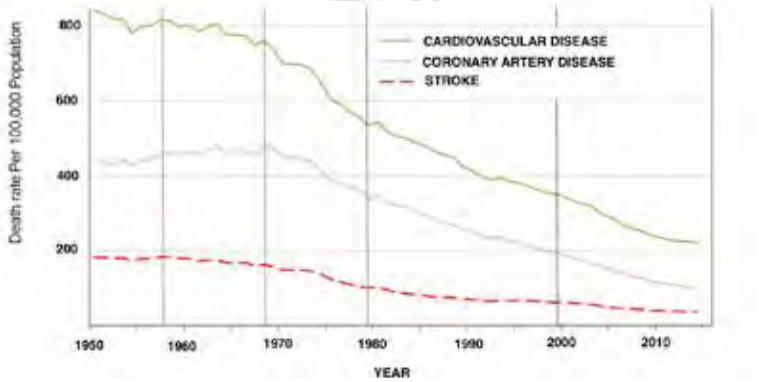
According to the Centers for Disease Control and Prevention (CDC), one in three Americans is prediabetic—and 80 percent of diabetics die of heart disease. Heart disease is already the number one killer. But the CDC now estimates that even more people born since 2000 will get diabetes than

earlier generations. That means heart disease will rise to even higher levels of lethality. It's already the top Medicare expenditure.

What is the CDC doing to help prevent this life-shortening, first-ever, noninfectious epidemic?

Treating the symptoms instead of the cause.

Treating the symptoms at least has brought some results. Unlike obesity and diabetes, the rates of mortality for cardiovascular disease have fallen, though they will likely grow again in the future. Some attribute this temporary decrease to the effects of the low-fat diet, statins, and coronary artery stenting. We argue that the cessation of smoking, treatment of hypertension, and improved acute coronary care units were responsible for most of this effect. Even with this decrease, the overall incidence of heart disease—the number of people with it—has not changed. It remains the number one killer above COVID-19, cancer, stroke, and all other conditions.



Age-adjusted mortality rates for cardiovascular disease, 1950 to 2014[28]

Many people believe that coronary artery stents or surgery are a treatment for coronary artery disease, and that these will significantly reduce their chance of later dying from the disease. We will examine why neither of these medical approaches changes the underlying course or ultimate outcome of atherosclerotic coronary artery heart disease. We'll also look at the

true underlying pathology and what can be done to prevent—and in some cases, even reverse—this disease without drugs or surgery.

All three of these lies were driven by the same thing: the insulin-producing, low-fat, high-carb diet. This became a national policy in the 1970s after the 1955 heart attack of President Dwight D. Eisenhower. That triggered people to write about fat causing heart attacks, congressional hearings with Senator George McGovern, and food guidelines emphasizing carb intake over saturated fat. We flipped the nation's metabolic system from fat burning to fat storage.

We also will cover many more lies in this book, including about statins, strokes, cancer, Alzheimer's disease, mental health, and even our basic understanding of aging itself. Then we will look at the fascinating truths that inform what we can do to prevent and even reverse these diseases.

THIS IS NOT A DIET BOOK

I'm not going to give you a strict diet to follow. Some people follow a diet and still have a heart attack or other disease. It's not enough to eat right. Other factors play a part in your health: your genetics, your environment, stress, sleep, toxins, and other deficiencies that we will cover.

Instead of giving you a diet, this book will give you peace of mind. Because we *will* cover a recommended nutrition and overall lifestyle plan based on the latest research and up-to-date science. Thank goodness the establishment now can at least agree that what you eat affects your health.

But what does "eating right" mean? There are thousands of diet books with subtle to wildly different variations—and nutrition is not the only solution to the risk factors, including environmental and genetic. So even if you "eat right," you still may be at risk for early death in your forties and fifties and know nothing about it.

That was me. I did everything right but still developed life-threatening chronic diseases that could have killed me.

This book will cover diet in general, though, so you know what foods do in your body and why—way beyond what you've previously read. We also will cover what bestselling and even critically acclaimed diet books do not. This includes tests you may want to consider, such as uric acid and homocysteine. That's in addition to all the lies about disease. Plus, we'll discuss aging and longevity. There are longevity breakthroughs tied to aging, specifically to metabolic function, and we'll talk about those so you can take advantage of them and add years to your life.

Speaking of aging, you've heard lies there, too. The lie about aging is that aging is from wear and tear on our bodies over time. Now we know that's not true. Aging is programmed into some animals more than others, such as Pacific salmon dying immediately after spawning. Other animals don't age at all. The single greatest risk factor for all chronic disease has been considered aging, but that's not quite true. And if we get that wrong, we're wrong on a lot more about aging. You'll want to scream when you learn the truth, but it just might give you a decade or more of enjoyable years at the end of your life that you wouldn't otherwise experience.

Most of all, this book will tear the cover off the medical lies that I believed, that I taught, that eventually made me sick, and that I eventually began to question. You will learn the truths that saved my life and can save yours.

It's time to get healthy. Let's go.