

PART III

THE FIBER FUELED PLAN

Fiber Fueled 365: The Lifestyle

Building healthy habits that lead to effortless fitness and thriving

We've finally arrived! I'm excited to share the Fiber Fueled 4 Weeks plan with you. But first, let me say that *Fiber Fueled* is not a diet. It's a lifestyle. It is a transformation into the life you deserve, where you restore your health and feel amazing and confident. Take a moment, put this book down, and think about how that transformation looks for you.

It's a beautiful picture, isn't it? Hippocrates, the founder of Western medicine, gave us the adage, "Let your food be your medicine, and your medicine be your food." This idea is central to the *Fiber Fueled* program, but just as important are the healthy lifestyle habits. We'll talk about these later in this chapter: sleep, exercise, time with loved ones, time with yourself, and more. These can be your medicine, too.

When you build the "right routine" then healing just happens. You're living a life that heals, restores, and strengthens you. And it's effortless. But to get there, we have to get into the right frame of mind.

It all starts with a "health mindset"

We are not born with skills that are forever locked in place, incapable of being modified. No one is born to be a professional singer or basketball player, as much as it may seem like that sometimes (hi, Beyoncé and LeBron)—we all have the ability to grow and get better no matter who we are. Rather than

believing, “I can’t do that,” if you apply yourself and get really invested in working toward your goal, you can and will develop new skills and change your life. It’s called having a “growth mindset.”

The growth mindset is not about who we are but what we are capable of becoming. You are capable of change. The idea of a “growth mindset” was first introduced in Dr. Carol Dweck’s book *Mindset: The New Psychology of Success*. It allows you to acknowledge that you have strengths and weaknesses, but that you should celebrate weaknesses as opportunities for growth. With our growth mindset, we choose not to overly emphasize “success” or “skill” or “perfection.” We honor effort, learning, and persistence.

My wife and I have been talking about this “growth mindset” since our first child was born. We wanted to create values in our family that embraced perseverance and hard work, not for winning, but for setting a goal to see what you’re capable of and what you can make yourself do. We feel strongly that it’s a healthy outlook for life.

So I had this awareness already spun into my soul, and when I became motivated to do better with my own health, I started to apply the same concept. I developed a health mindset. I wasn’t interested in the pressure of a rigid plan to eat healthy, and I didn’t want to go through a painful process of denying myself food through dieting. I wasn’t down for shaming and blaming myself for my unhealthy ways or love for fast food. It was time to move forward, but on my own terms.

It wasn’t always easy for me and I know it won’t always be easy for you. Let me be honest. I loved my old diet. I didn’t love the way it made me feel, but for about three minutes, it was blissful to dig into a Philly cheesesteak or a chili cheese hot dog. I literally was drinking a two-liter bottle of soda almost every day, trying to compensate for the hangover I had after each meal with caffeine. I probably should have been sponsored by Red Bull because they were a regular part of my life; sometimes I had two or three in the same day. And it never hit me that maybe, just maybe, it was my lifestyle that was making me feel like crap and also the reason I couldn’t lose weight, even though I was lifting weights for forty-five minutes, then jumping on the treadmill for a 5K or 10K or diving into the pool for a hundred laps.

I wanted to get back to having a healthy relationship with my food in the quest to better myself. I decided to embrace my own starting point and orient my choices toward better health. Every meal became an opportunity to do a little better. And when I slipped up, no worries. I’d try to do better next time. I enjoyed the challenge of seeing what I could do to take care of myself, and the opportunity to learn and grow from it.

It started with little changes. Saying yes to Brussels sprouts. Subbing in a glass of water or kombucha for Coca-Cola Classic or Diet Mountain Dew. Making a delicious smoothie at home rather than stopping at Hardee's to grab a chili cheese dog and burger. No late-night snacks. Dropping the artificial sweeteners and creamer from my coffee. Skipping the french fries sometimes for a side salad to get some green stuff on my plate. I didn't feel deprived or obligated. I was making the choice, and I was choosing better health.

One of the most exciting things I learned on my personal journey is that as I started to make these changes, I found my taste buds came along for the ride. Food that didn't seem appealing to me at first slowly became what I craved. You know that feeling when you return home after travel and you find yourself craving your favorite local meal? For me back in the day that was Jersey Mike's for a cheesesteak or Five Guys for a burger and fries. One day I got home and noticed I was dying for something else—my first stop was to my local salad joint where I grabbed a salad and a kombucha. Look, even to me it still seems weird to say that. I never thought I would crave a salad. But when this started happening to me, I knew something had changed.

The ultimate test came after I'd cleaned up my diet for a few years. I was in medical practice and I had the worst week ever. I was in the hospital by five in the morning every day, and from the moment I walked in the door, I was flying by the seat of my pants trying to get my work done. New consults kept coming in and the number of sick patients I was caring for kept increasing to the point where I was literally running between patients in order to see them all. Plenty of nights I would get stuck in the hospital after hours. Not like, "Hey, I got done at seven-thirty last night." No, this was more like I was lucky if I'd get home by 10:00 p.m. Most nights it would be even later. And it's hard to describe what it does to your morale when you work like that; you hate your job, you hate yourself for taking the job, but what you hate the most is that you haven't seen your wife or newborn daughter awake all week. You get home and they're asleep, then you sneak out in the morning before they get up.

So when the week from hell was over, I said to myself, "You know what . . . you deserve to treat yourself." At this point I was no longer eating red meat. I hadn't had a steak in nearly two years. But once upon a time, when I was chief resident at Northwestern in Chicago, good gracious did I love me a rib eye. So I decided to treat myself to what used to be one of my favorite steak houses. I sat at the bar and ordered a rib eye. Medium rare—that's the way I always liked it.

When the steak came out, though, I didn't start salivating when I smelled it. In fact, something smelled off. And when I took a bite, I knew something definitely was off. It didn't taste the way I remembered. It's not that I felt guilty; heck, I

felt like I deserved this reward. It wasn't an ethical thing. I was hungry and I was treating myself. I finished two bites and realized I just didn't want it. I covered it up with my napkin and asked for the bill. I paid the bill and got out of there as quickly as possible before they could question why I didn't like it.

There was nothing wrong with the steak itself. The only thing that had changed were my taste buds. I haven't had a steak since. I have no desire to when it comes to flavor. I had transformed my diet and developed the principles you find in this book by using them in my own life first. I was as happy as I'd ever been, and I wasn't restricting my food intake at all. If I was hungry, I would eat. But I could tell that things had changed for me.

One day I jumped on the scale at work, the same one we use to weigh our patients at each office visit. I'd been between 235 and 240 back in the day, but it'd been years since I actually weighed myself. And as I slid the weights on the scale to find that balance, a smile came across my face. I was down to 190, which is what I weighed in college. Behold the power of plants! And small choices!

Small choices yield huge results, especially as you start to develop more consistency in those small choices. But here's the thing: It's not meant to be a burden. It's about empowering you with a health mindset as your compass toward a better life. It's not about absolutes or being perfect. It's not meant to make you feel guilty when you grab the fries and soda. Absolutely not. Adopting a health mindset means finding the positives and celebrating progress rather than flogging ourselves for moments of weakness or imperfection. We all have those moments—myself included! But don't let them make you give up.

If your taste buds aren't quite there yet, don't worry. You'll get there just like I did. As your microbiome changes, so will your taste buds. The changes that you make to your diet over time will change the core of your microbiome—remember how adaptable it is?—and ultimately your taste will evolve with it. Trust me; these foods that you don't think you have a taste for now are going to be your new obsession!

Even better news is that you don't have to wait for your microbiome to shift by torturing yourself or pretending you need to eat food that you don't like. Remember, you have three hundred thousand edible plants to choose from! It's not just diversity of plants, either—there's diversity of flavors, too. All herbs and spices are plants and most flavors from around the world are inspired by plants, so Mexican, Italian, Greek, Thai, Japanese, Chinese, Vietnamese, Ethiopian, and more are all fair game. There are so many ways to eat plants: soups, salads, smoothies, sandwiches, stews, and more. Those are just the S's. We haven't even talked about noodles, tacos, pita wraps, rice bowls . . . the list goes on.

We each have our own starting point. And while the tools in this book can help everyone on their journey, the end point will look different for each person. What I'm about is progress. According to the U.S. Department of Agriculture, the average American gets just 11 percent of their calories from whole grains, beans, fruits, vegetables, seeds, and nuts. That's *average*. In other words, if you're reading this book and you get 5 percent of your calories from plants, you're actually pretty darn close to the average. And you have the most room to benefit from small changes. If you move that needle from 5 to 30 percent, you can improve your health. Then watch those small changes add up.

Strive for 90 percent

I don't want you to feel burdened by the lifestyle changes I'm suggesting—I want you to feel excited about the possibility you have for growth! But it's good to have a goal. Otherwise you may just be wandering around aimlessly eating blueberries and hoping for the best. So let's strive toward becoming 90 percent plant-based. Not necessarily today, but that's our big-picture goal. Why 90 percent? Well, this is what we see in the Blue Zones population—they are 90 percent plant-based, so we know it's a diet that will give you enormous health benefits. Plus, having a little leniency helps avoid the pressure of being “perfect.” That 10 percent is your sandbox. You get to make what you want of it. Whatever your vice, it can fit into your 10 percent flex account so you don't have to feel guilty about it.

Let's be clear on what constitutes 90 percent here. I'm talking about whole plant foods. Things you can actually grow in soil. Things that don't come in boxes or special packages. Things that don't have ingredient lists because there's only one ingredient—a plant. Everything else falls outside the 90 percent—processed plant foods, oil, meat, and dairy. There are plenty of vegans who should clean up their diet. Veganism is not automatically a healthy diet just because you've eliminated animal products. There are lots of unhealthy processed plant foods out there, and lots of unhealthy vegans.

Let's talk about oil, folks!

You're all wondering, “What's the deal with oil?” so here it is. . . . Oil is a processed food. By definition, it is high-calorie, low-nutrient. A pound of greens has 100 calories. A pound of oil has over 4,000! Olive oil is healthier than the alternative oils, and so when you opt for oil I'd generally recommend extra-virgin olive oil. But do you want to guess how many grams of

fiber there are in olive oil? Zero. Same is true for all oil varieties. Zero grams of fiber, no matter which type or amount. We should not be striving to get more oil in our life, so that's why it's part of our 10 percent flex account.

Make no mistake about it, I'm not encouraging you to stop at 90 percent. That would be inconsistent with our health mindset. I honestly believe that you're going to feel so good as you incorporate more fresh plants into your diet that you're going to want more and more, and that's going to drive you closer to 100 percent. How do I know this? Because that's what happened with me. I came to a point where I was close but not quite there, and I decided to give up the last few pieces. I have to tell you, I was surprised by how much of a difference giving up even that last small piece was. Why have something hold you back? But at the end of the day, no matter who you are and what your matter of perspective is, this is about challenging yourself to improve. This is about personal growth toward a more plant-centered diet. How exactly that's going to look is personalized and your choice. But whether you're 15 percent or 95 percent, if you're moving in the right direction, then I am your biggest cheerleader and with you 100 percent. Let's do it together and share our common philosophy.

When healthy habits form, effortless fitness ensues

If I asked you to close your eyes and envision what medicine looks like, what would you come up with? Is it a pill? A doctor wearing a white coat and reaching out with a stethoscope? Do you see yourself lying in a hospital bed, hooked up to an IV and a nurse checking your vital signs?

What if medicine could be you, right now . . . living, breathing, in the flesh. Not an intervention by our reactive health care system, but instead just you living your routine daily life.

It's time for us to redefine health care and acknowledge that health during our lifetime is the sum of all of the small choices we make minute by minute, day by day. One choice, whether good or bad, makes little to no difference in the grand scheme of things. People don't drop dead from having one cigarette. But if you create consistency, a pattern, then you are amplifying that choice over the course of time.

We are creatures of habit. There's just no getting away from that. That can be problematic when we form bad habits that take a poor choice and amplify it. But the flip side is that we can acknowledge the power in our habits to amplify our choices, and use it to our advantage by being intentional in creating healthy

habits.

It is these healthy habits that can allow us to just live our routine lives and yet be promoting health and fitness. It becomes effortless because it's just our routine, but when our routine promotes health it's so much more powerful than any pill a doctor could give you. The body is designed to heal if we can just get out of its way.

In the coming pages you will find the lifestyle elements that contribute to a healthy gut. Think of each of these as a small opportunity around which to build a healthy habit. Remember, small changes yield big results, and when we make them our habits, effortless fitness ensues. Here are the pillars of a *Fiber Fueled* life:

Diversity of plants is the number one predictor of a healthy gut microbiota

At this point, you probably don't need me to explain why the Golden Rule of plant-based diversity matters. You've heard it throughout this book. This is our anthem. Our core philosophy. We no longer need a laundry list of food rules, we only need to remember to eat a diversity of plants. When you walk into the supermarket, remember: "Diversity of plants." When you're at the salad bar, trying to figure out what to add, remember: "Diversity of plants." "Diversity of plants" should cross your mind whenever you're thinking about what to eat. It will help you in your quest to maximize plant-based diversity.

And remember: Plant-based diversity is a celebration of nature's abundance. You get to taste and enjoy all the flavors, all the textures. Herbs and spices abound. Gone are the days of dietary restriction and lists of "approved" foods. Is it a plant? Okay, cool, we're good. We should be striving to include at least thirty different plants per week. But truly, if you're on a mission to maximize diversity with each meal, you're going to *crush* that goal.

What's better—raw or cooked?

New research indicates that the same plant will have different effects on the gut microbiome in raw and cooked forms. Cooking alters the carbohydrates, like fiber, and many of the chemicals in the plants. The result is a different effect on microbial growth, the genetic makeup of the microbiome, and the types of postbiotics generated. While we can't say that one is necessarily better, we can say that they're different. Here's a pro tip: If you're cooking your food, make sure to nibble on some of the raw ingredients to get their unique benefits and add even more plant-based diversity to your meal.

Strive toward gut fitness by exercising your gut

There are some of you who will struggle with this process more than others. As we discussed in Chapter 5, you may need the help of a doctor to make sure there's no constipation, food allergy, celiac disease, or alternative explanation for your issues. If you've ruled out everything except food sensitivity, then we need to identify the strengths and weaknesses within your gut. We all have them! Rather than looking at food as black and white—either you tolerate or you don't—we should instead be looking at the shades of gray. There's a certain amount you can tolerate and that's entirely personal and determined by your individual gut microbiota.

As part of the Fiber Fueled 4 Weeks (see Chapter 10), I've labeled the moderate- and high-FODMAP ingredients and even offered substitutions. This way, if you have a meal and then develop digestive distress, it gives you an idea of which ingredient may have been problematic. A food diary can help you keep notes and potentially identify triggers. Among the FODMAPs, there may be specific categories that cause more trouble for you than others—fructose, fructans, galactans, or polyols. It could be lactose if you're consuming dairy as well, although I would eliminate dairy if you're having ongoing digestive issues.

If you identify which FODMAPs cause the most trouble, then you know which ones you need to ease into. Plan to go back to the same recipe in the future and make low FODMAP substitutions and see if it's a better experience for you. But if it remains a mystery and you just don't seem to be making progress, even after going through the Fiber Fueled 4 Weeks, then you may need to work with a registered dietitian to do a formal FODMAP elimination and reintroduction. This is a lengthy and fairly complex process, and it takes more than twenty-eight days to complete. But if you need to do it, make sure you do it right under the guidance of a qualified professional.

F GOALS: The foundation on which plant-based diversity is built

In Chapter 8 we explored the health benefits of our F GOALS foods. These are the gut health superfoods on which we want to build our microbiome, and the starting point or core diet. Plant-based diversity remains the mission, and F GOALS are the fundamental foods in that mission. In them, you'll find all the good stuff: SCFA-producing fiber, vitamins, minerals, microbes, and unique phytochemicals like sulforaphane. I'm challenging you to step your game up and have something from this list every day.

Is a little meat and dairy okay?

We discussed in Chapter 2 that there are healthy and unhealthy proteins and fats. Plants and

animal products clearly have different effects on the gut microbiota and on health outcomes. Whether you choose to include animal products in your diet is ultimately your choice, but the bottom line from my perspective is that it doesn't improve your health. I personally have opted to eliminate animal products from my diet and feel great in doing so. But I also can't say that you're "unhealthy" if you continue to consume a small amount. By small, I mean radically different than the 220 pounds of meat and 30 pounds of cheese that the average American is currently consuming. Again, I believe in being at least 90 percent plant-based. What you do with that last 10 percent is up to you, but I am challenging you to continue your health mindset, to never accept stagnation, and to strive toward better health.

Some people may wonder: Are grass-fed hormone- and antibiotic-free animal products good for your health? Well, yes compared to antibiotic-laden, hormone-infused, GMO-fed animal meats, but that's like saying chewing tobacco is healthier than smoking a cigarette. It doesn't mean it's actually good for you—it's just relatively better. I'd encourage you to spend some time deciding where you stand.

Should the environmental impact or ethics of our food choices be considered? I believe we all have a responsibility to educate ourselves and come to our own conclusions. Remember, we don't just have a microbiome in our guts; the soil does, the plants do, and animals do, too. The twentieth and twenty-first centuries haven't been very kind to any of them, which is a result of human activity.

If you choose to taper down your animal products, one approach is an elimination progression, moving up the chain to higher-quality substitutions over the course of time:

Eliminate Beef > Pork > Chicken > Eggs > Salmon and then land on Tofu and Beans

F GOALS

F: Fruit (spotlight on berries) & Fermented

G: Greens & Grains

O: Omega-3 Super Seeds

A: Aromatics (onions, garlic)

L: Legumes

S: Sulforaphane (broccoli sprouts and other cruciferous veggies)

In Chapter 8 we learned a few tricks to get the most from our F GOALS foods. Mushrooms should be cooked, while aromatics and cruciferous vegetables are generally best enjoyed raw. Aromatics and cruciferous veggies have enzymes that need to be activated to maximize the health benefits, so we can use the CHOP then STOP trick to bring out those phytochemicals. When it comes to super seeds, remember: flax for lignans, chia for fiber, hemp for

protein. Or why not all three in a morning smoothie? And don't be shy about adding greens at every single meal, even if it's just a handful that you eat raw. They are maximum nutrients with minimum calories. Put your foot down on the accelerator and go all out on them.

Don't overlook the importance of hydration

For years I would roll out of bed and walk like a zombie to the coffeepot. I'd spend the next couple of hours trying to feel alive, attempting to slap the fatigue out of my face with caffeine. At some point I'd cross that line and feel awake, but then also strangely strung out and jittery from too much caffeine. Why couldn't this be simple?

It can be. It starts with water, the simplest, healthiest, and least expensive beverage on the planet. I'm as guilty of this as anyone, but it's amazing that we pay several dollars to drink a soda or something else that's going to hurt us when restaurants will provide you ice water for free. Frankly, we should be more appreciative of our access to water. It's a requirement for life. At least 60 percent of your body is composed of water. You could go three weeks without food but you wouldn't last more than four days without water. It's vital! And life giving.

Unfortunately our twenty-first-century lifestyle is ignoring this health marvel. For most of us, our most dehydrated time during the day is when we first wake up. We haven't had anything to drink for several hours, and so it's the ideal time to rehydrate our bodies. In the last few years I changed my routine to start with two large glasses of water. It's amazing the difference this little change provides. It turns on my brain, gut, and kidneys and I feel much more awake. I still reach for the coffee, but after I've had my water.

Then, as the morning progresses, I make sure to keep things balanced between coffee and water. There's no more straight coffee. I'm doing both, but favoring more water than coffee. I pay attention to my lips now. When I feel my lips getting a little chapped I'll grab the water bottle.

To optimize hydration, my recommendation is to wake up and have two large glasses of water first thing in the morning like I do. Make sure to drink more water than coffee or other caffeinated product in the morning. Add two glasses of water to each meal. This will help you get up to eight glasses of water per day and help your body function the way it was meant to.

Let's choose refreshments that actually refresh us

It's really not that hard to incorporate healing salves into your beverage selection. Small changes yield massive results when it's your daily routine, and this is one we can easily take advantage of! Here are some great ways to make

better beverage selections to amp up your gut health throughout the day:

- **Jazz up your water:** I love a good squeeze of citrus in my water and have more than gotten my money's worth from my juice squeezer. Throw a couple of slices of citrus and some water in a giant mason jar with some ice on a great summer day. Or infuse your water overnight with cucumbers or watermelon and mint and pamper yourself with spa-worthy hydration.
- **A little coffee in the morning:** I'm a believer! Coffee contains polyphenols that act as prebiotics for the microbiota. It's also the biggest source of antioxidants in the Western diet right now. I'm trying to change that by spreading the *Fiber Fueled* message, but in the meantime I don't see a reason to give it up. The problem with coffee is the junk we throw in it. I converted to straight black coffee, and I love it. But if you absolutely must add a sweetener, a little bit of stevia, monk fruit, or erythritol will do the trick. And creamer? I'd skip the dairy and go with organic soy milk. I know lots of people who love unsweetened oat milk in their coffee. I also love spicing up my coffee—cinnamon, ginger, and turmeric is a fave combo. If I'm dragging and need an extra kick, I'll drop some maca and ashwagandha in there. These are adaptogenic superfoods derived from roots that combat fatigue and stress. If I'm adding spices, I'm usually adding some organic soy milk and sweetener as well to soften the flavors. But keep your coffee to two cups max. Also remember to pound the water before, during, and after coffee consumption. Finally, if you have a diarrhea-related issue, such as irritable bowel, coffee may aggravate your symptoms.

A note on caffeine

I generally am not opposed to caffeine. Okay, fine, I'll admit—I love it. Couldn't have survived internship without it. But some of you may suffer from caffeine sensitivity, which can exacerbate digestive issues. There's actually a gene that causes this. If you're worried about this possibility, I'd consider eliminating all caffeine for a week and see how you feel.

- **Green tea in the afternoon:** One of my favorite rituals is to have

hot green tea an hour or two after lunch. It really invigorates me for the afternoon, and tea has a phytochemical called L-theanine that improves focus. You'll notice the difference compared to coffee. Green tea is also an excellent source of prebiotic polyphenols. My specific recommendation for green tea is organic ceremonial-grade matcha tea. It's rich in antioxidants and offers literally one hundred times more prebiotic polyphenol EGCG than conventional green tea. All you have to do is add hot water, although you can crank the antioxidants even higher with a squeeze of citrus because the vitamin C dramatically improves their absorption, meaning you get even more from the same cup of tea. Speaking of which, try making a matcha cooler by throwing matcha in a mason jar with some ice and a lemon. It's a drink that makes me think of Arnold Palmer, the late great golfer, who loved combining iced tea and lemonade.

- **Smoothies over juice:** I'm not anti-juice. I'm just pro-smoothie. What are you doing when you create the juice? That's right, separating the fiber and then throwing it out. Removing the fiber but keeping the sugar gives me a bad case of processed food déjà vu. Remember, we want to be *Fiber Fueled*. But that said, I've also been preaching "low and slow, that is the motto" when it comes to fiber, and since smoothies are such a beautifully dense heaping of fiber, it may be too much for some of you as you ramp up fiber and FODMAPs. In that case, juice can help to get you the phytonutrients without pushing you too hard on the fiber. But juices shouldn't be piña colada-flavored, they should be at least somewhat bitter. If you're making a fruit juice, you're basically creating a sugar beverage. Fructose in whole fruit is fine, but when you toss the fiber it becomes straight sugar. So when making juice, my recommendation is to use almost exclusively veggies with minimal fruit and embrace the bitter flavor!
- **Easy on the 'booch:** I love kombucha and drink it routinely. I think it can definitely be a part of a healthy lifestyle, but there's a lot of hype that's motivating people to slug down 32 ounces per day and rely on it as their only fermented food. I'd far rather you drink 'booch than soda or other sweetened beverages, but the acidity can erode the enamel on your teeth, so I always dilute it down substantially. Drink it with at least half water. I only drink 4 or so ounces per day, a fraction of a 16-ounce bottle you can buy

at the store. But that 4 ounces turns into 8 to 12 for me after I dilute it down.

- **Avoid alcohol:** I know this isn't what some of you want to hear, but if we're building a healthy gut I would recommend avoidance of alcohol. It's clear that binge alcohol consumption causes damage to the gut microbiota, increasing intestinal permeability, and the release of bacterial endotoxin. In other words, alcohol causes dysbiosis. Believe it or not, this is how alcohol causes cirrhosis. You don't have to be an alcoholic, either. Just a single crazy Friday night can damage your gut. Is it possible that these rules don't apply to light drinking, though? Unfortunately, not. Just one drink per day increases your risk of high blood pressure and stroke. Just a half drink per day has been associated with increased risk of cancer. There is strong consensus among the scientific community that alcohol causes cancer. We shouldn't be so surprised, though—alcohol kills bacteria, and in the case of our guts, this can mean it attacks our “good” bugs.

Are the rules different for red wine?

Some experts argue that red wine is good for us because it has the polyphenol resveratrol. It's true that polyphenols in red wine are prebiotic and can increase gut diversity. It's also true that resveratrol in red wine has been linked with heart health, but it wasn't until recently that we discovered the mechanism—once again involving gut bacteria. Resveratrol in red wine decreases TMAO levels by inhibiting the production of TMA by the gut microbiota. TMA is the precursor to TMAO. We know from Chapter 2 that TMAO comes from consumption of meat, eggs, and high-fat dairy and has been implicated in the pathogenesis of heart disease, stroke, Alzheimer's, type 2 diabetes, and chronic kidney disease. Five of the top ten killers. In a country that eats more meat than any other in the world, of course having a way to slow down TMAO production would benefit the heart, but drinking red wine to do it can create alcohol dependence and potentially cirrhosis. Why not just reduce our red meat consumption and eat more plants? Grapes, blueberries, raspberries, mulberries, and even peanuts have resveratrol, but without the risks. That said, if we're going to responsibly enjoy alcohol, the occasional glass of red wine would be the way to do it.

Activate your satiety hormones naturally

We've all been conditioned to focus on the amount of food—whether we're counting calories or macronutrient percentages of whatever. I've heard of diets where people even weigh their food. It can be so complicated! But it doesn't have to be. Let me make this incredibly simple: When you reach for whole plant

foods, you can eat WITHOUT RESTRICTION. No exaggeration, you have my green light to eat as much as you want. I'm going to say it again. Eat as much as you want. You'll still lose weight and get all the health benefits.

Here's why this works: Thank the fiber and resistant starch. Whole plant foods are by definition high nutrient, low calorie. There is the requirement to actually chew them; you can't just inhale them. We know that chewing takes time. When we eat a salad, it takes longer than eating a hot dog. As we learned in Chapter 3, fiber and resistant starches produce SCFAs that trigger the release of satiety hormones. By taking our time to chew fiber-rich food, we are allowing our body to use its natural mechanisms to tell us when we've had enough. No need to count calories. Mother Nature is counting them for you. You'll feel full and satisfied, and know that it's been enough. And it will be a meal jam-packed with nutrients and fiber.

For most of human history, our species consumed whole plant foods to the tune of 100 grams of fiber or more per day. This was real food that grew in the dirt. Not fried okra, veggie burgers, processed grains like bread, or nondairy ice cream. When we process our food, we strip away the fiber. We pervert nature's balance and create artificially calorie-dense, fiber-poor foods that encourage overeating. Processed foods are the majority of America's diet. Most of the rest is meat, dairy, eggs, and oil. Calorically dense with a net fiber offering of zero. And then we wonder why we overeat and have an obesity problem and the associated health issues.

If you flip the ratio by following the plan in this book and eat 90 to 100 percent plant-based with diversity of plants, counting calories will not be necessary. You can eat when you're hungry, eat until you're full and satisfied, and you'll still lose weight thanks to being *Fiber Fueled*.

Engage in mindful eating

Go, go, go! That's the American lifestyle these days. I'm as guilty as anyone. I push myself to move faster, do more, and I sometimes skip meals. Let's start by taking a deep breath. There are some things in life that are too important to let the rat race infringe on them. It's unhealthy to inhale your food. The process of digestion starts in your mouth, where mastication breaks up the food and amylase in saliva begins to break down the starches. When we eat too fast, we don't allow our body to catch up with what we're doing, which leads to overeating. We weren't designed to scarf down food and get it over as quickly as possible; we're wired to enjoy our food and allow our body to signal us when it's full.

When I was a kid my Granddaddy would always say, "Small bites, and chew

well!” We all need to follow Granddaddy’s sage advice by reengaging with our food. Mindful eating is simply getting back to our roots of enjoying our food. It’s having the manners that your grandparents taught you when you were a kid. Here’s how you do it:

- **Sit down at an actual table.** No eating in the car or while you walk. Put your food on a plate or in a bowl. Don’t eat out of a container.
- **Turn off your cell phone.** Put down your laptop. Shut off the TV. No electronics during this sacred time.
- **Spend a moment observing your food before you start.** Celebrate nature’s bounty—the looks, the smells. It’s beautiful.
- **Take a moment to taste your food.** It doesn’t have to be with every bite, but you should routinely take moments to pause.
- **Chew your food!** Not one or two chomps. I’m talking twenty-five or more bites. Set your fork down while you chew.
- **Observe the Japanese tradition of *hara hachi bu*.** As described in *The Blue Zones*, this means eating until you’re 80 percent full and then stopping. By doing this, you’re giving your body a chance to catch up so that you’re just right and not overshooting.
- **Enjoy meals with other people when you can.** The Europeans have mastered this and we Americans are struggling. We should be taking our time and enjoying each other’s company while we eat, not sprinting to inhale our food so we can get back to work.
- **Schedule your mealtimes.** Maintain a regular schedule that taps into your circadian rhythm. An early dinnertime is key. I’ll talk more about this in the next section.
- **Avoid toxic hunger.** Eating as a reaction to hunger or to emotion is an unhealthy practice. You’re far more likely to reach for unhealthy “comfort” foods than nourishing, healthy foods. If you feel hunger coming on, don’t wait until it’s turned you into a carb-starved monster. This is where a piece of fruit or a handful of nuts can do the trick to hold you over until your next scheduled mealtime.

It’s not just what you eat but *when* you eat that matters . . .

Our body has a natural biorhythm that we call our circadian rhythm. This is an

endogenous, entrainable oscillation of about twenty-four hours that's a part of all life throughout our planet—other animals, plants, fungi. They all have this. Our gut microbes are no exception! When you disrupt your natural rhythm you are also perturbing your microbes. For example, jet lag actually induces dysbiosis in the gut microbes, which is why you feel like trash when flying internationally. And don't get me started on the shared cultural nightmare that is daylight saving time. If you are a shift worker, you probably also know this feeling well. Shift workers are at increased risk for hypertension, hyperlipidemia, obesity, and type 2 diabetes because of what a disrupted circadian rhythm does to the gut microbiome.

Our gut microbes thrive on consistency that's anchored into these twenty-four-hour oscillations, and that means timely meals. For example, you can eat literally the exact same food but at different times in the day and have a different effect on your blood sugar. We are most insulin sensitive in the morning and most insulin resistant in the evening. To optimize our eating patterns, we want to anchor our eating around the times that we need our fuel, and then allow our gut to rest for a period of time. This approach is called time-restricted eating, or TRE. Some call it intermittent fasting, but this isn't intermittent. It's a lifestyle that you sustain day to day.

To properly do TRE, you have to do two things. First, you create time boundaries so there's a period of food consumption and a period of sustained bowel rest. My recommendation is to rest your gut for at least thirteen consecutive hours, which means restricting your eating hours to eleven or less.

Second, you need to synchronize your eating pattern with your circadian biology. This is the part that many people are overlooking. It's not just any thirteen hours. Do you need to have a big meal in the evening or have a snack at 10:00 p.m.? Of course not. TRE is not meant to be first meal at 11:00 a.m. and last meal at 10:00 p.m. That's a whacked-out biorhythm. To get things properly aligned, you should eat dinner early in the evening and then it's a hard line—no food after dinner! Just water. It's also important to create a space of at least two if not three hours between when you stop eating and your bedtime. The earlier the better on dinner.

Does coffee break the fast?

Yes and no. Fasting benefits the gut microbes because they get a break to reset, and anything but water interrupts that. But the fat-burning metabolic benefits continue if you drink coffee and avoid solid food. I personally have had great success with twelve hours of strict water fasting followed by coffee and delaying my first solid food for a few more hours in the

morning.

On the topic of optimizing our biorhythm, let's talk about meal size. We tend to gorge ourselves at dinner, but it doesn't really make sense. We don't need a massive dinner when we should be winding down for sleep shortly after. On the flip side, we've been overlooking lunch. Midday is when we need energy the most. So let's invest a little more into a nice, satisfying lunch.

Supplements are meant to supplement diet and lifestyle, not replace them

As we discussed in Chapter 7, you can't overcome a bad diet or unhealthy lifestyle with supplements. We also see a lot of hype around supplements in the absence of science. Many of the most popular supplements on the market have little to no research to actually support them. They can be a waste of your money or, worse yet, they can harm you because they're not different from taking a medication. At least with medicine we know what the risks are. If you take five or more supplements because they're "natural," I can assure you that no one knows what they are doing in combination.

But I do believe there's a role for supplements when properly used. They allow us to optimize our diet. As we discussed in Chapter 7, I'm a believer in prebiotics and in some cases probiotics. There are three supplements that I generally recommend to address some of the challenges in our twenty-first-century life: vitamin B₁₂, vitamin D, and an algae-based omega-3 supplement. It's best to discuss these with your doctor to determine if they make sense for you and, if so, what dosage you should take.

Sleep is powerfully restorative

It's actually incredible the way your body heals when you just allow it to rest. You can think of time-restricted eating as rest for your gut. But sleep is rest for the entire body, including the gut. When we deprive ourselves of sleep, we feel the effects in the microbiome as it shifts toward a profile promoting obesity. No wonder we feel so crummy after a poor night's rest. Insufficient sleep is associated with increased appetite, weight gain, increased risk of heart disease/stroke/diabetes, impaired immunity, depression, poor concentration/productivity/work performance, and even poor athletic performance. Sleep is free and it powerfully promotes better health, including in your microbes.

It's important not only that we get enough sleep, but also that it's anchored to our circadian biology. The circadian rhythm in sleep and wakefulness is primarily synchronized to the rise and fall of the sun. When you get up in the

morning, make it a point to expose yourself to natural sunlight. Even a short walk outside can work wonders. On the flip side, we need to wind down when the sun goes down at night. Ideally, we should stop using electronics during this time because the bright light impairs melatonin release. We should also strive toward an earlier bedtime. In the words of Ben Franklin, “Early to bed and early to rise makes a man healthy, wealthy and wise.”

Time to reconnect with nature

Speaking of seeing the sun, think of how much life has changed for us humans in the last few hundred years. We went from predominantly outdoor creatures to the sterile, bleached interior of our homes and offices. Seems safer, but is it? We’ve certainly drifted away from nature. We’ve seen in this book that living creatures either have a microbiota or are a part of the microbiota. Microbes are a fundamental part of life on Earth. So what happens when we surround ourselves with lifeless physical structures (our homes) that we spray with chemicals? Unlike the lush habitats in nature, our man-made structures are a microbial badland that fails to contribute to your microbial diversity. No surprise, moving from a rural environment to the city has been associated with the loss of beneficial microbes and an increase in dangerous genes.

Conceptually this goes back to the hygiene hypothesis discussed in Chapter 1. Exposure to the outdoors early in life has been shown to improve immune function. Adults who exercise outdoors have more diverse microbiomes. Gardening improves mood, lowers stress, increases life satisfaction, and even promotes weight loss. Not to mention that growing your own veggies has been shown to make you enjoy eating them even more! We’ve even found that barefoot contact with the earth can improve mood, boost creativity, and give you more restful sleep.

The point is we need to look for opportunities to get outdoors. Don’t run on the treadmill when you could actually run outside. Don’t buy your plants when you could grow them. Don’t read this book on the couch when you could throw down a blanket and take off your shoes outside. And since we will continue to live indoors, let’s make the most of it and decorate our homes and offices with potted plants. Making time to trade microbes with nature is a necessary and wildly underrated contributor to human health. Every single one of us should have an outdoor hobby for every season of the year.

Regular exercise contributes to gut health

I find it amazing the way that fitness contributes to gut fitness. Our movement pattern, whether active or sluggish, ultimately has an effect on our microbes. In

mice we see exercise induce dramatic changes in the gut microbiota, with more SCFA producers and improved intestinal integrity. Believe it or not, there was a 40 percent increase in healthy microbes with exercise. Similarly, in adult humans we see increased SCFA-producing gut microbes with regular exercise. The effect is lost when you stop moving.

The fact that SCFA-producing microbes are generated through exercise says a lot. Mother Nature rewards us for good behavior, and the currency is SCFAs. Whether it's healthy eating or exercise, they share a common pathway that leads to health benefit. Once again, all signs point toward the relevance of SCFAs in human health. This explains why a healthy diet and exercise are individually great but in combination you get a synergistic effect.

Take a short fifteen- to thirty-minute walk after dinner, for example. Research shows us that it helps mobilize and empty your stomach, which helps digestion and reduces the likelihood of having acid reflux. A short walk stabilizes blood sugar and reduces triglycerides, contributing to a lower risk of coronary heart disease. Fat is burned and weight is lost. Your immune system gets stronger and risk of infection declines. Your energy levels and mood are lifted up. A walk outside even unlocks the creative part of your brain. All of this from just having a healthy routine that involves a walk after dinner. So easy!

Make no mistake—you can't exercise your way out of a bad diet. I've proven that firsthand. The benefits of exercise and plant-based eating go hand in hand. If exercise is not currently a part of your lifestyle, try walking at least thirty minutes three times a week. But if you only have ten minutes, start there. You can work to increase your time. When you exercise, it's going to hurt a little in the beginning, but it'll get better as you get stronger. Just like when you exercise your gut.

We need human connection to thrive

The highest form of torture is isolation, removing a person from other humans. We are by definition social creatures; it's a part of our biology. We're living in the era of "social media," yet are more isolated than ever. Social media is not only antisocial; it's bad for our mental health and may be bad for our gut.

Life and microbes are meant to be shared with others. Believe it or not, each one of us has a unique "bacterial cloud" that follows us around. We're each emitting about a million particles into our environment per hour. Close proximity to others has the potential for sharing among our bacterial cloud. Studies show that you're likely to share microbiome similarities with the people you live with. These relationships have even been shown to impact our genetic expression. Even having our furry friends—dogs and cats—can contribute to

microbiome health and protect us from disease. Our environment and the people we surround ourselves with allow a microbial exchange that keeps us alive and thriving. In a hypersterile world, I celebrate the microbes that some call germs or dirty.

We need to get back to the basics of spending time with real people: shaking hands, giving high fives, looking someone in the eye when they're talking. It's time to put down the phone and get back to how we're wired—for human connection.

Stress management is key

Stress impacts the gut. In fact, stress alone can create alterations in the gut microbiota and an increase in intestinal permeability leading to dysbiosis. This is why you can drink your green smoothie, eat your plants, go to the gym, and get a good night's rest, but if your heart and head aren't at peace then neither are your microbes. Many of the worst digestive issues that I see in my clinic are in the victims of abuse or those recovering from an eating disorder.

The good news is that the opposite is also true. Stress-reducing practices, such as meditation, are actually good for your gut. Take away the stress and suddenly the gut microbiota increase production of SCFAs and anti-inflammatory metabolites. All signs point to the importance of self-care and having a stress management practice. Some would call this mindfulness.

It can be simple. Just five minutes at least once a day in a quiet space. Settle into a comfortable position, loosen your clothes. This is your time, but you're going to dedicate it to the positive things in your life. There are four steps. First, think of something you're grateful for. Focus on a positive thing that's happened to you. Second, think of someone you love. Take a moment to appreciate the positive role they have in your life. Third, clarify your intention. You're drawing a map to where you want to go. What do you want to happen in your life? This can be anything—an emotion, behavior, or goal. Make sure it's positive and something immediately applicable in the short term. Last but not least, release your mind, focus on your breathing, and allow thoughts to naturally enter your mind. End with a few deep breaths and focus your eyes softly.