METABOLIC TRANSFORMATION GUIDE

NEW YOU in 22



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INTRODUCTION

In the next 22 days, something profound is going to happen to your metabolism.

You're going to fix it.

You see, you have a central metabolic "defect". Maybe you've always suspected that. Maybe you called it a "slow" or "sluggish" metabolism, maybe you thought it was genetic, or hormonal, but I'm willing to bet you've suspected there was something "wrong" with your metabolism, something that kept stubborn fat clinging to every inch of your body despite your best efforts to get rid of it.

Well, you were right.

And that same metabolic "defect" that made it so easy to pack fat on in the first place also makes it all but impossible for you to take it off.

As if that weren't bad enough, that same metabolic defect is responsible for making you sick, tired and depressed.

What's worse, this metabolic "defect" makes you age faster. How? By accelerating three key biological processes responsible for aging—*oxidative stress*, *inflammation, and glycation*...

Even if you've never actually thought about this "defect", I guarantee you it's at the core of your problems with weight—especially that stubborn fat that just won't go away no matter how little you eat or how much you exercise.

And until you fix this one basic metabolic "defect"—which is exactly what we're going to do in the next 22 days—your fat loss efforts are doomed to failure.

So what is this all-important change I'm going to help you produce in just 22 days?

Simple.

You're going to change from being a *sugar-burner* to being a *fat-burner.*

In the next 22 days, you're going to experience a powerful metabolic shift that converts you from a metabolism that just barely limps along on highly toxic sugar, to a person whose metabolism absolutely thrives on fat.

Yep, you read that correctly, *fat*! Despite what you have been lead to believe, fat is your body's preferred source of fuel, the fuel it runs the best on. It's the cleanest-burning, most energy-producing, most abundant fuel source on the planet.

Fat is the body's equivalent of solar energy. But just like abundant solar energy has to be *harnessed* to make it useful for running machines, your body has to be able to *access* that abundant fat to use as fuel to power *your* metabolic machinery.

This is what we call "burning fat".

If your body can't use fat for fuel very well, it will sit right where it is—on your hips, thighs, butt and stomach—while your body looks for an alternative fuel it *can* use.

But all that's about to change.

Quite simply, you are going to be transformed from a *sugar burner* into a *fat burner.*

Making this one simple metabolic shift means your body will finally be able to access all that fat that just sits defiantly on your hips, thighs, butt and stomach... and finally BURN it for energy.

Your body will be able to use that fat for fuel, exactly as it was meant to. And it will stop depending on sugar, which is the *least effective* of all fuels, as I'll explain shortly.

But before we jump into how to get this metabolic shift to happen, I want to give you an important word of warning...

THERE IS ONLY ONE WAY TO EFFECTIVELY BURN FAT

When your body is stuck in sugar-burning mode, it's literally impossible to burn fat—your hormones simply prevent your energy factories from accessing it.

Instead, like an addict, your body will do whatever it can to get access to sugar, including dismantling itself. Since it can't use fat very well, it will break down muscle, bone and even key organs like your brain, heart and lungs, in order to make more of the only fuel it has learned to run on: sugar.

That's why crash dieting and starving yourself doesn't work—your body will literally eat itself before it burns fat.

But once you've shifted over to a fat-burning metabolism, everything changes. Now your body will happily feast on that stubborn fat that's been hanging around your waistline for so many years. Day by day, week by week, month by month, the fat will steadily fall away, revealing the lean, attractive physique that's been hiding inside you all along.

And the icing on the cake is that not only will you look better, but you'll have a boatload of energy, you'll feel simply fantastic, your skin will glow, your brain will operate faster and you'll have significantly slowed down oxidative damage, inflammation and glycation, those three key aging processes I mentioned earlier.

You can do all this in just 22 days.

Interested? Well let's dive in!

IMPORTANT NOTE: HOW TO GET STARTED IMMEDIATELY

The Metabolic Transformation Guide is for people who want to dig into all of the fascinating scientific details that underpin this program. It's designed to help you finally understand exactly why we pack on fat and how to burn it off. It's packed with information about how your biochemistry influences your weight; how sleep, stress, detoxification and exercise contribute to fat gain or loss; and more very cool stuff.

If it were up to me, everyone would read this book so that they would be empowered to take an active stand against the corrupt food environment that is making us all sick, fat, tired, and depressed.

But…

I know a lot of you are short on time. So if you want to get started on the program right away WITHOUT knowing all of the details first, you have one of two choices…

1. Turn to chapter 12 and review section 3 of this book where the program is outlined.
2. Check out the Quick Start Guide I developed to go hand-in-hand with this book. If you want to get going right away, this is probably the single fastest way to get started burning fat immediately.

For those of you who get excited about the science of how the body works like I do, welcome and enjoy!

SECTION 1:
FAT BURNING 101



Chapter One

WHY BEING A FAT BURNER IS SUPERIOR

I'm willing to bet you've got fat on your body, probably in places you don't want it, and probably in amounts that make you cringe when you think about it. If you could burn fat efficiently, constantly and effortlessly, you wouldn't be reading this program.

But I'm going to tell you something quite radical right now: Fat is *not* your problem.

No, I haven't lost my senses, and yes, I'm fully aware you've come to this program because you want that fat gone forever. But hear me out.

Fat is actually the best fuel in the world for your body—it's the high-octane gas that your body was meant to run on, the "factory-specified" fuel for your cells. Without fat you'd simply cease to exist.

Your problem isn't that you *have* fat, it's that your body can't *burn* it. You've got plenty of fuel alright, but you can't get it into the gas tank.

You might ask, if I need energy for fuel, and I can't get my fat into the cells to be used for energy, what the heck is my body running on anyway?

Well, here's the bad news …

It's running on sugar.

You, my dear reader, are what we call a sugar burner.

Don't believe me? I have a little quiz for you—developed by our scientific advisory board—to help you determine whether you're a sugar burner or a fat burner. It's easy, and it only takes a few minutes.

You game?

I thought so.

AM I A SUGAR BURNER?

In the table below, place a check in the box for each statement that's true for you. (If the statement isn't true, just leave the check box blank.)

Hint: Don't think too much about each question. Go with your gut—your first instinct on this is probably right. (If you're not sure, it's probably a "yes.")

Are You a Sugar Burner?	✓ for each Yes
I am very hungry first thing in the morning.	
I need coffee/caffeine to get going in the morning.	
I usually drink more than one cup of coffee or cola a day.	
I have a difficult time maintaining my ideal weight.	
I can't easily go more than 3-4 hours without getting hungry.	
Eating often relieves my fatigue.	
I often get moody or irritable before meals.	
I often feel weak or dizzy if I wait more than 3-4 hours to eat.	
I often crave sweets and/or caffeine between meals.	
I often get "shaky" when I'm hungry.	
I suffer from frequent fatigue or fuzzy thinking that eating relieves.	
I frequently nibble food between meals because of hunger.	
I crave candy or coffee/caffeine in afternoons	
I'm often tired or drowsy at work.	
I get anxious and/or depressed when I'm hungry.	
Once I begin eating sweets, it is very difficult for me to stop.	
I prefer sweets and starches over all other kinds of food.	
I can't fall asleep at night without a snack before bed.	
I frequently awake in the middle of the night hungry.	
If I awake at night, I can't easily go back to sleep without a snack.	
TOTAL	

If you answered "yes" to five or more of the above, you're a sugar burner.

But don't be discouraged.

The good news—and it's very good news—is that you can change.

You can train your body to run primarily on fat. Fat will fuel not only your exercise, but your everyday activities.

And that's a good thing, because once you train the cells in your body to run on fat, they are going to feast on the fat that's all over your butt, thighs and tummy. They're going to love it—and you're going to love the results.

It's really that simple. Your body has been trained to run on sugar. It's become quite good at it, actually. It's a very effective sugar burner.

And if you're trying to melt inches off your middle, a sugar burner is what you don't want to be.

What you want to be—what you need to be—is a fat burner.

Let me explain.

METABOLISM 101

Every moment of every day, you're burning calories. You need calories for every activity, from thinking to square dancing, from meditation to moonwalking. You even burn calories while you're sleeping.

And these calories come from—big surprise—food.

But think about it for a minute. At mealtime, we ingest a large number of calories but where do they go? Clearly, we don't need all those calories at the exact moment we decide to have dinner! If our bodies didn't have a way to store those calories for future use, we'd be extinct.

Fortunately, that's not the case. We store carbohydrates in the liver and in the muscles as something called glycogen, and we store fat as something called triglycerides, which get packed into our fat cells (and to a certain extent, within the muscle cells themselves) where they wait patiently until the body needs them for fuel.

These two sources of fuel—fat and sugar (or, more technically, fatty acids and glucose)—are the primary sources of energy (calories) our bodies run on.

Your body can store about 69 gazillion calories of fat in your fat tissues (triglycerides), but only about 1800-2000 calories of sugar (glycogen). That's because sugar should only be used sparingly—in emergencies.[1] Sugar is the perfect fuel if you need a quick burst of energy lasting under 30 seconds, because the body can use that sugar instantly while it takes up to 20 minutes for the body to mobilize a significant amount of fat.[1]

Sugar is great in a pinch—but if you want sustained energy, you're much better off using fat as your primary fuel. Nature knew what she was doing when she gave you an endless supply of fat.

And, as you'll learn later, there's an added bonus to shifting your metabolism to burn fat: Fat is a "clean burning" fuel. When you burn fat, it doesn't produce as many of the chemicals that cause inflammation and oxidative damage, which are at the core of virtually every degenerative disease we know of—indeed, they're at the core of aging itself.

That's why moving from a sugar-burning to a fat-burning metabolism reduces your risk of the following:

- Pre-diabetes/metabolic syndrome/type 2 diabetes
- Heart disease
- High blood pressure
- Cancer
- Quicker aging—more wrinkles, declining skin condition and appearance, etc.
- Exhaustion/ fatigue/ lack of energy and endurance
- Low sex drive and/or stamina
- Poor mood—depression, anxiety, anger
- Hormonal imbalance
- Loss of lean muscle mass

Fat is precisely, and exactly, the perfect fuel to power our cellular machinery. Fat is what we want our cells to run on.

Unfortunately, if you're reading this program, that just isn't happening.

1 There are a few cells that run exclusively on sugar. These are nerve cells, red blood cells and the adrenal medulla.

5 PATHWAYS TO AN OPTIMAL FAT-BURNING METABOLISM

If a steady diet of sugar is so bad for us, why don't our bodies just burn a minimum amount of sugar and generate all the other energy it needs from fat?

An excellent question.

Our bodies don't run on fat for one simple reason: *because we've trained them not to*.

And, we've done so by not taking advantage of the 5 pathways that pave the way to an optimal fat-burning metabolism. In this program you will learn to utilize each of these important pathways to maximum effect.

Optimizing these five metabolic pathways is absolutely essential to getting rid of that unwanted fat. In fact, not doing so is one of the main reasons for failure on conventional diet programs.

Sure, we all know about diet, and most of us realize that exercise is pretty important as well. But how many of you truly understand the ways that stress, poor sleep, and toxins can sabotage your efforts and derail even the most successful nutritional program, keeping you stuck forever with a sugar-burning metabolism and a spare tire around your waist?

Understanding the role of stress, sleep and toxins—in addition to exercise and diet—will help you finally understand exactly why so many people fail to lose weight when they diet.

You're about to find out.

Pathway #1: Nutrition

When there's plenty of quick-burning sugar around, there's not much need for the fat cells to open up and release their goodies. The muscle cells, for example, have more than enough fuel just from the sugar in your diet. Fatty acids stay safely locked up in the fat cells, which now live on your hips, butt and thighs.

Who ever said metabolism was fair?

That's why the first step to switching over to a fat-burning metabolism is to change your fuel mix by changing what you eat. I'm going to show you exactly how to do that. I'm going to teach you exactly which foods you need to eliminate if you want to be a fat burner, and I'll even explain a secret ninja tactic for eating the carbs you love! How great is that?

Pathway #2: Sleep

Let's face it—few of us get a solid seven to nine hours of restful, uninterrupted sleep.

And what does that have to do with fat burning, you might ask?

Everything.

Not sleeping soundly—not reaching the deep stages of sleep—means three things to the body.

One, it's a huge stressor.[2,3]

Two, it leads to increased appetite.[4] (Ever notice how much you compulsively snack on sugary foods when you've pulled an all-nighter?)

And three, it throws a monkey wrench in your hormonal symphony since some of the most important hormones for fat burning and for good health are released only during the deep stages of REM sleep.[5]

And, as you'll learn later in this program, when your hormonal symphony is playing out of tune—as it will if you don't sleep deeply and soundly—you'll stay stuck in a sugar-burning metabolism, and fat burning will remain elusive.

I'll show you how to improve the quantity and quality of your sleep you can get and stay in fat-burning mode. All you have to know to implement the techniques I'm going to teach you is your bedtime.

Pathway #3: Stress

Let me give you the one-sentence executive summary on stress: It makes you fat.[6]

Really. No kidding. When the stress hormone like cortisol goes too high, it literally tells your body to store fat around the middle, break down muscle, and further reduce your metabolic rate.[7]

Oh, and if that wasn't enough, it also ages you faster.

You need to learn how to deal with stress because you simply can't ignore it. At least not if you want the fat-burning metabolism you'll need to effortlessly burn off those "fuel tanks" on your hips, butt and thighs. Again, I'll show you how. It's easy. If you can take a breath, you can do most of the stress-reduction techniques I recommend.

Pathway #4: Detoxification

Since we all want to get rid of toxins, detoxification and cleansing get a lot of press these days. Few people understand how profoundly toxins can actually mess up fat-burning hormones. (Messing up your hormones—as you'll soon see—virtually guarantees a sugar-burning metabolism.)

Toxins will damage your mitochondria[8], leading to less production of energy, dysfunction of the hormonal receptors on the cell membrane, and oxidative damage to the cells and DNA which can age you prematurely, keep you tired and fatigued and keep your body from burning fat efficiently and effortlessly.

If your toxic exposures are too high, you can stay stuck in sugar-burning mode no matter what you eat. And if your body's ability to get rid of those toxins is impaired, you'll have an even harder time burning fat.

In this program, I'll show you how to reduce your toxic exposure and detoxify your body naturally and efficiently. It's as easy as taking a bath.

Pathway #5: Exercise

One of the many reasons I got the nickname "The Rogue Nutritionist" is that I tell the unpleasant (and unpopular) truth about exercise—it's a lousy way to burn fat.[2]

Does that mean it's not important?

Not on your life.

But most people are doing it wrong, or, at least ineffectively, from a fat-loss point of view. Within reason, all exercise is healthy—but exercising for *health* and exercising for *fat loss* are not necessarily the same thing. In fact, they're only *rarely* the same thing.

The *right* kind of exercise, however, stimulates fat-burning enzymes, gets your hormonal symphony playing like the Chicago Symphony, and takes you out of sugar-burning mode and into fat-burning nirvana.

It's also the best anti-aging drug on the planet!

I'll show you the most efficient way to exercise in this program, both for health and for fat loss. And the good news is, it won't take an hour a day, every day of the week.

I've got a special program for you that's much shorter, less frequent and more powerful, so stay tuned. If you can walk, you can do this program. And you'll get your metabolic engines running on fat—the same fat that's now locked up in your fat cells, living on your hips, butt, thighs and stomach.

Once you optimize each of these pathways, you will automatically become a fat-burning machine, and that ugly pudge on your body will just melt away.

And there's more good news …

2 At least it is if you approach it in the traditional way.

By the time you've finished this program, you'll understand exactly how to do a metabolic tune- up that will get your hormones playing beautiful music together, signaling your cells to burn fat effortlessly and efficiently.

You'll learn just what foods to eat (and not eat) so that you can keep your fuel-burning mitochondria in tip-top shape.

The hormonal receptors on your cell membranes will work again, your cells will grow more mitochondria (the energy production factories in your cells), and the unholy trio of a sugar-burning metabolism—inflammation, oxidation and glycation—will be kept to a minimum.

You will learn how to sleep better, stress less, detoxify your body and exercise more efficiently.

And this means you will see the last of the sugar-burning metabolism that's kept you fat, sick, tired and depressed.

Let's get started!

WHAT YOU LEARNED IN THIS CHAPTER

- A fat-burning metabolism burns fat effortlessly and efficiently. A sugar-burning metabolism does not.
- Our bodies use two primary kinds of fuel—fat and sugar.
- When you're primarily a sugar burner, you stay fat, sick, tired and depressed. A sugar-burning metabolism leads to many diseases of aging.
- The five pathways to optimal metabolism are nutrition, stress, sleep, detoxification and exercise.
- Fat burning is driven by hormones, and a sugar-burning metabolism keeps your hormones from working properly.
- When you are a sugar burner, you increase inflammation, oxidation, glycation and your mitochondria are less efficient.
- This program will teach you how to create a fat-burning metabolism.



Chapter Two

THE FAT BURNING HORMONAL SYMPHONY

When I was a kid, every time we'd pass an obese person on the street, my grandmother would quietly cluck in sympathy and then whisper in my ear, "It's a hormonal thing."

Of course, later we "learned" that fat people were fat because they ate too many calories and didn't go for enough jogs. At least, that's what you'd think if you believed the conventional wisdom.

Once again, the conventional wisdom turned out to be not so wise after all. Meanwhile the idea that being fat is controlled by hormones is another of the many things about which grandma was right all along.

Now back in those days, we didn't really understand what "it's a hormonal thing" meant, but we (or at least my grandma) somehow intuited that hormones were deeply involved in weight gain. Which—make no mistake about it—they are. Big time.

Hormones control fat burning, they control fat storage, and they control appetite. And if they're not working properly, you're in deep doo-doo, no matter how much you exercise or how little you eat.

Let me explain.

THERE IS NO SINGLE FAT-BURNING HORMONE

If you're familiar with my work over the last fifteen years, you've undoubtedly heard me talk a lot about a hormone called insulin. And I'm hardly the only one talking about it. Insulin metabolism is at the core of the *Atkins Diet®*, *The Zone Diet*, *The South Beach Diet®*, *The Paleo Solution* and *The Primal Blueprint®*. It even plays a central role in my own program, *Unleash Your Thin*.

And with good reason.

Insulin—also known as the "fat-storage hormone"—is one of the most important hormones we need to know about if we're going to do anything about eliminating fat.

But here's the thing: it's not the only one we need to know about. Not by a long shot. And quite honestly, I'm getting tired of seeing marketing material and sales letters that lead you to believe that getting fat is all about controlling one hormone.

Full disclosure: I've probably made this mistake myself. Insulin's such an important hormone—with such a central role in gaining fat—that it's easy to give it the lion's share of attention and to assume that if you control insulin, you control fat burning.

After all, as you'll soon learn, insulin is what shoves fat into the fat cells and locks the doors. So it's easy to understand why many folks think that controlling insulin is all there is to controlling fat gain.

Unfortunately, that's not the case. Insulin is just the tip of the hormonal iceberg. At least half a dozen other hormones work with insulin to regulate appetite, hunger, cravings, fat storage and fat burning.

In this chapter, we're going to look at how four specific hormones work together to create what we call "the hormonal fat-burning symphony": A hormonal environment that nudges you away from sugar burning and toward a fat-burning metabolism.

And the best place to start is with a critically important hormone called IGF-1.

THE FUELING HORMONES: IGF-1 AND INSULIN

IGF-1 stands for "insulin-like growth factor." It's called "insulin-like" because its molecular structure is very similar to insulin, so much so that insulin and IGF-1 actually compete for the same receptors on the cell membrane.[1]

You can think of both insulin and IGF-1 as fuel nozzles that are used to feed your cells. But the differences in the way they do it is critical to fat loss and critical to your health.

When you are a sugar burner, the primary pump delivering fuel for your cells is insulin. And this is a problem because insulin is the fat-making hormone, delivering fat-making messages that we'd prefer our cells not hear.

What's more, insulin is darn good at its job—the more insulin you've got circulating in your bloodstream, the fatter you get.

IGF-1, on the other hand, is a fat-burning hormone. It therefore stands to reason that when you're a fat-burner, your cells are "listening" to IGF-1.

Which is exactly what you want.

Whenever you eat food, your blood sugar goes up. In response to this increase in blood sugar, the pancreas releases insulin into the bloodstream. Insulin's job is to act as a sugar wrangler, gathering all that excess sugar up and delivering it to your cells where it can be "burned" for energy.

When you eat the standard American diet full of high-carb foods (including those you've been told are good for you like "low-fat" cereals, pasta, rice, potatoes and bread), your blood sugar rises a lot—and the pancreas has a heck of a time keeping up with the demand for insulin.

The problem is compounded because the muscle cells—which are supposed to welcome all this sugar in—are pretty much on vacation, at least if you're living a sedentary life and they eventually stop paying attention when insulin comes knocking on their door. They become resistant to its effects—a condition known, not surprisingly, as insulin resistance.

Now you've got high-blood sugar, which is bad enough, and you've also got high levels of insulin. The insulin keeps knocking on the doors of the muscle cells but the muscle cells aren't having it.

Eventually, insulin turns to the fat cells, which are quite happy to have the sugar payload. When the fat cells can't take any more, they too become resistant to insulin. Now you're on your way to full-blown diabetes, obesity and all the rest of the stuff that comes with insulin resistance.

Not a pretty picture.

Changing Your Fuel Pump

Theoretically, insulin should only be elevated for a short time, a few times a day, right after you've eaten. Which is a good thing. The rest of the time, your cells should be getting their fuel primarily from the IGF-1 fuel pump.

Why is this important? Pull up a chair.

IGF-1 feeds the cells much like insulin does, but it also sends a number of important signals to the body at the same time. One signal is to build and repair muscle. Another is to burn fat. IGF-1 is not an "equal

opportunity" fuel pump. It does not feed the fat cells, but it's great at providing nourishment for the muscles, not to mention the organs, glands, bones and nerves.

You want IGF-1 to be your primary fuel pump, and you want insulin to hang around just long enough to take care of excess blood sugar, do a couple of other housecleaning chores and then get the heck out of the way so IGF-1 can go back to work keeping your metabolic machinery in good working order.

Unfortunately, when you've got too much fat on your butt, thighs and belly, that's not what happens.

Now here's where it gets interesting. Because insulin and IGF-1 are so molecularly similar, they can—and frequently do—*compete* for the same receptors on your cells.[2]

A Competition for Cellular Attention

Imagine the receptors on the cells as parking spaces, and insulin and IGF-1 as cars. The drivers of the insulin cars are way more aggressive, and when they're around, they grab all the parking spaces, leaving IGF-1 to cruise around with nowhere to land.

Remember, IGF-1's metabolic message is to build, repair and spare muscle, protein, bone, your brain and nerves, organs, glands, and connective tissue, and to burn fat. Obviously, we want to increase IGF-1 activity while reducing insulin levels. That way the fat-burner signal is much stronger—and much longer—than the fat-maker signal.

Makes sense, right?

But when you've got a ton of aggressive insulin cars driving around in your bloodstream and vying for the parking spaces on your cells, guess which message gets into the cell?

Yup. The message that gets through loud and clear is, unfortunately, "Store fat! And shut the doors to the fat cells so nothing escapes!"

Now don't get me wrong, insulin does a number of really good things in the body—like, for example, getting amino acids (protein) into the muscle cells and increasing the uptake of potassium.

Insulin's not a "bad" hormone. In fact, we're going to make judicious and strategic use of insulin by driving it up at specific times in specific ways that will actually help you burn fat.

But for the most part, it's critical that insulin passes the "Goldilocks" test—not too much, not too little.

Aside from a few strategic insulin spikes, we want to reduce our insulin levels so that IGF-1 can grab those parking spots and send its muscle-sparing, fat-burning messages to the cells.

And that's where a lot of diet programs simply stop. They bring down insulin levels—which you can easily do with a low-carb diet—and call it a day.

Unfortunately, it's not quite that simple.

Why?

Because there's more to your hormonal symphony. Let's talk about the next player in the orchestra … leptin.

YOUR FUEL METER: LEPTIN

So far, we've used a bunch of car analogies to illustrate how hormones work together to keep the metabolic engines humming and to keep you (ideally) in fat-burning mode. Let's continue the analogy with a discussion of a hormone that acts exactly like the fuel gauge on your car's instrument panel.

That hormone is called leptin.

Imagine what it would be like to drive a long distance with a broken gas gauge. You'd never know whether you were about to run out of gas. In fact, if you're like me, you'd probably fill up at every station, *just in case*!

Leptin is what tells your brain that your body's "storage tanks"—the fat cells—are full (or empty). When it's working properly, it monitors your food intake, lets your brain know when you've had enough, and keeps a careful eye on how much you've got in your "storage tanks."

In fact, leptin is actually released by the fat cells, in direct proportion to how full they are. When leptin is present in high levels, it sends a signal to our brain that we're full and should stop eating. When leptin levels are low, the opposite happens: we feel hungry and crave food.

It's the body's fail-safe way of letting the brain know that there's plenty of energy saved up for reserve, so there's no need to keep shoveling in the food. It's an elegant system, and when it works well, it's terrific.

The problem is, it doesn't work at all when you're a sugar burner. When you're a sugar burner, the system is broken. Your brain never gets the leptin message, you're hungry all the time, even though your fat-storage tanks are bursting at the seams, and the whole hormonal fat-burning symphony is playing horribly out of tune.

Why? Because your brain has become insensitive to leptin's messages.

Contrary to what you might expect, obese people, have tons of leptin. The problem is that leptin isn't getting into their brains, so it never gets chance to deliver the message to "Stop eating!"

This happens because, when exposed to high levels of leptin, the brain becomes resistant to its effects. If this kind of hormonal resistance sounds familiar, it's because it is. You'll recall that the exact same thing happens in insulin resistance, except in that case it's the muscle cells becoming "resistant" to the effects of insulin. Here it's the brain cells becoming resistant to leptin.

Leptin resistance is now a hot topic in the field of obesity[3], and with good reason. Until this hormone is functioning normally, its messages received loud and clear, your brain is going to think you're starving.

And this has a number of important effects:

1. **You feel compelled to eat constantly.** This is one reason most "crash diets" are ineffective. When you lose a lot of weight quickly, leptin levels plummet unless you take specific steps to counteract this effect.
2. **Your body responds to this perceived deficit of leptin by increasing appetite.** Eventually, you give in to the cravings, and begin to gain the weight right back. Every instinct in your body commands you to eat, eat, *eat!*—at least if you want to stay alive!
3. **Your entire metabolism slows down to accommodate this perceived starvation.** Your thyroid slows down (more on this later), and your overall metabolic rate drops. And here's the worst part—you eat just as you did before, but now it's actually making you fatter! Your body has learned to run on less fuel because it thinks you're starving. The amount of food you ordinarily eat is now considered "excess" calories for your slowed down metabolism, and your body stores those "extra" calories as fat. Frankly, it sucks!

To put it simply, you become a sugar burner instead of a fat burner.

You eat more, you burn less fat, your growing fat cells produce even more leptin, but instead of responding to it (like someone with a functioning, fat-burning metabolism would) you become more resistant to it and you get fatter every second of the day. It's a vicious cycle.

YOUR ENGINE IDLE: THYROID THE MASTER METABOLISM HORMONE

The thyroid got a lot of attention in the media back in 2007 when Oprah Winfrey announced she had had a thyroid condition, and with good reason—the thyroid is your metabolic gatekeeper.

This small, butterfly-shaped gland, located in your neck, is responsible for keeping your metabolism running smoothly. If it's under-producing thyroid hormones—a condition known as hypothyroid—then your metabolic engine is idling really low, and fat gain is all but inevitable.

"When the thyroid gland is releasing inadequate amounts of thyroid hormone to meet the body's metabolic demands, the metabolic rate is therefore reduced," writes David Brownstein, MD, one of the leading experts in the integrative treatment of thyroid disorders.

In other words, your metabolism slows down. And that means fat-burning crawls to a standstill.

"Thyroid hormone acts as the body's metabolic regulator," writes Brownstein, "every single muscle, organ and cell in the body depends on adequate thyroid hormone levels for achieving and maintaining optimal functioning."[4]

So what can slow the thyroid down?

Glad you asked.

Virtually every pathway we discuss in this program has a strong impact on thyroid function, starting, not surprisingly, with diet.

"Constantly eating devitalized food will result in deficiencies of vitamins, minerals and other essential products and will inevitably lead to hormonal and immune system abnormalities," writes Brownstein. Not surprisingly, he identifies sugar and refined carbohydrates among the major culprits.

Brownstein also considers detoxification essential to a healthy, functioning thyroid (which, in turn, is essential for a healthy fat-burning metabolism).

"One of the main reasons the thyroid gland can malfunction is from exposure to heavy metals, including mercury, lead, cadmium, arsenic and nickel," he writes. "These agents poison enzyme systems throughout the body and decrease the normal functioning of various organs and glands including the thyroid gland. Detoxifying the body and removing these harmful elements can vastly improve the overall picture of one's health."[5]

When you have a sugar-burning metabolism, it virtually guarantees that the thyroid won't be working at optimal levels. As we've seen, a sugar-burning metabolism is a fast track to leptin resistance.

And leptin resistance is a fast track to being hungry all the time, since there's a disconnect between the brain and the body—your fat cells and your tummy may be full, but your brain never gets the message. Since your brain thinks you're starving—and no food is coming in—it makes an "executive decision" to conserve energy, which it does by slowing down the thyroid.

Thus the vicious cycle continues.

If all of this inter-connectedness is starting to make your head spin, it should—we've only just begun to understand how all of your fat burning hormones work together.

But knowing every last detail of this isn't important—what's important is to understand that they all work together and until, and unless, you take specific steps to get them all fixed, you'll be stuck in sugar-burning, fat-gaining cycle.

WHAT TO DO, WHAT TO DO?

New You in 22 is specifically designed to trigger the hormones that burn fat, build or maintain muscle and keep you young and healthy while minimizing the hormones designed to pack fat on, eat away your muscle and age you faster.

It's designed to correct the IFG-1 to insulin ratio so that IGF-1 can take its rightful place as the major fuel pump system in the body. But—unlike standard low-carb diets—*New You in 22* recognizes that fat loss isn't just about lowering insulin levels.

We want to keep insulin levels down for the most part, but we also want to prevent the body from making the kinds of adaptations that it typically makes to any diet. We want to make sure that as we correct our leptin levels, and retain optimal thyroid output.

The good news is that leptin resistance can be corrected, insulin resistance can be reversed, and the hormonal symphony can be trained to play in tune. And that's exactly what needs to happen if you're going to lose unsightly belly fat once and for all.

But it's not just food that has a hormonal effect. To really get the hormonal symphony playing like the Chicago Philharmonic, we've got to tackle stress, exercise, sleep and detoxification

All of these have a profound effect on hormones—and a direct effect on your waistline. To find out how—and, more importantly, what to do about it—read on!

WHAT YOU LEARNED IN THIS CHAPTER

- Hormones work together to create what we call "the hormonal fat-burning symphony"—a hormonal environment that nudges you away from sugar burning and toward a fat-burning metabolism.
- Insulin is the fat-storage hormone, whose job it is to fill the cells up with sugar and fat. Its message to the cells is "store stuff!"
- IGF-1—insulin-like growth factor-1—is the fat-burning hormone. It builds and repairs muscle and shrinks your fat cells.
- Insulin and IGF-1 compete for the same receptors.
- When you're a sugar burner, you rely on insulin to deliver messages to the cells, and IGF-1 activity is slowed down.
- Leptin is a hormone that functions like the fuel gauge in a car that tells you when you need gas. Leptin sends a hunger signal to the brain when it senses you need food.
- Unfortunately, when you're a sugar burner, the hormonal symphony doesn't play correctly, and the leptin message ("Stop eating, you're full!") does not get through to the brain.
- The thyroid is the metabolic gatekeeper. When the thyroid releases inadequate amounts of thyroid hormone, the metabolism slows down.
- All the pathways discussed in this book—detoxification, exercise, nutrition and stress management—have profound effects on regulating the hormonal symphony and bringing things back into balance.
- When the hormonal symphony is functioning properly, fat burning is effortless and efficient and happens naturally.



Chapter Three

IT'S ALL ABOUT ENERGY

In the almost 25 years that I've been helping people with fat loss, there's one question I've been asked more than any other:

"How do I get more energy?"

The two topics—fat loss and energy—are closely related.

While there are always exceptions to the rule, in general, I've found that those who are carrying around a bunch of unwanted extra fat are also usually tired. And that's not a coincidence. Lack of energy and excess fat are intimately related, and you're about to find out why.

The good news—*great* news, actually—is that when you fix one of them, the other usually goes along for the ride. Have you ever heard someone who lost 50 pounds complain of having low energy?

No. You haven't. And you won't.

You know where that energy came from?

Burning fat.

When you start burning fat for fuel and energy, the sparks start flying. Fat melts off, and even better, you feel like you could run a marathon.

And all for one reason: energy.

SO WHAT IS THIS THING CALLED "ENERGY," ANYWAY?

The currency of energy in the body is a little molecule called ATP (adenosine triphosphate). Our bodies use ATP to do everything.

Cyanide—the poison that will kill you in less time than you can say James Bond—works by stopping the production of ATP. Quite simply, if you stop making ATP—even for a minute—you die. Game over.

When it comes to making ATP, fat is to sugar as rocket fuel is to regular gas.

Let me explain.

Any food you eat—anytime, anywhere—breaks down in the body to one of three basic structures. Carbs break down into glucose, fat breaks down into fatty acids, and protein breaks down into amino acids. But before these breakdown products can produce actual energy, they first need to be converted to ATP.

Even the very act of converting fuel into ATP takes energy, meaning it requires ATP to make ATP.

Let's take protein out of the mix for the time being because protein is the least preferred fuel for running metabolic machinery. The body prefers to save protein for making things like bones, muscles, organs and other important structures. However, in an emergency—or when it can't access fat (like when you are a sugar burner)—it will break down those structures in a desperate attempt to get more sugar, which is precisely what you don't want to happen. More on this later on.

That leaves two primary sources of ATP production—glucose and fatty acids.

But these two fuel sources produce very different "mileage."

The reason our bodies prefer fat over sugar is because we literally evolved to use it as our primary energy source.

To make this all a bit clearer, we have to take a minute and introduce a fascinating little structure that lives inside the muscle cells—it's called the *mitochondrion*.

MITOCHONDRIA: OUR EVOLUTIONARY ADVANTAGE

The mitochondrion (singular) is ground zero for energy production in the cell. Mitochondria (plural) are basically little ATP factories, churning out ATP/energy for every purpose, every process of life.[1]

All advanced forms of life have mitochondria.

In all the time the Earth has been here—roughly 4.5 billion years—only two different kinds of cells have evolved: prokaryotes and eukaryotes.

Prokaryotes are the simpletons of cellular life. A prokaryote is just a membrane with some fluid inside. There are no specialized sub-units within the cell—not even a nucleus. It's just "cell soup." Everything this simple cell needs to sustain life takes place right inside the cell, no "division of labor" possible or necessary.

When higher life forms evolved, it marked the beginning of eukaryotic cell development. All animals—including us—have eukaryotic cells.

Since prokaryotes have no sub-units, by definition they have no mitochondria. They are sugar burners. They use glucose as an energy source, which generates very little ATP.

From an evolutionary point of view, sugar burning is clearly the booby prize.

We couldn't have evolved without mitochondria. Without mitochondria, we would never have grown from single cell bacteria. We specifically evolved these fat-burning furnaces so we could generate the energy needed to engage in the advanced activities required by higher life forms.

And why does this matter? Simple. Because mitochondria are exactly where you burn fat in your body. They're also where you create energy.

Knowing how the mitochondria work— what damages them, what protects them—is very important to keeping them in tip-top shape. Since all fat burning and energy production depends upon them, keeping your mitochondria "happy" is a pretty important goal.

To understand just how powerful the evolutionary advantage of mitochondria is, it's worth looking at how much more effective they are at generating energy from fat instead of sugar.

A FAT-BURNING METABOLISM PUTS 95% MORE HORSEPOWER IN YOUR ENGINE

When you're burning sugar for fuel, the yield is between 2 and 36 molecules of ATP[2]. Sounds Okay—until you compare it to fat.

One molecule of even a *short-chain* fatty acid yields 48 ATP molecules, bettering glucose by 33% right there. A *long-chain* fatty acid produces 147 ATPs.

Now get this: 95% of the fat in your body is in the form of triglycerides.[3,4] A triglyceride contains three fatty acids. That means one triglyceride can generate as much as 147 x 3 molecules of ATP, or 441 units of energy![5]

In other words, fat gives you much more energy than sugar does.

Now do you see what I was talking about when I said fat is a "better mileage" fuel source?

If one brand of gas (glucose) gave you a couple miles per gallon, but another brand (fat) gave you a couple hundred miles, which brand would you rather use?

Exactly.

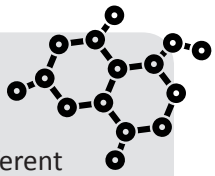
So when you burn fat, you create a ton of energy. No wonder people who lose weight feel so damn good!

On the other hand, when your fat is stuck on your hips, all your body can do is burn sugar. It's no wonder you don't feel like hitting the gym.

So maybe you're thinking at this point, "If the fat cells packed around my waist, butt, thighs and hips are literally bursting at the seams, and if the mitochondria loves that fat so much and wants to make all this ATP out of it and give me all this energy, then why the heck are my thighs still fat? Shouldn't the fat cells be releasing all those fatty acids so the mitochondria can have at 'em?"

Great question.

Nerd Alert



Fatty acids come in different lengths: short-chain fatty acids, medium-chain triglycerides and long-chain fatty acids. The amount of ATP generated depends on the exact type of fat being burned. The longer the carbon chain that makes up the fatty acid, the more ATP is generated.

THE REAL REASON YOU CAN'T BURN FAT

The main reason you can't burn off that ugly fat is because your mitochondria aren't being used optimally. You've got a Ferrari engine in that body of yours, but you're running it like a jalopy.

You've trained your body to rely on the inferior fuel source of sugar, just like those simple single-celled organisms we evolved from.

Not only does this create less energy (which is why you feel fatigued all the time), but, as we will see in the next chapter, it increases oxidation and inflammation that lead to rapid aging and chronic illness, not to mention all that extra fat you store.

But the worst part is that your body is addicted to sugar, and it'll do anything to get it.

Virtually every woman reading this is familiar with the term "skinny fat," and the men would instantly recognize it if you explained the term.

It's when you're underweight but "overfat." You're flabby, even a little paunchy (if you're a guy) or a little "poochy" (if you're a woman). You have no muscle tone. Why? Because if you've got a metabolism that primarily burns sugar, and if there isn't enough sugar coming down the pipe (via your diet), your body simply turns to the organs, bones and muscles and starts breaking them down.

Disgusting as it sounds, your body literally starts eating itself, dismantling healthy tissue (especially muscle) and transforming it into sugar to keep your metabolism going. Muscle is made mainly of protein, and protein is made of amino acids. If you're body's starving for sugar, it will break these amino acids and turn them into sugar.

You've heard of losing muscle while you're dieting, right? Now you know why.

That's "skinny fat"!

This is why you keep packing on fat and losing muscle.

Okay, so how did you ever train your body to do this in the first place?

As always it comes down to diet and lifestyle.

Later in this program, we're going to be talking in detail about the five specific pathways (i.e., diet and lifestyle components) that determine whether you're stuck in sugar-burning mode or if you can upgrade to a fat-burning metabolism. But let me just whet your appetite by touching on a couple of them right now.

STRESS, ENERGY AND THE CURSE OF BEING A SUGAR BURNER

Let's start with stress. Chronic stress ramps up production of cortisol which basically says to the liver, "Dump a bunch of sugar into the bloodstream! We're in trouble here and we need to run away!"

That's fine if you're a caveman running from a bear, but if you're a desk jockey, that new influx of sugar is definitely not going to be used as emergency fuel for the muscles. Instead, the excessive amount of blood sugar now cruising through your blood stream is going to trigger insulin, just as if you ate a doughnut or two.

And we all know where that leads. More insulin resistance, more fat storage, more locking the doors to the fat cells and a continued reliance on a sugar-burning metabolism.

Meanwhile, the excess cortisol and insulin produced by chronic stress trigger a desire for even more fuel—i.e., carbohydrates—and you're stuck in a vicious cycle of excess blood sugar, insulin resistance, liver stress, adrenal stress, fat making, lowered leptin (and greater hunger!), with a greater likelihood of high blood pressure to boot.

THE REAL REASON YOU DON'T FEEL LIKE EXERCISING

Then there's exercise, another pathway that can be used to move you towards a fat-burning metabolism or, sadly, can keep you in a sugar-burning one.

See, sugar is a great fuel in emergencies, and it's terrific when you need a short burst of energy. But for most everything else—especially exercise—fat is clearly the way to go.

When you're a sugar burner, exercising is usually one of the last things you feel like doing.

Maybe the real reason we don't exercise so much has nothing to do with being "lazy"—it's because we simply don't feel like we have the energy to do it.

Exercise demands a ton of ATP, and you only generate a ton of ATP when you burn fat. If you're a sugar burner, there's no way you can keep up with the demand for ATP when you exercise. Sugar burners are rarely eager to get to the gym. It would be exhausting!

TO SUM UP

The bottom line is that nothing good comes out of being stuck in sugar-burning mode. Sugar produces relatively tiny amounts of ATP, while fat produces a ton of the stuff.

The irony is that we've been taught for years that we need carbohydrates for energy.

In fact, the best, most efficient, most clean-burning, energy-producing fuel is not carbohydrates—it's fat.

In this program I'm going to teach you how to access that fat that your body—specifically your mitochondria—are craving.

That's one craving we want to give in t!

WHAT YOU LEARNED IN THIS CHAPTER

- The "currency" of energy in the human body is a molecule called ATP.
- ATP is generated in the cells, specifically in energy-production factories called the mitochondria.
- The two primary fuels for making ATP are sugar (glucose) and fat (fatty acids).
- Sugar generates much less ATP than fat.
- The less ATP you make, the less energy you have (including cellular energy for fat burning).
- The more you burn sugar, the more toxic "exhaust" you make. That waste overwhelms the mitochondria, causing them to be even less effective than before at making ATP and burning fat.
- When your body can no longer effortlessly and effectively burn fat, you stay addicted to sugar and are caught in a vicious circle with a sugar-burning metabolism.



Chapter Four

THE TWIN METABOLIC DESTROYERS

Look at virtually any disease you can think of—especially the big chronic illnesses like obesity, diabetes, heart disease—and you'll find the twin towers of metabolic damage: inflammation and oxidation.

But what doesn't make the headlines is that both oxidation[3] and inflammation are also directly linked to a diminished ability to burn fat for energy.

The less fat you burn for energy, the more sugar you burn instead. And, as I hope you're starting to see, that leads to less energy, more hunger and more eating. And you end up fatter than ever.

The less fat you "spend" as fuel, the more fat you store—and the fatter you get.

That, right there, is a very good reason to lower inflammation and oxidative stress.

But that's not the half of it.

MISSED HORMONAL MESSAGES: THE E-MAIL THAT NEVER ARRIVES

Think about the common experience of sending an e-mail that wasn't received. What could have gone wrong?

Assuming you remembered to press "send" and there was nothing wrong with your computer, something probably happened on the other end. Maybe the e-mail went into the spam folder. Maybe it was captured by a virus that eats incoming e-mails. Maybe the servers for the recipient's e-mail account were messed up. Whatever the cause, the message was never received.

Well, hormones work a lot like e-mail. Even when they're "sent out" properly, they don't always wind up where they're supposed to go. We saw this in Chapter 2 when we talked about insulin and leptin.

So what causes the cells to not "hear" the fat-burning message of hormones?

Good question. And the short answer is membranes.

One of the main reasons hormones don't get through to the cell is that the receptors on the cell membrane aren't working properly. If the receptors are damaged—as they are when inflammation and oxidative damage are present—things are not going to go well.

If the hormonal message gets in at all, it's likely to be distorted.

If the hormonal message to burn fat and create energy isn't getting through—or if its effectiveness is impaired—your efforts to burn fat are going to come to nothing. Your mitochondria won't be generating enough ATP, you'll have less energy, your hormones will stay out of balance and your fat will remain exactly where it is.

3 For our purposes, we will be using the terms oxidation, oxidative stress and oxidative damage interchangeably.

Before we dig a little deeper into the details of this oxidative damage and inflammation, let's step back a bit and take a kind of "high-level" view of how all this impacts your waistline:

1. Sugar and processed carbs raise insulin.
2. Sugar is inflammatory—as is insulin.
3. Insulin causes fat storage—and bigger fat cells create more inflammation.
4. More inflammation causes more free radicals, which cause more oxidative damage which contributes to further inflammation in a vicious cycle.
5. This vicious cycle damages the cell membranes, eventually screwing up the hormonal receptors that are parked there.
6. When the receptors are screwed up, the hormonal messages get screwed up.
7. When the hormonal messages are screwed up, you don't burn fat.
8. When you don't burn fat, you get fat, REALLY fat.

OXIDATIVE DAMAGE: YOUR BODY RUSTING

If you've ever seen rust on metal, you're familiar with oxidative damage, even if you didn't know the technical name for it.

For those of you who don't remember high school chemistry (or would understandably prefer to forget it), electrons travel in pairs and orbit around atoms. Every so often one of those electrons gets loose and pandemonium ensues.

The molecule with the unpaired electron—known as a free radical—starts acting like a college sophomore on spring break—temporarily free from the constraints of dormitory living, he or she goes nuts and will "mate" with anyone!

Free radicals "hit" on existing, stable pairs of electrons thousands of times a day, trying to find an electron they can pair/bond with; meanwhile, inflicting enormous damage upon your cells, your cell membranes, and even your DNA.

Free radicals that come from oxygen (known, not surprisingly, as oxygen free radicals or reactive oxygen species) are the most deadly and damaging. And the cellular, mitochondrial and DNA damage they do contributes to accelerated aging, and just about every disease that comes to mind.

Now here's the thing. Mitochondria are making free radicals all the time, just through the process of ATP production. But normally, the mitochondria also contain a ton of homegrown antioxidants—like glutathione—which help quench any fires the free radicals might be starting.

When the mitochondria are impaired—either because they aren't getting enough oxygen or nutrients, or because they are injured from inflammation or oxidative stress—they can't make enough antioxidants to take care of the free radicals they're generating.

The result? They become even more damaged, less able to respond to hormonal messages, and less effective at producing energy (ATP). It's a downward spiral of cellular dysfunction that leaves you with a ton of fat to burn while the mitochondria—the cellular factories that are supposed to burn that fat—are unable to burn it.

Okay, that covers oxidative stress. Now let's talk about its fraternal twin: inflammation.

INFLAMMATION: THE SILENT FAT MAKER (AND KILLER)

The problem with sugar burners isn't just that they can't burn fat. Sugar burning actually sets off a fire throughout the body that causes more fat to pile on. And this same fire is now known to be at the heart of every age-related disease known to man.

I'm talking about inflammation.

If there's any one topic that has gotten research scientists really excited in the last decade, it's inflammation. As far back as 2004, *Time* magazine ran a cover story called "Inflammation: The Secret Killer," calling it (accurately!) the surprising link between heart attacks, cancer, Alzheimer's and other diseases.

They turned out to be right. Inflammation is a part of virtually every degenerative disease on the planet.

The thing of it is, there are two types of inflammation—acute inflammation and chronic inflammation—and they are very different in their effect on the body. Barry Sears, PhD, author of the world-famous *Zone* diet books, explains the difference succinctly: "Acute inflammation hurts," he says. "Chronic inflammation kills."

It also makes you fat.

The Two Flavors of Inflammation

Now, everyone reading this probably has personal knowledge of *acute* inflammation—that's what happens when we stub our toe or get a splinter. The area gets red, swollen with fluid, and hurts like heck. And believe it or not, that's actually a necessary part of the healing process.

But *chronic* inflammation—well, that's a whole different story.

Chronic inflammation is bad news. Little injuries—pockets of inflammation—arise in, for example, the vascular walls, ultimately leading to plaque.[1]

You'll never feel it—but it's there, creating consistent, silent—and deadly—damage. Yet most of the time it flies under the radar with few symptoms (much like high blood pressure, or diabetes). Just because it's symptom-free, though, don't think for a minute that chronic inflammation isn't creating metabolic havoc.

It's also a known contributor to obesity.

To make matters worse—obesity *itself* is a known contributor to inflammation. How's that for a vicious cycle?

You know those fat cells sitting on your hips, butt, thighs and stomach, the ones that contain all that fuel that a sugar burner can't access? Well, I'm sorry to say that they actually do a lot more than just sit there and annoy you. They're actually quite metabolically active.

Those fat cells are constantly pumping out inflammatory chemicals of their own (such as inflammatory cytokines). You can think of those fat cells as little inflammation factories.

So the more fat you have, the more inflammation you have. The more inflammation you have, the more damage to the mitochondria. The more damage to the mitochondria, the less you're able to make ATP. The less ATP you make, the less energy you have, including energy for fat burning.

And, as you've guessed by now, the less energy you have, the hungrier and fatter you get.

How Does Inflammation Happen? Let Me Count the Ways!

While many things can cause inflammation, the list of usual suspects is pretty short. And at the top of the list—far ahead of almost anything else—is poor diet.

"The single leading inflammatory trigger is the consumption of unhealthy food, high in refined sugar and flour, trans and hydrogenated fats, alcohol, artificial ingredients, and especially artificial sweeteners containing aspartame," writes Dr. Arien van der Merwe.[2] "Packaged and processed foods, especially those loaded with artificial hormones, antibiotics, colorants and preservatives are also a major cause of inflammation."

By the way, did you notice saturated fat on that list of bad fats? No? That's because it wasn't there. No, by far the most inflammatory "foods" in the typical diet are sugar, trans fats, and—as you'll learn in Chapter 7—those "healthy" vegetable oils we've all been told to consume so much of. (More on that later.)

This is not the place to go into the advantages of an anti-inflammatory diet for fat loss. But it *is* the place to point out that of all the foods we consume, sugar is one of the most inflammatory of all. And a high-sugar/high-carbohydrate diet profoundly increases inflammation, throwing kerosene on the same metabolic fire you're trying to put out.

That's another reason you'll be "fixing" your metabolism with a low-sugar / low-starch diet on this program. Not only does sugar stimulate insulin, which drives up inflammation, but sugar is inflammatory all on its own.

And when you reduce sugars and starches in the diet—guess what? You reduce inflammation. You also reduce oxidative stress. Then your hormones can start to get the right messages to your cells, and your mitochondria can start burning fat effectively.

But diet isn't the only way you become inflamed. Environmental toxins lead to inflammation and oxidation as well.

TOXINS BURN UP YOUR BODY

Just as free radicals come from both internal and external sources, so do inflammatory chemicals. Nearly everything that's an irritant to the system—the air pollution we breathe, the tobacco smoke we inhale directly or indirectly, the some 80,000 chemicals we're exposed to in our environment—have the potential to produce some level of inflammation.

Remember, one of the ways the immune system protects us from "invaders" is by sending out inflammatory compounds when the body senses something that doesn't belong. That's why your toe gets swollen when you step on a nail—the body is sending out chemicals to surround the puncture, trying to keep a microbe from getting a foot in the door and causing an infection.

That's great—but very often relatively harmless environmental substances—allergens such as pollen, for example, or fungi, or even dust—can trigger an immune reaction in many people. When this happens there's an exaggerated inflammatory response.

It's even worse with real toxins such as mercury, pollution, X-radiation and pesticides. Even prescription medicines can trigger an inflammatory response, since they're basically foreign chemicals that the body doesn't recognize.

That's why detoxification—along with the other four pathways you'll learn about in the next section—is so critical. All five pathways can be used to dampen the fires of inflammation, helping you turn from a sugar burner into a fat burner.

PUTTING IT ALL TOGETHER

Being a sugar burner keeps you fat (and sick, tired and depressed) in several ways.

Psychologically, it keeps you craving sugar (in much the same way as smoking creates cravings for nicotine). Your cells get "adapted" to using that sugar as fuel, and turn down the fat-burning apparatus (enzymes and hormones necessary for effective fat burning).

In addition, the sugar-burning metabolism creates massive amounts of oxidative damage and inflammation, damaging the mitochondrial fat-burning furnaces, further insuring that they won't function properly. That

means less energy (ATP), more cellular damage, a down-regulation of hormone receptors and a jumbled hormone symphony that keeps fat-burning messages from being effectively sent and received.

I know. It sounds like a lot—and it is. But if there's one thing you need to take away it's that everything is related. Hormones, stress, toxins, diet, even emotions—all work together to nudge you towards either sugar-burning or fat-burning metabolism.

One of them makes you fat, sick, tired and depressed.

The other makes you lean, healthy, vibrant and energetic

On this program, I'm going to show you how to simply optimize all of the pathways that will lead you to the latter! But first we need to talk about *glycation*—and how it makes your body into a sugar factory.

WHAT YOU LEARNED IN THIS CHAPTER

- Oxidative damage and inflammation are directly linked to a diminished output of energy (ATP). And ATP is required for fat burning, as well as every other activity.
- Oxidative damage and inflammation damage the cells' ability to respond to hormonal messages.
- Hormonal messages are received by receptors that live on the cell membrane. Both inflammation and oxidative damage harm those membranes and the receptors that live on them, interfering with the hormonal messages you need for a fat-burning metabolism.
- Oxidative damage happens when rogue molecules called free radicals damage your cells and your DNA. This is akin to "rusting" from within.
- Inflammation occurs when your immune system runs amok, and starts setting fires all over your body.
- Fat cells produce inflammatory chemicals. The more fat you have, the more inflammation you have. The more inflammation you have, the more damage to the mitochondria, the energy factories within the cell. The more damage to the mitochondria, the more fat burning is impaired.
- Processed foods, sugar, trans fats, added hormones, antibiotics, colorants, preservatives, chemicals, poor nutrition excess stress, lack of sleep and toxins all contribute to oxidative damage and inflammation, thus reducing your ability to burn fat effectively.
- Being a sugar burner keeps you fat, sick, tired and depressed. It creates massive amounts of oxidative damage and inflammation, damaging the mitochondrial fat-burning furnaces.



Chapter Five

IS SUGAR GUMMING UP YOUR GAS TANK

Want to know the most destructive thing you can do to a car engine?

Pour sugar in the gas tank.

When you put sugar in a gas tank, you basically blow out the engine. The fuel can't burn cleanly. The whole mechanism gets sticky and gummed up.

The car owner is, needless to say, seldom amused.

When you pour sugar in your body, it's basically the same thing. You gum up your internal combustion engine—your metabolism—and you get fat. This process is called glycation.

Glycation is what happens when excess sugar in your bloodstream hooks up with slippery proteins making them sticky, and, ultimately, turning them into toxic little molecules that effectively turn off your fat burning engines. And help to keep you a sugar burner—big time.

WHY SUGAR AND PROTEIN DON'T MIX

Here's how glycation works. Proteins in the bloodstream look like little tadpoles. And they're just as slippery. These little slippery substances can travel easily throughout the bloodstream, getting in and out of tight narrow places (like small blood vessels).

Think of a visual image for sugar—I vote for cotton candy.

Now put those things together—cotton candy and a nice slippery protein like a tadpole. This is glycation, which is really just the technical term for "sticky"—it's the chemical reaction that happens when sugar molecules bump up against protein.

When that "stickiness" happens too much in your body, it's bad news for fat-burning. When you eat a high-sugar diet—or a diet that converts to sugar quickly—meaning a diet rich in bread, cereal, pasta, rice, potatoes and all the other processed carbs—that excess sugar gets right into your bloodstream.

Insulin's job is to remove that excess sugar from the bloodstream, but when the hormonal symphony isn't playing in tune, that system doesn't work so well. Which leaves you with a heck of a lot of excess sugar in your bloodstream.

Inevitably, some of that excess sugar starts bumping into the slick proteins and gumming up the works. These sugar-sticky proteins are now called glycated proteins.

Glycated proteins are toxic and make your cellular machinery run less efficiently. They exhaust the immune system. And they contribute mightily to the diseases of aging, and even to aging itself.

But here's what else they do: they overwhelm the mitochondria, the main fat-burning factories in the cell. And that alone is guaranteed to keep your metabolism running on sugar, your skin wrinkly and your belly bulging.

HOW TO AGE (AND GET FAT) QUICKLY IN ONE EASY LESSON

Glycation is happening in your body every single day. And it ages you just like the hot noonday sun ages unprotected skin.

Eventually, these sugar-coated, sticky proteins clump together in bunches and form what scientists call AGEs—which stands for advanced glycation end products—partially because these proteins are so involved in aging the body.

I like to think of it as "losers" attracting "losers"—the result of which are AGEs, a kind of "super-loser."

These rather disgusting, insoluble masses of linked, damaged proteins—these free-radical generating factories—accumulate everywhere—in the skin, the brain, the nervous system, the vital organs, the vascular system—and they do exactly what their name implies. They age you, and they make you fat.

Glycation and oxidation are actually two sides of the same coin. Glycated proteins generate the very agents of oxidative damage—free radicals. These, in turn, create more damaged proteins which then hook up with one another and become AGEs, producing even more free radicals and more inflammation, and continuing this awful cycle of inflammation, destruction, metabolic damage and aging.

Yes, it can get complicated, but the take-away point is that glycation, oxidation and inflammation reinforce themselves in the nastiest of vicious circles, crippling your metabolism and aging you faster.

The reality is a small amount of glycation can't be helped—it's happening in your body all the time—and if only a small percentage of your protein is "gummed up," it's no big deal.

But for sugar burners the problem is of particular concern because all that sugar floating around your body virtually guarantees you're going to have a lot more glycation. This inflames your body, damages your cells, and inhibits your hormonal symphony.

Now your mitochondria become overwhelmed. They simply can't function properly. ATP production slows (and your energy along with it). Your body shifts further and further into sugar burning, sputtering along, using this toxic fuel like an engine trying to run on sugar-coated gasoline.

The result? You stay fat, sick, tired and depressed.

But here's the good news: glycation—and its damaging impact on all systems in the body—is something you can actually do something about.

HOW YOUR METABOLIC MACHINERY GOT SO GUMMED UP

Sharp-eyed readers that are paying close attention may have begun to connect the dots.

What element in the diet causes hormonal disruption, sending insulin through the roof, dysregulating leptin, and setting you up for a sugar-burning metabolism while shutting down fat-burning?

What element in the diet contributes to inflammation and oxidation?

And what element in the diet could possibly be responsible for the consistently elevated blood sugar that ultimately leads to glycation, causing even more inflammation and more mitochondrial damage and a further impairment of fat burning and energy production?

Altogether now: It's sugar, and foods that convert to sugar in a heartbeat.

In section 2, we'll be talking about the effects of sugar in a little more depth, but it's important to know for now that sugar is at the scene of the crime in virtually every single process that damages your body's ability to burn fat.

Sugar is inflammatory, it creates oxidative damage, it causes glycation, it disrupts the hormonal symphony and sends the wrong hormonal messages. And it compounds all that by damaging the ability of the cells to receive the hormonal messages in the first place.

Remember that the next time you're tempted to ask, "What's the harm in a little sugar?"

INGESTING READY-MADE AGES

But sugar isn't the only way you can end up with glycated proteins in your bloodstream. Glycation doesn't just happen in the body. You can actually ingest ready-made glycated proteins from your diet, and a lot depends on how you cook.

When you cook foods at really high temperatures, it results in what's called the *browning effect*, which is simply another term for glycation. You can see the browning effect in action when you heat sugar and butter together in a frying pan or when you brown a chicken in the oven.

When you eat that stuff—delicious as it may taste—you're basically eating glycated proteins. Not for nothing are the resulting combinations of sugar and protein known as glycotoxins ("glyco" meaning sugar, and "toxins" meaning … well, toxins!).

Foods cooked at really high temperatures are virtual glycation factories, and when you eat those foods, you are ingesting pre-made AGEs, which, you'll recall, are basically the end result of glycation. Your body will make these AGEs or you can eat them ready-made right out of your frying pan.

The fact that you can ingest fully formed AGES by eating foods that have been cooked at high temperatures is no longer in doubt. A recent study in the *Proceedings of the National Academy of Sciences* strongly suggests that eating foods cooked at high temperatures will increase the rate at which we age, largely due to the fact that such foods cause both chronic inflammation and the formation of AGEs.[3]

STRESS TURNS YOU INTO A SUGAR FACTORY

But, alas, it's not just what you eat that causes glycation. It's also how you live—specifically, how stressed you are.

Stress operates in a lot of ways to keep you in sugar-burning mode, and one of the ways it does this is by increasing your risk for glycation.

We saw this in the case of one of our own team members, who eats as well as anyone I know, works out routinely, gets plenty of sleep and whose blood sugar and insulin measurements were just fine. But—and here's the detective story for you—his hemoglobin A1c was disturbingly elevated.

Hemoglobin A1c is an important marker for long-term blood sugar, and measures the amount of elevated blood sugar over time. Doctors use Hemoglobin A1c scores of over 6 to diagnose diabetes.

How did our team member's blood sugar get so high?

Simple. Stress was causing him to burn sugar for its quick impact. Remember, stress is your body's way of responding to a perceived emergency, and for emergency fuel *right this minute*, sugar's the way to go.

But large amounts of stress for sustained amounts of time—which is the way most of us are living—"trains" the body to run on sugar. Since our team member wasn't eating any sugar to speak of, that sugar had to come from somewhere. And the place it came from was his own body.

Through a process called *gluconeogenesis* (the making of new glucose from non-sugar sources), the body will literally dismantle itself to get amino acids which can then be converted into sugar. Those sugar-addicted cells will behave like a bunch of crazed bargain shoppers on Black Friday—they'll do anything they can to get the white stuff.

Through this process of gluconeogenesis, the body breaks itself down to produce a flood of sugar for an emergency that never comes! The blood is flooded with glucose, and that can only mean more opportunities for glycation.

Which is exactly what his elevated hemoglobin A1c test was showing.

Case closed. Stress matters. And in more ways than we might think. I think stress is so important that I consider it one of the five major pathways to a fat-burning metabolism, which is why I devoted an entire chapter to it in this program.

We're going to get to those five pathways in just a few minutes. But first I want to talk to you about the real pitfalls of dieting.

Because if you know what they are, it's a lot easier to avoid them.

WHAT YOU LEARNED IN THIS CHAPTER

- Excess sugar in the bloodstream bumps into slippery proteins, causing them to become sticky and dysfunctional. This process is called glycation.
- The new sticky proteins clump together to form damaging compounds called AGEs (advanced glycation end-products).
- AGEs generate free-radicals, causing more damage to the mitochondria, and ultimately harming their ability to burn fat.
- This contributes to an ongoing cycle of inflammation and oxidative stress that further compromises the ability of your body to burn fat effectively, ensuring that you will stay in sugar burning mode.
- Glycation leads to fat gain by causing damage to the mitochondria.
- The major cause of glycation in the body is sugar and fast-burning carbs in the diet.



Chapter Six

THE 3 MAJOR PITFALLS OF TRADITIONAL DIETING

Right about now you may be asking, "Why do so many diets fail so miserably?"

That's what this chapter is all about.

Many diets fail because—whatever other good things there may be in those diets—they do not help you make the shift to a permanent fat-burning metabolism. You'll see what I mean in a minute when we talk about the three most common pitfalls of conventional diets.

In this chapter, you'll also learn why *New You in 22* is different. You'll see how *New You in 22* specifically avoids the common pitfalls of conventional dieting—those same pitfalls which doom you to sugar-burning hell.

WHAT HAPPENS WHEN YOU GO ON A DIET

To get a clearer picture of why dieting is often (if not always) doomed, let's go back in time a bit to see how the human metabolism adapted to the conditions under which we evolved over the last, oh, 100,000 years or so.

Our Paleolithic ancestors hunted or fished for what I've affectionately call the Jonny Bowden Four Food Groups: Food you could hunt, fish, gather or pluck. They ate these foods when they could. They didn't have set meal times.

Our metabolism adapted under feast or famine conditions. That's why we humans have an exquisitely tuned system designed for storing calories—we needed to be able to survive when food was scarce.

Fast forward to the present. Now you've got those terrific fat-storing genes, so wonderfully suited to an environment of scarcity and extreme activity, and so supremely *un*suited to the environment of the food court at the mall and the 24-hour food mart.

So you get fat. No surprise there. It's what your genes were designed to do. But you want to do something about it. So you go on a conventional diet.

You don't necessarily change the composition of the foods you eat; you just eat less of them. You follow all the standard advice about "eating this, not that" which basically tells you how to eat *less* calories but not *different* calories.

But when you just cut calories, without paying attention to what foods they *come* from, you run smack dab into three of the biggest dieting pitfalls that ultimately just make you fatter than you were prior to starting the diet in the first place.

PITFALL #1: YOUR METABOLISM SLOWS DOWN

Now that you're eating less calories, the first thing that happens is leptin—the hormone responsible for telling the brain "stop eating, dude, your tummy is full!"—goes down. Low leptin is a powerful signal to eat.

When leptin drops, your body believes it's starving, so it slows down your entire metabolism by lowering thyroid production. Remember when we talked about the relationship between leptin and thyroid? Well, here's why it's so important: your "engine idle" slows down when thyroid production is reduced.[4]

This means your entire metabolism is suppressed. Your body starts running on the least amount of fuel necessary to keep it alive. If you're running for your life from a tiger, it doesn't make sense to shuttle blood to the digestive or reproductive organs—not if you're not going to be alive tomorrow!

Your body is perceiving a four-siren emergency triggered by that leptin drop, so it's not really interested in anything but keeping you alive right now while expending the least amount of energy.

Like a movie director who suddenly has his operating budget cut, your body's cutting all the non-essentials and spending its limited energy keeping basic functions going. Your caveman genes think there's a famine, and they're running the show.

Then, to complicate matters even further, when your cavemen genes think there's a famine they don't just sit there and fume about it—they send out powerful chemical signals to turn fat storage up.

This makes total sense from a survival point—*store every drop of energy you can!*—but it's sheer hell if you're trying to shed body fat. Now you're storing fat more effectively than ever at the exact same time that your metabolism is slowing down. And that's exactly what you *don't* want to happen when you diet.

But it does.

And it may well be one reason it's so darn easy to gain back all the fat you lose (and more) the minute things return to how you were eating before you went on a diet.

After all, your metabolism has slowed down and you're not burning fuel at the same rate as before the diet (since your body thinks you're in a famine). Your ability to store fat—just as a pure survival tactic—has gone up, up, up. Your body is on high alert, waiting eagerly for some extra calories so it can pack some fat back on.

Now you go off your diet. Want to guess what happens?

You gain back all the fat back, and then some.

You are eating the same amount of calories as you did before you dieted; the only problem is that now your body requires *less* food. It's cut its operating budget, so to speak, and is running on less calories than before.

Your previous level of calorie intake is now seen to be excessive. And the excess calories have to go somewhere—and guess where? Your hips, belly, thighs and butt, and anywhere else you can think of where you don't want extra padding!

So the average diet is actually designed to make you fail at burning fat. It slows down the exact processes you need to get that stubborn fat off your tummy, thighs and hips.

And I'm sorry to say the problems don't end there. Nope. They're just beginning …

PITFALL #2: YOUR BODY EATS ITSELF

Yes, I know that sounds disgusting, like I'm talking about some kind of flesh-eating virus from a Wes Craven flick, but it's actually what happens and here's how.

4 This isn't always a bad thing—but it is in this situation!

Dieting is a huge stressor on the body, and the defining physiological feature of stress is a release of cortisol, one of the three main stress hormones produced by the adrenal glands.

Why does your body pump out all that cortisol when you're dieting? Because it thinks you're starving! And if you're trying to lose body fat, that's not a good thing.

See, cortisol is the hormone that will get you out of an emergency (hence it's nickname, the fight-or-flight hormone). One way it does this is to raise blood sugar. Think about it—if you're on the African Serengeti and suddenly have to run like hell from a saber-toothed tiger, you need a fast bolt of immediate energy for a sprint (which would be sugar).

Now imagine what happens when you're on a diet.

First, your stress hormones rise. Second, you're on a diet so you're not eating as much sugar, which is what cortisol is looking for, because sugar can be turned into energy the fastest to save the day. Cortisol will use anything in its bag of tricks to raise your blood sugar so it can keep you alive in what it perceives as an emergency.

One of the things it does to accomplish this is to break down muscle, because the amino acids that make up the protein in muscles can be readily converted by the body into glucose (sugar), as we previously discussed.

This is kind of like burning the sails on a sailboat if you're in the middle of the ocean and desperately need fire to stay warm. It's a really bad idea under normal circumstances, but in a life and death situation, it may be the only course of action.

Cortisol breaks down muscles because your body perceives this crazy diet of yours as a famine, and that definitely qualifies as an emergency from an evolutionary standpoint. The thing is, you're not in a real emergency, at least not one that threatens your survival.

But since the body thinks that's what's happening, cortisol keeps creating more sugar, which ultimately winds up as fat. And you're left losing ground on your diet and wondering why it stopped working.

If all this weren't bad enough, you've now got an added problem to contend with: a reduction in muscle mass. (Remember, cortisol broke down some muscle in a desperate effort to create more sugar.)

Since muscle burns a lot more calories than fat does (after all, it's where most of your energy-producing mitochondria are), your resting metabolic rate—meaning how many calories you burn while just lounging around—has just effectively slowed down. You now have less muscle, and muscle burns more calories than fat.

You go back to your old way of eating but you now have less "calorie-burning machinery" (muscle). This leaves you in almost the identical situation from Pitfall #1 in which your hormones directly cause your metabolism to slow down.

You eat less, but your metabolism is slower so you are burning less calories. Fat loss comes to a standstill, you eat even less, become frustrated and then give up!

No wonder it's so easy to pack the blubber back on.

And because you're already a confirmed sugar burner, all the energy that's already in the fat cells stays right where it is, and remains unavailable to your metabolism. To continue the sailboat analogy, it would be like you had a ton of wood in the stowage space, but that room is painted shut!

Which all leads me to the last pitfall of traditional dieting …

PITFALL #3: KEEPING THE FAT OFF IS NEXT TO IMPOSSIBLE

When you really understand all the hormonal and metabolic forces working against you in a conventional diet, it's a wonder that anyone gets anywhere using sheer willpower. Because, really, in the long run, willpower doesn't stand much of a chance against the tidal wave of hormonal signaling.

In the conventional dieting situation we're talking about, your leptin is going to drop like a rock, meaning the brain is getting a powerful signal to eat, eat, eat! Meanwhile, *grehlin*—the appetite *reinforcement* hormone—is now elevated, reinforcing the hunger signals of decreased leptin.

Your thyroid production has dropped down, meaning your metabolism is slowed and whatever you do eat is likely going to wind up stored as fat. Meanwhile, you're pumping out cortisol like the Exxon Valdez spill so you're totally wired and stressed out from the biochemical catastrophe you find yourself in.

So you grit your teeth and rely on your willpower to get you through this horrible diet, which you can't wait to be over.

Willpower, Willpower, Who's Got the Willpower?

Now here's the deal with willpower: It's like hanging from a ledge by your fingertips. Eventually you let go.

Look, I'm all for developing willpower. It's a skill that we actually can practice and use. If you are familiar with my work, you may remember that I've been addicted to half the things in the Physician's Desk Reference. I know a little bit about addiction and willpower, and no one has more respect for self-discipline than I do. (Not that I have that much more self-discipline than anyone else, but at least I have a healthy respect for it!)

But here's what's different about self-discipline and food.

You can get off drugs and never use them again. You can stop drinking—or smoking—and after a nasty little withdrawal period, you never need look at (let alone indulge in) those substances again.

But you can't do that with food. Which makes food—specifically sugar—one of the hardest possible addictions to break.

Let's be real. The feeling of being deprived of your favorite foods—especially since you still have to eat and those foods are always around—can be a huge challenge. What's more, it can affect your mood. You become grumpy and depressed and even more susceptible to cravings for foods that will knock you right back into "fatdom" faster than you can say "Krispy Kreme."

What follows is the all-too-often inevitable rebound binge and another round of dieting and … well, you know the story. You've probably lived it.

How do you avoid all three of these pitfalls that seem inevitable? Are we all just doomed to gain fat as we age?

Of course not.

THE SOLUTION TO TRADITIONAL DIETING

New You in 22 takes into account the three pitfalls of traditional dieting and prevents every one of them from happening. It does this by:

1. Using specific food patterning to fake out your body's fat-storing strategies.
2. Preventing the metabolic adaptation that happens with traditional dieting, leading to the dreaded plateaus and inevitable regains.
3. Offering you an easy way to stop relying on willpower. The solution is so simple it's almost mind-numbing: You get to eat all the foods you love.

The pitfalls of conventional dieting are avoided, and your days as a sugar burner are numbered.

Let the fat-burning games begin!

WHAT YOU LEARNED IN THIS CHAPTER

- A standard, American diet of high carbohydrates and low fat virtually guarantees that you are "training" your metabolism to run on sugar.
- Cutting calories rarely works since you are not changing the quality of the food you eat, just the amount.
- When you eat less calories, leptin drops, creating a powerful signal to eat. In addition, the hunger-stimulating hormone ghrelin, goes up.
- Dieting is a huge stressor on the body, and triggers the release of cortisol, which can eventually lead to your body "eating itself"—breaking down valuable muscle tissue and lowering your metabolic rate even further.
- Long-term compliance on diets is difficult
- The strategic use of high-carbohydrate meals during the course of the New You in 22 program prevents the metabolic adaptation that can occur with conventional diets, often leading to plateaus and fat gain.

SECTION 2:
THE 5 PATHWAYS TO OPTIMAL FAT BURNING



Chapter Seven

PATHWAY #1 –NUTRITION: THE GRANDDADDY OF HEALING

My nutrition mentor, the late, great Robert Crayhon, once said this about nutrition:

"The two great dangers with nutrition are thinking it does nothing—and thinking it does everything."

Fact is, as you've learned in this program, nutrition alone won't fix a sugar-burning metabolism. That's why this program targets each of the five most powerful pathways to a fat-burning metabolism—nutrition, stress, sleep, detoxification and exercise.

Nutrition might not do everything, but make no mistake: it's still the granddaddy of all the pathways, the one that influences every one of the biochemical and metabolic problems we highlighted in section one.

Nutrition is definitely the most important pathway to becoming a fat burner, reversing aging and staying healthy. It's just a no contest.

Let's look at the top five ways that nutrition runs the show.

#1: FOOD INFLUENCES YOUR HORMONES

One of the biggest lessons Barry Sears, PhD, taught me over twenty years ago was that food has a hormonal effect. We've already seen how some foods can send insulin (your fat-storing hormone) through the roof, while other foods don't.

And remember that when insulin is elevated—and when it's doing the lion's share of cell messaging—our old friend IGF-1 takes a hike. IGF-1 is the hormone we want delivering its messages at full volume, since those messages are the ones that say, "burn fat," "build and repair muscle" and "grow young."

When we lower insulin (by food choices) we automatically make it possible for IGF-1 to get in there and do what it's supposed to do, instead of sitting helplessly on the sidelines.

So just by your food choices alone, you can direct hormonal traffic in favor of less insulin (less fat storage) and more IGF-1 (more fat burning).

That means you'll turn from a sugar-burning monster into a fat-burning machine.

#2: WANT ENERGY? FEED YOUR MITOCHONDRIA RIGHT!

Ever wonder why when you eat too much sugar your energy plunges not too long afterwards? Well, maybe you're finally beginning to understand why …

Eat food that converts to sugar quickly and you get a spike of energy as your cells gobble up as much of that sugar as they can, just like a rat that's addicted to cocaine will scamper across the cage to get his fix.

As we've seen, elevated blood sugar is followed by a surge of insulin which eventually manages to drag your blood sugar down to the basement, leaving you completely drained of energy, a foggy brain, and saddled with an insatiable craving to go eat more sugar or sugar-like food.

What's more, when you feed your body sugar—or the equivalent of it in the form of pasta, rice, potatoes, bread, cereal—your mitochondria never get a chance to really strut their stuff and show you what they can do with fat. The cells are too busy stuffing themselves with sugar.

When this happens, your mitochondria are like the men in that old Maytag® dishwasher commercial—they have nothing to do. (Nothing, that is, except be damaged by the inflammation and oxidation caused by high-carb diets, about which more in a moment.)

The point is that when you eat badly, energy production suffers. Seriously. And as we've seen, energy—the cellular energy we know as ATP—is needed for every single biochemical process in the human body, including fat burning.

Less energy means less fat burning.

#3: FOOD CAN FUEL THE FIRES OF INFLAMMATION

Sugars—in fact, high-glycemic carbohydrates in general—increases inflammation.[1] And inflammation keeps you locked in a sugar-burning metabolism causing fat to pile up everywhere. So we need to turn down inflammation, and that means dramatically reducing our intake of sugar.

But there's a lot more to inflammation than just sugar.

In fact, one of the most inflammatory things we consume on a regular basis is not sugar at all. I'm talking about vegetable oil.

Overconsumption of vegetable oil—a relatively recent development in the human diet—tips the inflammation/anti-inflammation balance scale so strongly that it looks like a seesaw with an elephant on one end and a gerbil on the other.

Oils and Inflammation

Yup, good old "healthy" polyunsaturated oil, the kind the health dictocrats tell you to consume by the barrelful—soybean oil, corn oil, safflower oil, cottonseed oil, sunflower oil, you name it—is ultra-inflammatory.

These so-called innocent oils are contributing to the breakdown of your mitochondria and your ability to burn fat. Here's how it works.

Our bodies make inflammatory chemicals (series 2 prostaglandins), and they make anti-inflammatory chemicals (series 1 and 3 prostaglandins).

We make the inflammatory chemicals out of omega-6s (vegetable oils) and we make the anti-inflammatory



Nerd Alert

While we're on the subject of saturated fat, let me say that I'm firmly in the camp that believes this is one of the most wrongly demonized foods in our diet. Saturated fat from healthy whole foods such as grass-fed meat, free-range eggs, coconut and palm oil is perfectly safe and will not lead to heart disease.

In fact, as my colleague Stephen Sinatra, MD, and I point out in our book, The Great Cholesterol Myth, a growing body of research has completely vindicated saturated fat in terms of having any real role in heart disease.

One analysis was jointly done by researchers at Children's Hospital Oakland Research Institute and Harvard, and reviewed 21 studies that including over 347,000 people who were followed for between five and twenty-three years. The conclusion? How much saturated fat people ate predicted absolutely nothing about their risk for cardiovascular disease or stroke.

In the researchers' own words, "There is no significant evidence for concluding that dietary saturated fat is associated with an increased risk of coronary heart disease or cardiovascular disease".[2]

3s (fish oil, flaxseed oil). Both omega-6 and omega-3 are technically polyunsaturated, but there's a world of difference between them.

You do need both—and if our diets contained an equal amount of each of them, everything would be hunky-dory.

But it's not.
The ideal nutritional ratio of omega 6 to omega 3 in the human diet—and we know this from studies of hunter-gatherer societies—is about 1:1.[3]

Would you like to know what we're actually consuming?

A whopping 16:1 in favor of the inflammatory omega-6's.[4] And that's being conservative, since in many areas of the country (and the world) it's as high as 20:1 or even 25:1.

That's right, we're consuming between 16-25 times more inflammatory omega-6s than we are anti-inflammatory omega-3s.

That would be like having two armies—the inflammatory army and the anti-inflammatory army—and giving the inflammatory army 1600% more funding!

Where are all those extra omega-6s coming from?

You guessed it. Vegetable oil.[5]

That's why it burns me up every time I hear some know-nothing dietary expert define "bad" fats as being the same thing as "saturated fats." They are most definitely not the same thing. The worst thing we have to fear from fat in our diet is not saturated fat but trans fats and damaged fats (fats that have been used over and over again for frying in fast food restaurants).

And we need to be much more concerned about the amount of omega-6 (vegetable oil) we're consuming, especially since most of it is processed within an inch of its life and stripped of any possible nutritional benefit.

The bottom line is too much vegetable oil contributes to inflammation; inflammation keeps you in sugar-burning territory. And that's exactly where you don't want to be.

In case you hadn't guessed by now, you won't be seeing an awful lot of vegetable oils in the recipes for *New You in 22*. Instead you're going to eat luscious grass-fed butter and coconut oil, and other wonderful saturated fats that have been shown to reduce your inflammation, keep you satiated and help you burn fat. Relax when you see those fats in the recipes. They're not going to hurt you at all!

Now another food we need to discuss when it comes to inflammation is gluten.

How to Set Your Body on Fire with Bread

In the last few years, two books have come out that I consider to be among the most important books on nutrition written in the last decade.

One of them, *Wheat Belly*, is by cardiologist William Davis, MD. The other, *Grain Brain*, is by the preeminent integrative neurologist of our time, David Perlmutter, MD. And what both these books have to tell us about grains will set your hair on end.

This isn't the place to go into the many things that grains do to our body, but it *is* the place to mention the connection between gluten and inflammation. This connection could be adding inches to your waistline with you even knowing it.

Gluten—as you may know—is a component in grains, predominantly in wheat, but also in barley, rye, spelt, kamut and—more often than we'd like—oats, only because of cross-contamination with gluten grains. And what gluten does to the human body isn't pretty.

"Research has shown that the immune system's reaction to gluten leads to activation of signaling molecules that basically turn on inflammation," writes Perlmutter.

"Wheat products elevate blood sugar levels more than virtually any other carbohydrate," writes Davis. "[That's] why eating a three-egg omelet that triggers no increase in glucose does *not* add to body fat, while two slices of whole wheat bread *increases* blood glucose to high levels, triggering insulin and growth of fat, particularly abdominal or deep visceral fat."

Both of these superb books are very clear on one thing: the wheat we eat today is not your grandma's wheat, and definitely not the stuff that looks like those beautiful pictures we've all grown up seeing, "amber fields of grain" gently swaying in a Midwestern breeze.

"Modern food manufacturing, including bioengineering, have allowed us to grow grains that contain up to forty times the gluten of grains cultivated just a few decades ago," says Perlmutter. "And one thing we do know: Modern gluten-containing grains are more addictive than ever."[6]

So you won't be seeing a ton of grain-based recipes on this program. I don't say, "you can never eat grains"—I wouldn't say that about any food. But I don't believe they are the benign, always-healthy substance that the diet dictocrats have told you they are. For many people, grains may be—and often are—a powerful modulator of inflammation.

That's one reason grains actually prevent you from becoming a fat burner!

And let's not forget that nutrition doesn't only impact inflammation, it also influences the whole evil set of triplets—inflammation, sure, but also oxidation and glycation.

#4: FOOD IS YOUR MOST POWERFUL WEAPON AGAINST OXIDATION

The foods we choose are one of the most important ways we can do damage control on oxidation. Why? Because food and supplements are our only external sources of antioxidants.

So no matter how that oxidative damage happens in your body, it almost doesn't matter, because the medicine needed to heal it is going to be the same: antioxidants. And—if you're eating and supplementing intelligently—you're getting a ton of them.

Notice I said "if."

Antioxidants are one reason I feel so strongly about vegetables and fruits—especially brightly colored berries such as raspberries and blueberries.

I know it's possible to burn fat on a very low-carb diet that doesn't include them—after all, the fat-loss part (at least at the beginning) is about controlling the hormonal symphony, particularly leptin and insulin. And you can keep insulin quite low with just fat and protein.

But why should you? Vegetables have nearly no effect on blood sugar and are virtual nutritional powerhouses, literally shoveling antioxidant protection into your bloodstream with every bite.

That's why I want you to eat vegetables—because of the fiber, the nutrients, the antioxidants, the phytochemicals, and all the other health-giving compounds found in the plant kingdom.

And if you need to bring it back down to practicalities, remember what oxidative damage does to your mitochondria. (Hint: the key word is *damage.)* When your mitochondria are damaged, they won't perform properly, which means they won't be burning fat effectively. You'll have less energy, your cells will rely more on sugar, and the whole miserable cycle will continue.

So you can think of antioxidants as "cellular defenders," an army of compounds that will protect your cells (not to mention your DNA) and make sure your energy-burning mitochondria remain a bunch of happy, fat-burning campers.

Finally we have the last enemy of the fat burning metabolism, glycation.

#5: DON'T LET YOUR FOOD "AGE" YOU

Glycation, you'll recall, is what happens when sugar gums up the gas tank, ultimately causing nasty little inflammatory, oxidized molecules called AGEs.

These AGEs, in turn, cause even more oxidation and inflammation, more mitochondrial damage, more interference with the hormonal message, and more insurance that you'll stay a sugar burner ... and fat.

And how do you think all that excess sugar gets into the bloodstream to create the glycated proteins and, ultimately, the AGEs in the first place?

Exactly. Through diet. And in the case of glycation it happens in two insidious ways.

First, by eating the food that keeps bumping your blood sugar up. The more sugar floating around the bloodstream, the more opportunity for some of it to glom on to proteins, making them sticky and ultimately leading to AGE formation.

That's bad enough. But the other way we increase AGEs through our diet is to just swallow those bad boys whole, which is exactly what we do when we eat highly caramelized, or browned foods. The "hooking-up" of protein and sugar doesn't only take place in the bloodstream—it can also take place in the frying pan. And frequently does.

So you see, nutrition really is the Macdaddy of the pathways to health. Remember, "Depression is not a Prozac deficiency."[7] If you give the body what it needs, nine out of ten times it will make the compounds you need it to make (including hormones and hormone receptors), and if you feed it the fuel that it was "meant" to be fed, everything works better.

And that includes your mitochondria, and it includes your cell membranes, both of which are absolutely vital for an efficient, fat-burning metabolism.

SO WHAT'S THE CONCLUSION? NOT WHAT YOU MIGHT THINK!

If after reading all this, you're pretty sure I'm going to recommend a low-sugar, low-starch diet for the rest of your life, you're only partially right.

See, a diet like that—which, by the way, is a very healthy way to eat—has some potential pitfalls. We're going to avoid those pitfalls by strategically harnessing the power of insulin, as I mentioned in the last chapter.

So let's look a little more carefully at how we are going to do this.

ALL LOW-CARB DIETS ARE NOT CREATED EQUAL

When you significantly reduce carbs, you have to replace them with something else, and there's only two other "something else's" to consider: fat and protein.

Some folks in the low-carb community believe we should replace most of those carbs (sugars and starches) with more protein, while others believe we should replace them with more fat. Both make very persuasive cases.

I've taken a middle ground position on this one and here's why. I do believe we need a certain amount of protein at each meal to get the real metabolic advantages of protein.

On the other hand, I'm concerned with the potential insulin-raising effects of excess protein, something that does not occur with fat. As exercise physiologist and legendary ultramarathoner Stu Mittleman once told me, "To burn fat, you've got to eat fat."

What You'll Eat to Burn Fat on This Program

Your eating program for the first ten days of this program is going to be this …

Higher fat, moderate protein and low carbohydrate.

You'll get the metabolic stimulating and muscle building effects of the protein, but without the danger of insulin spikes. You'll be consuming healthy fat, which is, after all, your best energy source, and you'll be consuming almost no sugar, which is, after all, what's keeping that stubborn fat hanging off your belly.

I tell you this because it is critically important that you do ***not*** try to do a low-fat version of this program. That's exactly the opposite of what I want you to do and will work directly at cross-purposes with our intended goal, which is to get you into fat-burning mode and out of sugar-burning hell.

Then, after ten days on a higher fat, moderate protein and low carbohydrate diet, you're going to have a carb feast.

Yep, you read that right. After ten days you're going to do a carb feast.

Your Secret Weapon Against Being Stymied By Fat-Loss Plateaus

The carb feast is your secret weapon against the body's uncanny ability to figure things out. It allows you to avoid all of the metabolic adaptations and other pitfalls I described in the last chapter.

By including strategic carb feasts in this program we will "refill your carb stores, crank up your metabolism, and give your mind a break," as John Keifer, the undisputed guru of carb-cycling systems puts it. "Several studies show that because of the change in enzyme production that occurs in your body throughout your low-carb days, gaining fat on a carb night is nearly impossible."[8]

Here's how it works in a nutshell. You eat really low carb for a period of time, which accomplishes two things: One, it depletes your glycogen (stored sugar) stores, which is important because it's harder to burn fat for energy when your body has plenty of it stored as carbs. Two, it trains your body to run on fat, or fat metabolites. So far so good.

But before you can become fully adapted with the slowdown in metabolism that often follows, we're going to suddenly spike insulin levels temporarily with a big old carb meal (which can—and should—include some fabulous desserts). And these carb meals are absolutely delicious—Pasta Bolognese, Barbecue Beef Burger with Sweet Potato Fries, and Chicken Fried Rice.

Normally, this is what we *don't* want to do (spike insulin) but that's when we've been spiking it with every meal we've eaten since kindergarten! Now we're trying to spike it *temporarily* for a *specific purpose*.

Spike that insulin with a high-carb meal and boom, up goes your leptin. Now you're less hungry. Leptin also takes the brakes off the thyroid, which turns up your metabolism so it doesn't get too sluggish—that means you are burning more calories while at rest.

Your whole metabolic stress response to dieting cools off.

Then you start again with a low-sugar eating plan, continuing the path towards fat burning but without the metabolic adaptations that can slow you down, depress your thyroid, eat up your muscles, and make you cranky as heck. And before you know it, carb feast is here again.

In fact, we're going to have that carb feast several times during the course of this program.

See? All of a sudden "low carb" isn't looking quite so bleak, is it now?

And remember—during those carb feasts you won't be cheating—you'll actually be giving your body a metabolic fix to prevent the kind of adaptation that can result in plateaus, weight gain and discouragement. That means you don't have to feel guilty about it. In fact, you can actually consider the carbs you'll eat on carb feast night as a kind of "metabolic medicine"!

The exact foods will be spelled out for you in Section 3 of this program, but I hope I've convinced you of the science—as well as the clinical experience—behind these choices. Remember, the nutritional goals for this program are:

1) Eat healthful and delicious foods that provide the broad spectrum of natural antioxidants, anti-inflammatories, protein, fat and fiber.
2) Eat in a way that does not elevate blood sugar, insulin and fat storage.
3) Eat in a way as to not damage the mitochondria with toxins and sugar, as damaged mitochondria mean less energy, less fat burning and less overall health and vitality.
4) Prevent the inevitable metabolic and hormonal adaptations that often take place when people remain on strict, low-carb diets for long periods of time.

And finally, the last goal: A program that's not hard to stay on and that promises some actual fun with food!

The bottom line is simply this: The food you eat, over time, will direct your body to run primarily on sugar or primarily on fat.

Our goal here is to get you firmly situated on the healthy road to a fat-burning metabolism, and that's exactly what the meal plans for the next twenty-two days are going to do.

WHAT YOU LEARNED IN THIS CHAPTER

- Nutrition is the granddaddy of the pathways to a fat burning metabolism.
- Nutrition influences hormones, energy production, inflammation, oxidative stress and glycation. It is also an important contributor to detoxification.
- Food has a hormonal effect. Some eating patterns increase insulin (the fat storage hormone) making it more difficult for IGF-1 to do its job.
- High-carb diets perpetuate sugar-burning metabolisms.
- Foods with little nutritional value stress the mitochondria, lowering energy production, and making the mitochondria less efficient at burning fat.
- Sugar—and foods that convert to sugar quickly, particularly grains—can be highly inflammatory.
- One of the most inflammatory foods in our diet is high omega-6 vegetable oil, particularly when not balanced by an equal amount of anti-inflammatory omega-3.
- Saturated fat from whole foods, such as eggs, grass-fed meat, coconut and palm oils, is perfectly healthy and not a cause of heart disease.
- High-sugar diets contribute to glycation, which contributes to mitochondrial damage, which prevents effective fat burning.
- High-sugar diets also contribute to oxidation, which also contributes to mitochondrial damage.
- Your diet should be high in healthy fat, moderately high in healthy protein, low in processed carbohydrates and high in antioxidants and anti-inflammatories. That's the kind of diet that creates (and maintains) fat-burning metabolisms.



Chapter Eight

PATHWAY #2—SLEEP: THE FAT-LOSS TECHNIQUES YOU CAN DO IN BED

Once I wrote an article that wound up on the homepage of AOL called "An Effective Weight Loss Technique You Can Do in Bed."

That one probably got more hits than any of the hundreds of articles I've published in the last two decades.

Want to know what that effective weight-loss "technique" I was referring to is?

Sleep.

A number of important studies in the last few decades have documented a powerful association between lack of sleep and obesity. Lack of sleep—or the wrong *kind* of sleep—has a profound effect on four important hormones that help regulate appetite and fat storage. Lack of high-quality sleep basically makes your hormonal symphony sound like a kazoo.

Inflammation, oxidation and glycation increase; the mitochondria get damaged; less energy (ATP) is created; hormonal messages get all fouled up, and you're left stuck in sugar-burning territory. The result? You're unable to become the lean, mean, fat-burning machine you need to be if you're going to melt fat off your body.

And there's more.

Sleep is a big part of an anti-aging lifestyle. Without sufficient amounts, you age faster.

It's no secret that most of us don't get enough sleep. Sleep affects how we work, how we relate to other people, how we make decisions, and how we feel in general. Not getting enough sleep can depress our immune system and raise our stress hormones.

That's why fixing your sleep is one of the most effective anti-aging and fat-loss techniques in the world. The right amount of sleep—and, equally important, the right *kind* of sleep—is absolutely essential if you want to make the transition from sugar burner to fat burner.

I wasn't kidding when I said you can lose weight in bed!

TO LOSE FAT, LISTEN TO YOUR INTERNAL RHYTHM

Although society has changed drastically in the past few hundred years, our genetics have not. Geneticists and anthropologists tell us that our specific human genome has only changed 0.01 percent in the past ten thousand years. Therefore, whenever possible, I think it makes sense to look to what our human genus was programmed for when it comes to basic things such as food, exercise and sleep.

As I've mentioned, our caveman ancestors ate from what I call the Jonny Bowden Four Food Groups: Food you could hunt, fish, gather or pluck. I've always maintained that this is the factory-specified fuel for human beings. It's what we evolved to eat, what our systems were designed to run on best.

So doesn't it make sense that we should eat the same healthy foods humans have run on for millennia, rather than the sugar-soaked processed garbage that now lines our supermarket shelves?

Well, it's the same thing with sleep.

Prior to electricity, we listened to our biological rhythms, which were in sync with the rhythms of the earth. We slept when it was dark out, and awoke when it was light. We spent plenty of time in the sun. We moved around a lot.

And when it was dark, we sat around the campfire and went to bed and slept like babies. When the sun rose, we started the day. This, if you will, was the natural order of things.

This is the factory-specified sleep pattern for healthy humans. It keeps your hormones running like a purring cat, replenishing healing chemicals for cellular repair, rejuvenation and maintenance, moderating glucose and insulin sensitivity, releasing growth hormone (and the anti-aging hormone melatonin), and keeping stress hormones from running amok and forcing you into sugar-burning hell.

This factory-specified sleep pattern has been as wildly disrupted by modern life as our factory-specified diet has been wildly disrupted by processed foods. And we've paid a great price in health and longevity.

Let me explain.

WHY DO WE NEED SLEEP?

The restorative power of sleep is well known, but scientists have been unclear about just why this is so. However, a fascinating study published just as I was completing the manuscript for this program suggests that what may be happening is a kind of internal housecleaning that leaves your brain (and body) refreshed.

Researchers observed live mice and found that during sleep, neurotoxins were essentially "washed out" of their brains. In the researchers' words, "... the restorative function of sleep may be a consequence of the enhanced removal of potentially neurotoxic waste products [that accumulate while we're awake]."

"The brain only has limited energy at its disposal," lead researcher Dr. Maiken Nedergaard told the BBC News. "[I]t must choose between two different functional states—awake and aware, or asleep and cleaning up."[1,2] Sleep cleans up your brain, sending neurotoxins packing. Sleep is also when your hormonal symphony is tuned up, inflammation and oxidation are reduced, stress vanishes, your body relaxes, and you shift toward a fat-burning metabolism.

In fact, we burn the highest percentage of calories from fat when we sleep than we do at any other time of day.[3,4] How does this happen?

Well, let's look at what happens inside your body when you sleep for the answers.

SLEEP AND THE FAT-BURNING HORMONAL SYMPHONY

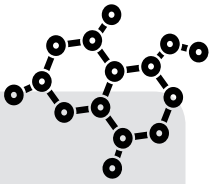
So how does lack of sleep turn the hormonal symphony players into a motley band of out-of-tune trombonists, adding to your misery and keeping you in sugar-burning hell?

To quote the poet Elizabeth Barrett Browning, "Let me count the ways."

Lack of Sleep Makes You Hungry

As we saw in Chapter 2, leptin is a hormone that's intricately involved in the regulation of appetite, metabolism and fat burning. Leptin is the chemical that tells your brain when you're full, when it should start burning up calories and, by extension, when it should create energy (ATP) for your body to use.

It triggers a series of messages and responses that start in the hypothalamus and end in the thyroid gland, the gland that controls how powerfully your metabolism is revving.



Sleep plays an important role in regulating our leptin levels and in controlling our appetite. During sleep, leptin levels increase, telling the brain you have plenty of calories in reserve, so there's no need to trigger hunger.

However, when you don't get enough sleep, you end up with less leptin, which makes your brain think you don't have enough calories to get through the day. The leptin message—"All clear! Stop eating!"—doesn't get through to the brain, which now thinks you're starving and signals you to eat.

Lack of sleep, together with the lowered amount of leptin, will even wake you up in the middle of the night making you hungry and craving carbohydrates so you can get back to sleep.

Meanwhile, your body takes steps to store the calories you eat as fat and to hold on to the fat you already have so you'll have enough energy the next time you need it. All of which, of course, increases your waistline and the size of your butt and thighs.

But the problems don't end ther …

As we have seen, leptin works in conjunction with a hormone called grehlin as a type of checks-and-balance system to feelings of hunger and fullness.

Ghrelin—which is produced in the gastrointestinal tract—has the exact opposite effect from leptin: it stimulates appetite. It tells your brain when you need to eat, when it should stop burning calories, and when you should store calories as fat.

When you don't get enough sleep, it not only drives leptin levels down (causing you to stay hungry) but it also causes ghrelin levels to rise, which means your appetite is stimulated even more.

When you are sleep deprived (as most of us are), the biological signals telling you to eat are so overwhelming it's almost impossible to say no to a bowl of Häagen-Dazs® ice cream or a Krispy Kreme doughnut®. Leptin and grehlin create a double whammy for fat gain.

Nerd Alert
Sleep Architecture 101

Sleep can be divided into two categories—REM (rapid eye movement) sleep and non-REM sleep. Non-REM sleep has four stages. Stage one is when you move from wakefulness to drowsiness to falling asleep. This is what you see when you drag your husband to the opera and he starts nodding off. In stage two, eye movement stops, brain waves slow down, muscles relax, heart rate slows, and body temperature decreases. Stages three and four—together called slow wave sleep—are characterized by brain waves called delta and theta waves. Body temperature and blood pressure drop just a little more, breathing slows, and the body becomes immobile—the well-known "dead to the world" phase.

After all this, the piece de resistance, REM sleep happens. This is when everyone in dreamland gets up to dance! REM sleep is the stage where you dream.

Non-REM sleep is when your body repairs, growth hormone is released and your metabolism is rebalanced.

REM sleep is when neurotransmitters and your mind are rebalanced and repaired.

Both are critical to your health. And you get plenty of REM and Non-REM sleep when you complete an appropriate amount of sleep cycles. When you get a good night's sleep, you get anywhere from four to six complete cycles, each of which takes about 90-110 minutes.

Lack of Sleep Slows Down Your Metabolism

As if constant hunger and the fat you pile on when you overeat weren't problem enough, when you don't get enough sleep your body is unable to access your fat stores. Why? Because the decrease in leptin brought on by sleep deprivation slows down your metabolism.

When leptin levels fall it has a direct impact on your thyroid. Thyroid hormone levels fall as well, and when this happens, your metabolism slows down. And all of this is nothing but bad news if you're trying to burn fat.

Eve van Cauter, PhD, a diabetes researcher with the University of Chicago explains it perfectly: "[I]f you are trying to lose weight by restricting calories when you aren't getting enough sleep, it's probably going to be very difficult to lose weight," she says.

The good news is that the opposite is also true: Getting enough sleep decreases hunger and will actually help you lose body fat. I am going to show you precisely how to do that in Section 3.

But first, I want to dive a little deeper into the connections between lack of sleep and fat gain.

SLEEP, STRESS AND INSULIN RESISTANCE

We've already learned how insulin plays a critical role in keeping us fat, and how a condition known as *insulin resistance* (where the cells stop "listening" to insulin) contributes mightily to obesity (not to mention diabetes and heart disease). Well, sleep deprivation makes insulin resistance worse.

Researchers have long known that insufficient sleep increases the risk of insulin resistance, type 2 diabetes and obesity. But recent research shows that even the fat tissue itself is affected.

Scientists at Cedars-Sinai in Los Angeles found measurable differences in how fat tissue responds to insulin after as little as four nights of restricted sleep.[5] In their study, published in the *Annals of Internal Medicine*, healthy subjects underwent four nights of sleep restriction (just over fourteen hours of cumulative sleep loss).

Afterwards, the fat tissue samples from these otherwise healthy participants looked exactly like tissue samples from diabetic or obese subjects. Their insulin sensitivity was decreased by a whopping 30%.

Basically, a mere four days of undersleeping turned these healthy folks into almost-diabetics!

Other research has shown that insulin resistance can be significantly increased after just a few days of sleep deprivation.[6,7]

SLEEP DEPRIVATION STRESSES YOU OUT

All of this is further complicated by the fact that lack of sleep is a huge stressor, causing our bodies to secret cortisol which has profound implications for storing body fat, particularly belly fat. If you want lots of ugly, pudgy belly fat, don't sleep and stress out a lot. It'll work like magic.

How?

When you "undersleep," your body perceives that you are under threat, so it raises cortisol levels, causing muscles to be broken down and fat to be stored around the middle. This process eventually causes blood sugar to rise, which causes insulin to rise as well.

Soon you're locked into a cycle of blood sugar madness—and you're locked out of a fat-burning metabolism.

THE VISCOUS CYCLE OF SLEEP LOSS, INFLAMMATION AND OXIDATIVE STRESS

Lack of sleep will also knock your immune system for a loop.

Individuals who are sleep deprived experience a whole lot more colds and illnesses.[8] And loss of sleep—even for a few short hours a night—can make your immune system turn on healthy tissues and organs.[9,10] Even worse, markers for inflammation[11] and oxidative stress go through the roof.

One way researchers test the relationship between oxidative stress and lack of sleep is by measuring glutathione, one of the most powerful natural antioxidants produced in the human body. In one study, glutathione decreased in the liver by 23% after five days of sleep deprivation and by 36% after ten days. "The decreases were accompanied by markers of generalized cell injury," wrote the authors.[12]

It's been shown that losing sleep for even part of a night can trigger the key cellular pathway that produces inflammation.[13] In one study of 525 middle-aged people, researchers found that sleep deprivation led to an increased production of inflammatory hormones. Individuals who reported six or fewer hours of sleep had higher levels of three inflammatory markers.[14]

And make no mistake about it—it's those inflammatory markers that just might be behind the effect of sleep on fat gain. The more inflammation you have, the less effectively your metabolism works, and the more likely it is that you become a sugar burner and you pack on fat. This quickly becomes a vicious cycle. Why? Because that extra fat on your hips, thighs and butt are now firing out even more inflammatory chemicals (see below), and creating even more inflammation.

Recent studies have shown that fat tissue isn't just a bunch of annoying fat cells that sit on your thighs and piss you off. Those fat cells are little endocrine glands, which are capable of secreting—among other things—inflammatory chemicals called *cytokines*.

And we've seen in detail what inflammation and oxidative damage can do to your metabolism. They damage the mitochondria, damage the hormone receptors, lower energy production (ATP), and basically ensure that you stay stuck in a body whose engine is running on sugar.

Which is exactly what you don't want.

SLEEP YOUR WAY TO FAT LOSS

Sleep is essential to memory, mood, and cognitive performance, all markers for a youthful, energetic life. And it's absolutely necessary for a smoothly running fat-burning metabolism.

The bottom line is simply this: Sleep matters. More, perhaps, than you realize.

The old saying, "I can sleep when I'm dead" used to be a badge of honor among Masters of the Universe types, but the irony is that those who live that way—ignoring the importance of sleep, with all its metabolic and hormonal anti-aging and fat-burning benefits—may find themselves dead *sooner* rather than later!

Keep in mind, it's not just the quantity of sleep that we get that's important; it's also the *quality*. Getting in bed with the TV on, tossing and turning for eight hours, running to the bathroom a few times a night, and perhaps even checking your e-mail on the way back, is not what anyone would call a good night's sleep.

That's *not* how you reduce inflammation and fat-making hormones. It's *not* how you reduce oxidative damage, and it's *definitely* not how you create a healthy, fat-burning metabolism.

The good news is that in Section 3 of this program you're going to learn how to sleep more, and you're going to learn how to sleepbetter.

All you need are a few simple techniques. These simple techniques will further shift you from a sugar-burning metabolism to a fat-burning one.

WHAT YOU LEARNED IN THIS CHAPTER

- Quality sleep is absolutely vital for losing body fat. It's also vital for healthy aging.
- Sleep is the time when our body recovers, repairs and regenerates. It's when we produce important hormones such as human growth hormone, the ultimate anti-aging hormone.
- Sleep is also the time that the brain flushes out neurotoxic waste products that can slow you down, cloud your brain, and even contribute to a sugar-burning metabolism.
- Lack of sleep is a powerful stressor and can seriously disrupt the hormonal symphony.
- Lack of sleep depresses leptin; your brain thinks you're starving, you'll experience cravings and hunger, and you'll be far more likely to overeat.
- Lack of sleep slows down your metabolism. (When leptin levels fall, so does thyroid, the master regulator of the metabolism.)
- Lack of sleep also increases the likelihood of insulin resistance.
  Lack of sleep depresses your immune system, and increases markers for inflammation and oxidation, both of which can interfere with your ability to burn fat.



Chapter Nine

PATHWAY #3—STRESS: THE SECRET FAT MAKER

There's an old saying that goes, "If a fish could think, the last thing it'd think about is water."

The point of the saying is that water is a fact of life for the fish—it takes water for granted, and, as long as it's there, the fish would no more spend time thinking about it than we would about air. Well, unfortunately, the same thing could be said for modern humans and stress.

It's popular to complain, "Oh, I'm so stressed out." Indeed, stress has become a buzzword to signal the standard reaction to anything mildly annoying in your life. It's almost a badge of honor these days.

When you're stressed you're in good company, sharing marquee space with Type A personalities, movers and shakers, Masters of the Universe, have-it-all moms, and other busy and productive types.

But stress is a lot more than a mild annoyance. It's a true fat maker. It's also a true life shortener. And stress is probably the single most potent enemy of a lean waistline and a long life on the entire planet.

It's hard to overstate how important it is that you understand what stress actually is, why it makes you fat, and why it contributes to every single disease of aging. Stress can and will shorten your life.

If longevity and health are something you want, if you want an effective, efficient, fat-burning metabolism, ignoring the role of stress is just not an option.

ALL IN YOUR MIND? NOT SO MUCH …

If you're like many folks who don't spend a lot of time reading biochemistry textbooks, you can be forgiven for buying into the common myth that "stress is all in your head." The fact is, the complicated stress response *begins* in the brain, often out of conscious awareness, but it doesn't *stay* there.

The stress response is a complex, multidimensional set of biochemical and hormonal responses and signals that affect virtually the entire body. You can measure levels of specific stress hormones in the blood, urine (and in limited cases, saliva). Stress is a reality—it's not "all in your head"!

And—if you don't know how to manage them—the effect of those hormones over time is to make your waistline bulge and shorten your life.

It's not a coincidence that the slimmest, longest-lived and healthiest people on the planet either have relatively stress-free existences, or have in place a number of useful ways of dealing with stress so it doesn't shorten their lives and make them fat, sick, tired and depressed.

Like many things we wish we didn't have—cravings for sugar, for example—the stress response plays an important role in our survival. In fact, if we weren't wired to respond to stressors, we'd be dead. Why? Because our physiology wouldn't react any differently to a Mozart concerto than it would to a raging lion.

Clearly, God, Mother Nature, or the wonders of evolution decided to give us some built-in mechanisms (like the stress response) that allow us to respond effectively to threats. These mechanisms were designed to save our life in an emergency.

The problem with these mechanisms is not the mechanisms themselves, but the fact that we are no longer following the manual that says, "use as directed." Instead, most of us use that stress response every day, and for many, multiple times a day, which just ends up sending us down the same road to becoming sick, fat, tired and depressed.

Let me explain.

OUR CAVEMAN HERITAGE

Assume for a moment that you are a calm, happy caveman, resting peacefully on the African Serengeti. All of a sudden, a saber-toothed tiger comes charging at you. What do you do?

Well, obviously, you run like hell. Or you pick up a stick—or the nearest object you can use as a weapon—and prepare to do battle for your life. But even before your conscious brain registers the get- butt-in-gear command, a number of important physiological events occur that prepare you for action.

A tiny section deep in the brain called the amygdala registers danger even before you're consciously aware of it and sends an instant message to the air-traffic controller of hormones in your brain called the *hypothalamus*.

The hypothalamus then shoots a hormonal signal to the pituitary gland, which in turn sends a hormonal signal of its own to the intended target of all this rapid-fire communication: a pair of pecan-sized glands perched atop of the kidneys called the adrenals. All this happens faster than you can press "send" on an e-mail.

Once they receive the message, your adrenals send out powerful hormones—cortisol, adrenaline and noradrenaline—which accomplish a number of things. They get your heart racing. They shut off other metabolic operations that might siphon away energy needed to fight or run (for example, digestion and tissue repair).

Cortisol,adrenaline and noradrenaline are known as the fight-or-flight hormones, precisely because that is what they prepare your body to do. If they weren't onboard, you'd continue to lounge lazily on your way to becoming a tasty dinner for that saber-toothed tiger.

So far, so good. This is how nature intended it. The stress hormones are like first gear for the body, turbo-charging the engine to prepare for an emergency. You're instantly alert, primed for action. Your blood pressure has gone up, your heart is racing, and blood is coursing through your arteries into your muscles, all good things if you're about to run or fight for your life.

But nature meant for the stress response to be used in emergencies. It's like the nuclear option for the body—a special gas pedal to be used only when there's an important threat to survival. It's first gear. Nature did not mean for that particular pedal to be pressed to the metal all day long.

And here's why: A quick burst of cortisol (and adrenaline) will get your heart racing (so you can run quicker), increase your lung and heart function (same reason), dilate your pupils (so you can see where you're going and what you're running from), and raise your blood sugar (you'll need it for energy!), all while turning down the metabolic "volume" on bodily systems that are temporarily superfluous, such as the reproductive and immune systems.

When you face an emergency, these short-term physiological changes are absolutely necessary for your survival. Like first gear on a car, it's exactly what you need when you're stuck in a ditch!

But just as driving down the highway in first gear is a disaster, so is having too much cortisol in your system for the long term. That's why chronic stress is a big problem.

SUGAR-BURNING HELL: WHY STRESS MAKES YOU FAT

The big problem with cortisol is that it has a number of nasty side effects. Those side effects are okay in the short term, but long term, they're bad news. Constantly elevated cortisol means a nightmare of aging, disease and fat storage.

Why?

Well, to put it simply, chronically elevated levels of cortisol virtually ensure that you'll stay a sugar burner.

One of the things cortisol does is to tell the liver to quickly dump a lot of sugar into the bloodstream. It does this any time your brain senses an emergency or a need for immediate energy.

And where does it get this sugar from? From glycogen, the storage form of carbohydrate in the body. Cortisol goes in, takes glycogen from your muscles and liver where it's stored, breaks it down to glucose and then dumps the glucose in the bloodstream. This process is called *glycogenolysis*.

It gets worse. Cortisol also sends a message to the body to break down muscle. It does this to get at the amino acids that make up muscle, because some of those amino acids can be converted to sugar. When you're stressed it's easier for your body to get energy this way than going to your fat stores.

So now you've got a ton of sugar in the bloodstream, (plus some muscle breakdown for collateral damage). This over-abundance of blood sugar triggers the release of insulin, just as sure as if you ate ten Ding Dongs®. Insulin's job is to take that sugar to the muscle cells enabling you to run like hell from the saber-toothed tiger, or shimmy up the nearest tree to escape a marauding bear.

But there's a problem. There *is* no saber-toothed tiger. There isn't even a marauding bear. Your stress response was set up to deal with those physical emergencies that required immediate fuel for the muscle cells, but those are not the emergencies that trigger the modern-day stress response.

Today, most people have chronic *mental* stress. Chronic mental stress is relatively ongoing, and doesn't require an immediate physical response. So now you have chronically elevated cortisol telling the liver to keep dumping more sugar into the blood stream to deal with a perceived stress, while chronically elevated insulin keeps sucking up that sugar and storing it away in your fat cells.

Welcome to sugar burning hell!

It gets even worse. The excess cortisol and insulin trigger the desire for more quick-fuel carbohydrates. Why does this happen? Because stress makes your body believe you are in fight-or-flight mode and require sugar for fuel.

When you scarf down a Krispy Kreme doughnut® in response to this desire you further lock yourself in the vicious cycle of high blood sugar, insulin resistance, pancreatic stress, liver stress, adrenal stress, fat production, lowered leptin, increased blood fats, high blood pressure, inflammation, glycation, oxidation and metabolic syndrome. Yikes!

COLLATERAL DAMAGE: STRESS ALSO MAKES YOU DUMB, SICK, OLD AND CRAZY

I'm sorry to say the problems don't end there, so please don't hate the messenger.

High levels of cortisol shrink an important portion of the brain called the hippocampus, which is essential to memory and thinking. Mental stress also triggers the adrenal medulla to produce excessive amounts of adrenaline and noradrenaline. The noradrenaline constricts blood vessels, increasing blood pressure, which can lead to hypertension over time.

And chronically elevated stress hormones lower immunity, which is why marathoners often get sick the week after competing. "Stress does many things to upset immune regulation," writes Datis Kharrazian, DC, DHSc, CD, MS.[15] "It suppresses immune function, promotes immune imbalances, weakens and atrophies the thymus gland, and thins the barriers of the gut, lungs and brain."

It doesn't stop there.

Stress has a powerful effect on cancer. Scientists from Wake Forest University School of Medicine found that the stress hormone adrenaline causes changes in prostate and breast cancer cells that may make them resistant to cell death.[16,17] "This means that emotional stress could both contribute to the development of cancer and reduce the effectiveness of cancer treatments," said lead researcher George Kulik, D.V.M, PhD, an assistant professor of cancer biology and senior researcher on the project.[18]

And if that weren't bad enough, a recent study[19] found that midlife stress may raise the risk for dementia. The study followed 800 middle-aged Swedish women for 38 years and found a strong—and disturbing—link between common stressors and dementia later in life.[20]

That's an awful lot of collateral damage if you're trying to be leaner and live longer and healthier.

HOW TO MANAGE IN A STRESSED OUT WORLD

The good news is you can certainly learn to modify the behaviors that send your stress response into overdrive and keep you locked in sugar-burning mode indefinitely.

Calming exercises, such as deep belly breathing, yoga and tai chi, engage your relaxation response. This cools down your stress response and helps rehabilitate your body. They are like replenishing food for the soul, this is why they are such an important part of any fat-burning strategy.

Think of your relaxation response as your inner grandmother. When you let her speak, words of wisdom and solace often pour fourth. These messages temper the frantic shouting of the stress response. They help you live longer and they help you live better. And they help you move towards a healthy, robust, fat-burning metabolism.

That's why stress reduction is such an important part of this program. It's one of our five pathways to health, vitality, and a fat-burning metabolism.

And in Section 3 you're going to learn to do one simple exercise that anyone can do, that takes only four minutes, and can help counter the negative, sugar-burning effects of an overactive stress response. This exercise—and a few other easy techniques we'll suggest in Section 3—will help reduce the effects of excessive stress.

Remember, this program isn't just about losing body fat. It's also about living longer, healthier, *and* with more vitality and energy. And nowhere is the connection among all those things more apparent than in the role of stress. You've seen the powerful connection between stress hormones and body fat, as well as the connection between stress and immunity, stress and dementia, and stress and cacer.

Bottom line: We need to take stress a lot more seriously than most of us have been doing. Managing it is truly one of the major pathways to health, vitality, and a fat-burning metabolism. And the nice thing is that stress reduction can be as simple and easy as taking a few deep breaths.

WHAT YOU LEARNED IN THIS CHAPTER

- The stress response is a complex multidimensional set of biochemical and hormonal responses and signals that affect virtually the entire body.
- The stress response is also known as the fight-or-flight response because it prepares your body for immediate action, such as what would be needed in a physical emergency.
- Cortisol, noradrenaline, and adrenaline are the main fight-or-flight (stress) hormones.
- Cortisol tells your liver to quickly dump a lot of sugar into the bloodstream. It also sends a message to break down muscle.
- Since this new sugar in the bloodstream is not needed by the muscles, it will trigger the release of insulin, and you'll be caught in a vicious cycle of high blood sugar, insulin resistance, adrenal stress and fat production.
- Stress hormones also lower immunity, which is why marathoners so frequently get sick after their event.
- The constant release of stress hormones keeps you a sugar burner and is detrimental to your health in numerous ways.
- Meditation, deep breathing, and slow, repetitive movements (as done in yoga and tai chi) are deeply relaxing, and stress-reducing. They reduce the stress response taking you out of sugar burning territory.



Chapter Ten

PATHWAY #4—DETOXIFICATION: CLEANING OUT YOUR FAT BURNING PIPES

What if I told you that there's something out there that's so insidious, so destructive and so pervasive that it could derail your efforts to burn body fat no matter how well you eat, how frequently you exercise or how much you sleep?

Would you be happy about that?

I didn't think so.

Well, I'm sorry to be the one to tell you this, but there is something out there—thousands of "somethings" actually—that are working overtime to keep the fat on your body right where it is, stuck on your hips, butt, thighs and stomach, unable to be effectively burned for fuel by your mitochondria.

And those "somethings" are toxins.

Toxins damage cell membranes and block hormone receptors. Some toxins can even behave like hormones, making them effective hormone mimics (more on this later).

They damage your fat-burning factories and they overwhelm your cells' antioxidant factories, reducing cellular antioxidants like the all-important glutathione. This means more oxidative damage with less ability to fight it.

Put more simply, they force you into sugar-burning hell, and they keep you there.

Now this might not be such a big deal if we weren't exposed to toxins all the time.

The problem is, we are.

LIVING IN A TOXIC WORLD

Toxins are everywhere. And don't count on the Environmental Protection Agency to monitor them for you. By some estimates there are nearly 80,000 chemicals available in the United States that have never been fully tested for their toxic effects on our health and environment.[1]

The country's main chemical safety law—the Toxic Substances Control Act (TSCA)—makes it almost impossible for the EPA to take regulatory action against dangerous chemicals, even those that are known to cause cancer or other serious health effects. And, in case you were wondering, many of these chemicals are recognized as carcinogens.[2] Great!

So how does this happen? How do we get exposed to all this stuff? And who's in charge here, anyway?

Well, under the current law, the EPA must prove a chemical poses an "unreasonable risk" to public health or to the environment before it can be regulated. Good luck with that. The underfunded and overworked EPA hasn't a prayer of keeping up with the workload.

The Toxic Substances Control Act allowed an incredible 62,000 untested chemicals to remain on the market when it first passed. In more than 30 years, the EPA has only required that about 200 of these chemicals be tested, and has partially regulated a grand total of five. The rest have never been fully assessed for any toxic impact on human health.[3]

Whoops!

What's more, for the 22,000 (!) chemicals introduced since 1976, manufacturers have provided little or no information to the EPA regarding their potential health impacts.[4]

Yet one thing is pretty much certain: toxins can keep you stuck in sugar-burning hell. They prohibit you from burning fat effectively, they cause you to age more quickly, and they are one of the root causes of a wide variety of chronic illnesses.

A TOXIC SYMPHONY

At this stage I think we can all agree on one thing: whether you're a sugar burner or a fat burner depends largely on hormones. Specifically, it depends on the ability (or inability) of those hormones to get their fat burning messages through to the cells.

Toxins interfere with the beautiful, harmonious music of your hormonal symphony by turning it into a toxic cacophony of sugar burning and fat gain. How does this happen? Pull up a chair.

Toxins Destroy Your Cell Membranes

The primary way toxins damage your cell membranes is through the process of inflammation.[5]

When the membrane is inflamed, everything is affected, including (but not limited to) ATP production. Cellular detoxification becomes compromised, largely because the antioxidant factories of the mitochondria that would normally handle that become overwhelmed.

"Once the cell membrane becomes inflamed, it loses this ability to move the good stuff in and the bad stuff out," says Dr. Daniel Pompa. "Cellular inflammation is really the silent killer and the cause of most disease. Diseases occur due to cell membrane inflammation and not just of the outer membrane, but also the inner mitochondrial membrane, where inflammation can drastically affect all cell function and energy."

Indeed.

And when cell membranes are damaged, nutrients have a harder time getting in. When the nutrients that are necessary for the mitochondria to work properly aren't delivered, mitochondrial function is heavily compromised, and so is fat burning.

Remember, the membrane acts as a kind of security check, a metabolic "bouncer" that keeps the riffraff out and lets the good guys in. If the membrane is compromised, it's like shutting down the only road to and from the city—eventually everything needed for the city to function and survive is going to be kept from entering and the city (the cell) will eventually break down.

Toxins Damage Hormone Receptors

The ability of the cell to communicate with the rest of the body—specifically the hormones that tell it what to do—is very much dependent on the health of the cells' hormone receptors.

But if the receptors on the cell membrane are damaged, that doesn't happen. The message gets sent back undelivered. And toxins—along with the unholy trinity of inflammation, oxidation and glycation—are one of the reasons.

All four damage those receptors. That means hormonal messaging gets screwed up, and some messages aren't received. Or sometimes a message gets through—but it's the wrong message (see Toxins Mimic Hormones, below).

Either way, fat burning is compromised and you remain a sugar burner.

The point here is that everything that needs to happen for effortless and efficient fat burning is compromised by things like inflammation, oxidation, glycation and toxins. That includes the energy production factories in the cell (mitochondria) and it definitely includes the hormone receptors that live on the cell surface.

That's why toxins can keep you in sugar-burning hell. And it's why detoxification—lowering the toxic load of the body—is such an important pathway to a fat-burning metabolism.

TOXINS MIMIC HORMONES

If all this weren't bad enough, there is also a class of toxins—known as hormone or endocrine disrupters—that actually mimic the action of hormones, screwing up your hormonal symphony even further.

These stealth molecules look very much like ones our body recognizes and knows what to do with, but they're as real as a twenty dollar Louis Vuitton bag.

Sidney Baker, MD, a legendary pioneer in integrative medicine and the author of the classic text, *Detoxification and Healing* explains endocrine disrupters like this:

> "The most subtle danger to our chemistry comes from molecules that … so resemble our own molecules that they blend in with the crowd and go unnoticed until it turns out that they not only cannot function as do the molecules they mimic, but they occupy strategic spaces in our chemistry and interfere with our own molecules. If we conjure up a picture of toxins as mostly weird and alien chemicals we may fail to understand that mimicry is one of nature's most pervasive tricks. A random molecule that interferes with the way your molecule works because it looks just like it reminds us that in this sense we have more to fear from friendly looking chemicals than from monstrous ones."[6]

The endocrine disrupters that Dr. Baker is talking about are often referred to as hormone mimics. And of the hormone mimics, xenoestrogens—chemicals that behave like estrogen but are foreign to the body—may be the most destructive.

These compounds—found throughout our environment and often lurking in the most innocent of places—react with our body the same way hormones do, but they have devastating results.[7]

Most of us are exposed to xenoestrogens unwittingly because they're in our environment—pesticides or chemical fertilizers, for example. Incidentally, one of the best reasons for eating organic is to minimize exposure to these chemicals.

One example of xenoestrogens are phytoestrogens, which are chemicals that behave like weak estrogens and come from plants (*phyto* means "plant").

But phytoestrogens are lightweights in the hormonal disruption sweepstakes, compared to the really dangerous man-made stuff made by pharmaceutical companies, or pesticides like atrazine that are notorious for causing reproductive cancers.

Another class of xenoestrogens is *phthalates*, which are industrial chemicals used to give flexibility to plastics, but which, in men, interfere with the normal action of testosterone. Phthalate exposure has been

associated with a host of traits symptomatic of low testosterone in males, from low sperm count to greater heft.[8]

And we haven't even mentioned the xenoestrogens in plastics, fertilizers and pesticides!

In the classic (and widely publicized) book, *Our Stolen Future*, zoologist Theo Colborn was one of the first to hypothesize that some industrial chemicals commonly found in the environment could be wreaking havoc with human health by disrupting the body's hormonal system. He stated that these endocrine disrupters may play a role in a range of problems, from developmental and reproductive abnormalities to neurological and immunological defects to cancer.[9]

So hormone mimics don't only make you fat. They make you old and sick as well.

Unfortunately, the damage toxins do doesn't end here.

TOXINS DIRECTLY DAMAGE MITOCHONDRIA

One important thing to know about mitochondria—besides the fact that they are ground zero for fat burning in the cells—is that they are very sensitive creatures. And like all sensitive creatures, they are easily hurt. One of the things they're most hurt by are toxic metals.

Take mercury, for example. It's well-established that mercury is a neurotoxin,[10] and for that reason alone it would be a good idea to avoid it! But mercury does a number of other awful things which can indirectly keep you stalled in a sugar burning metabolism.

Chief among them: mercury damages your mitochondria.[11,12] For one thing, mercury promotes the formation of free radicals, which, as we've seen, can damage the mitochondria,[13] and slow down fat burning and ATP production in general. But mercury goes one step beyond just generating more free radicals and oxidative damage.

It also significantly hobbles your body's ability to fight back against that free radical damage by crippling one of the most powerful antioxidants your body makes—glutathione.

"One major mechanism for metals toxicity appears to be direct and indirect damage to mitochondria via depletion of glutathione," write the authors of a paper on mitochondrial dysfunction published in the *Journal of Experimental and Molecular Pathology*.[14]

Mercury decimates your mitochondria on two fronts—by overwhelming them with oxidative damage, and by depleting glutathione, one of the cells most potent weapons against that very oxidative damage.

What is the result of all this mitochondrial damage? Fat burning slows to a crawl, if it even happens at all. Your body shifts toward a sugar-burning metabolism, and your fat stays safely locked away on your hips, butt, thighs and stomach. And you stay fat (not to mention sick, tired, depressed and old!)

But that's not all …

Nerd Alert



The liver is detoxification central in the human body, and it does its work in two distinct phases. Phase 1 is dependent on a group of powerful detoxification enzymes known collectively as the Cytochrome P450 enzyme system, while Phase 2 is dependent upon amino acids.

Both phases of detoxification depend on certain critical key nutrients. Phase 1 detoxification removes the toxins and packages them into little metabolic equivalents of garbage bags. Phase 2 actually throws the garbage bags out.

Phase 1 is highly dependent on the antioxidants from brightly colored fruits and vegetables, while Phase 2 is highly dependent on specific amino acids that a relatively higher protein diet will provide.

A BODY OVERWHELMED BY TOXINS IS RACKED WITH INFLAMMATION AND OXIDATION

Imagine what would happen if you burned fuel in a fireplace without ever cleaning the chimney …

Gunk (toxins) would accumulate, eventually polluting the air and clogging up the chimney. Keep this going, and your house will be filled with black soot.

Well, that's exactly what happens in your cells when you are exposed to toxins. More free radicals are produced, oxidative damage increases, and inflammation skyrockets as the "black soot" of toxic waste accumulates.

Why do oxidation and inflammation burn out of control when you're exposed to toxins?

Because your built-in cellular defenses are overwhelmed.

See, your cells contain a whole antioxidant system designed to keep themselves healthy. After all, burning fuel produces free radicals—there's no two ways about it. Those free radicals "rust" us from within. Preventing that rusting—quenching those free radicals—requires antioxidants.

Luckily for us, our cells come equipped with a whole "anti-rusting" system which, among other things, is designed to protect the mitochondria. It's a terrific army of antioxidants, ready to do battle and mop up any mess that comes from converting food and oxygen into energy.

And in a healthy, functioning fat-burning metabolism, those antioxidants—with long names like glutathione, catalase and superoxide dismutase—do a fine job.

But problems occur when we ask that system to do too much. Which is exactly what happens when we overwhelm our bodies with sugar, empty calories that contain no additional nutrients, and expose it to toxins.

Now the cells antioxidant defense factory is overwhelmed, and all hell breaks loose. It's like putting a cover on the furnace, trapping the exhaust inside. The fire grows at the same time your ability to put it out grows weaker! This is definitely not a good thing when it happens in your cells, but that's precisely what you get when you overwhelm them with toxins.

This turns fat burning down even further and is a central factor in virtually every disease we know of including Alzheimer's, obesity, diabetes, heart, disease, and cancer.

WHAT DO YOU DO ABOUT ALL THIS CELLULAR DAMAGE? DETOXIFY!

In case you're dizzy from all the science stuff in this chapter, let's break it down to the basics:

1. To have a smooth running and fat-burning metabolism, you have to take care of your cells, specifically the cellular engines known as mitochondria.
2. The mitochondria are easily damaged by toxins, but they fight back with their own powerful antioxidant army.
3. But even that powerful antioxidant army is powerless in the face of accumulated toxins, inflammation, oxidative damage and glycation.
4. Supporting that intracellular antioxidant system and detoxifying your body is essential for staying young, happy and healthy, and is essential for fat burning.

And that's exactly what we are going to do in this program!

While a structured detox program is beyond the scope of this program, in Section 3 I will provide you with tons of foods filled with natural anti-inflammatories and antioxidants. The nutrition program in *New Your in 22* is designed to help you detoxify your body naturally.

In Section 3 we will also discuss some ways you can reduce your toxic exposure and reverse the effects of toxins you have already endured. I'll also list a simple set of household and environmental chemicals you can easily avoid to minimize the damage these toxins have on your ability to burn fat.

Follow these steps, and you'll clean out the cellular gunk that's holding you back from that fat-burning nirvana you've been dreaming of!

WHAT YOU LEARNED IN THIS CHAPTER

- Toxins can keep you stuck in sugar-burning hell. They prohibit you from burning fat effectively, they cause you to age more quickly, and they are one of the root causes of a wide variety of chronic illnesses.
- Toxins destroy your cell membranes through the process of inflammation.
- Damage to the cell membranes prevents many nutrients that are critical for cellular metabolism and fat burning from getting in.
- When this happens mitochondrial function is compromised and you produce less energy.
- Toxins also damage the hormone receptors that live on the cell membranes, preventing important hormonal messages (such as "burn fat") from being delivered.
- Some toxins even mimic the action of hormones, further screwing up the hormonal symphony and allowing the wrong messages to get into the cell. These toxins are known as hormone mimics or endocrine disrupters. They not only interfere with fat burning, they also play a role in a range of chronic diseases.
- When the cells and the mitochondria are damaged by toxins the cells' natural antioxidant defenses are overwhelmed.
- The resultant damage keeps you stuck in sugar-burning metabolism.
- Detoxification is a critically important pathway for both healing the body and creating a healthy, functioning fat-burning metabolism.



Chapter Eleven

PATHWAY #5—EXERCISE: IS IT REALLY AN EFFECTIVE WAY TO BURN FAT?

I'm willing to bet you think you have a good idea of what I'm going to say in this chapter, because you've heard it a million times.

You think I'm going to tell you to bust a gut in the gym with some killer workout—like the kind you see on late-night infomercials starring some dude with shredded abs screaming about intensity.

Not even close—in fact, I am going to recommend something completely the opposite. Let me explain ...

THE REAL STORY ABOUT EXERCISE

Not long ago, a startling phrase appeared in big bold letters on the blog of John Berardi, PhD.[1] Who's John Berardi, you ask? Just a famous personal trainer with huge biceps and 8% body fat—a guy who's made a pretty good living helping people get in shape.

Oh, and I almost forgot: Berardi also happens to have a PhD in exercise physiology.

Here was the startling statement…

"Exercise doesn't work!"

Berardi's statement may sound crazy—especially since he routinely recommends about five hours of exercise a week—but it will soon make more sense to you.

"Although I always knew that diet was an important part of the training equation, I also always harbored some subconscious notion that if I worked my clients hard enough, their lack of dietary effort would be overcome by my super-effective training programs," he writes.[2]

So a few years ago, Berardi decided to test his belief that exercise alone can create fat loss. He worked on a study at the University of Texas that put 100 sedentary participants into one of two groups. Group one just kept on doing what they were doing, exercise-wise, which was basically nothing. Group two was given a 12-week program of 5-6 hours of activity per week.

The program was designed by Berardi and overseen by both a weightlifting coach and a group exercise coach. All the participants started out at a whopping 35-40% body fat, as measured by DEXA scans. We're talking sedentary here—just the kind of folks you'd probably think should exercise more so they could lose some weight.

Now remember: the study didn't require the participants to make any change in their diets. These guys were only interested in one thing: "We wanted to test the effects of exercise alone—*without* diet," writes Berardi.

"In other words, the question became: Without a dietary intervention, can exercise *alone* reshape a person's body?" [emphasis mine]

At the end of the 12-week study, they got their answer: Not so much.

"Without (changing your diet), twelve weeks of high-intensity training produced a fairly disappointing 1% loss of body fat," he writes

Fairly disappointing?

"In terms of raw data, the participants lost only 1 pound of fat and gained 2 pounds of lean vs the placebo group," explains Berardi. "Frankly," he says, "that sucks."

If Berardi was the only person getting these results, we could probably dismiss what he's saying as a fluke. But he's not.

THE DATA SHOWS TYPICAL EXERCISE DOESN'T WORK FOR FAT LOSS

A study published in *Nutrition & Metabolism* showed that after ten weeks of training, thirty-eight previously overweight and sedentary subjects had very minimal changes in their body composition, losing a mere 1.5 pounds of fat over the course of the fifty exercise sessions.

However, those subjects who exercised, and shifted their diet to include more protein and fat and less carbohydrates, saw a number of significant improvements in strength, cardiovascular fitness and blood lipid levels.[3]

Other studies have confirmed this phenomenon—exercise by itself does very little in terms of changing body composition.[4,5]

"The past few years of obesity research show that the role of exercise in weight loss has been wildly overstated," wrote John Cloud in the 2009 *Time* magazine cover story "Why Exercise Won't Make You Thin."[6] Eric Ravussin, Chair in Diabetes and Metabolism at Louisiana State University and a prominent exercise researcher, agrees. "In general, for weight loss," he says, "exercise is pretty useless."[7]

How can this be the case? Why—despite what we've all been told for so many years—is exercise such a poor method of losing fat?

I have a theory, and I'll tell you about it in a moment, as well as the solution to the problem!

But first, let's take a look at data that shows where exercise *does* have a tremendous impact—in slowing down the aging process.

WHY EXERCISE IS MY FAVORITE ANTI-AGING DRUG

Let's put fat loss aside for a moment—don't worry, we'll get back to it—and let's talk about the undisputed other benefits of exercise. According to the 2008 Physical Activity Guidelines for Americans,[8] being physically active on a regular basis:

- Improves your chances of living longer and living healthier.
- Helps protect you from developing heart disease and stroke or their precursors, high blood pressure and undesirable blood lipid patterns.
- Helps protect you from developing certain cancers, including colon and breast cancer, and possibly lung and endometrial cancer.

- Helps prevent type 2 diabetes and metabolic syndrome (a group of risk factors that increases your chances of developing heart disease and diabetes).
- Helps prevent osteoporosis.
- Reduces the risk of falling.
- Improves cognitive function among older adults.
- Relieves symptoms of depression and anxiety and improves mood.
- Prevents weight gain and helps keep weight off after weight loss.
- Improves heart-lung and muscle fitness.
- Improves sleep.

If there was a drug on earth that could accomplish all those things, the pharmaceutical companies would be lining up for the chance to make it, and it would be the biggest seller of all time.

In addition to all the amazing stuff listed above, exercise is also a terrific stress reducer. And, as we've seen, stress is the natural enemy of fat loss.

Exercise Reduces Stress

A 2010 study of stressed-out women found that exercising vigorously for an average of forty-five minutes over as short a period as three days caused changes at the cellular level. The exercising women had cells that actually looked younger. Compared to cells of the stressed-out women who didn't exercise, the cells of the exercising women showed fewer signs of aging.[9,10] Exercise also boosts levels of the brain chemical GABA, which is usually associated with improved mood and decreased anxiety.

Then there's the brain.

Exercise Boosts Brain Function

Research by Arthur Kramer at the University of Illinois showed that six months of moderate exercise actually increased the volume of both the grey and the white matter in the brain, proving that exercise can build up your brain.

And the best part is that it doesn't take much. A pretty moderate level can do the trick, in this case, just walking forty-five to sixty minutes, three times a week.[11]

Even if you don't care much about the physical size of your brain, exercise has been shown to reduce the risk of Alzheimer's disease and other forms of dementia. One theory is that it does so by increasing blood flow to the brain.

A study in the *Archives of Internal Medicine*[12] evaluated the cognitive functioning of seniors over the age of sixty-five for almost six years and found that the less they exercised, the quicker the rate of cognitive decline and the higher the risk for dementia, including Alzheimer's disease. In a sobering finding, those who didn't exercise were three times more likely to develop dementia.

And, of course, exercise has a profound impact on one of the hormones we most care about when it comes to losing body fat—our old friend insulin.

Exercise Improves Insulin Sensitivity

Remember, insulin—the fat storage hormone—escorts sugar into the muscle cells where it can be burned for energy. When you exercise, you create a demand in the cells for immediately available energy, which is usually sugar

That means insulin now has somewhere to go with its sugar payload. It takes it into the exercising muscle cells, which are more than happy to welcome it in. This means the cells are becoming more sensitive to insulin and less insulin *resistant*.

This alone makes exercise worth the price of admission, since insulin resistance is at the heart of obesity and diabetes, and probably involved in heart disease as well. In any case, insulin resistance will keep you from burning fat any day of the week. Exercise helps reverse it.

Exercise, Heart Disease, Stroke and Diabetes

A baker's dozen of studies[13-23] have demonstrated that as simple an exercise as walking substantially reduces the chances of developing heart disease, stroke, and diabetes in different populations.

And the more you do it, the better it is. One study looked at people who were already walking—folks in the National Walkers Health Study—and divided them into four groups, depending on how much walking they did per week. Those who walked the most had double digit reductions in their risk of dying from either cardiovascular disease or diabetes.[24]

And if that weren't enough, walking lowers inflammation—a serious archenemy of a fat burning metabolism. In this study, after twenty-four weeks, walkers saw significant changes in hs-CRP, the best measure of systemic inflammation I know. And that was in addition to a significant drop in BMI, waist circumference, fasting blood sugar, triglycerides, and a significant increase in HDL cholesterol.[25]

All from just a 24-week walking program.

AND NOW BACK TO EXERCISE AND FAT LOSS

So, by now you've probably figured out that I'm a big fan of exercise for every health reason on the planet. However, exercise by itself is a pretty sucky way to lose body fat. But notice I said "by itself."

When you exercise along with a diet program like *New You in 22*, it's a whole different story.

Take the data from the National Weight Control Registry. The Registry basically keeps track of people who've successfully lost weight and monitors what they do.

How successfully?

To be in the Registry, you have to have lost 30 pounds and kept it off for a year—but the average participant has lost 70 pounds and kept it off for six years! If that's not considered success, I don't know what is.

WebMD recently posted a piece on some of the top habits shared by these successful weight losers, and one of them was this: They exercise 60 minutes each day. Most successful losers are walking 11,000-12,000 steps, or the equivalent of about 5.5-6 miles a day.

Pamela Peeke, MD, the author of *Fight Fat After Forty* and *Body for Life: For Women*, and a Pew scholar in *Nutrition & Metabolism*, has said "In order to achieve and maintain weight loss, you have to add in intensity to mobilize the fat." She suggests adding some hills to your daily walk, doing some speed intervals, or doing whatever it takes to boost your heart rate a little more.

Not so coincidentally, that's precisely what you're going to be doing in *New You in 22*.

THE SIMPLEST, MOST EFFICIENT EXERCISE PROGRAM IN THE WORLD

I want you to do a very specific exercise program for the next 22 days. Get ready to be surprised. It's a very simple program. Actually, it can be explained in one word, and by now should come as no surprise given the data I've shared with you.

Walking!

And by the time you've read through the next few paragraphs you'll understand exactly why this—and *only* this—needs to be your exercise for the next 22 days while you are upgrading your metabolism from one that sputters along with sugar, to a super-efficient, fat- burning one that's on cruise control.

I believe that the reason it's so hard for people to lose fat by exercise alone is because they are sugar burners. Sugar burners will run out of steam very quickly since they can't effectively tap into their fat stores for energy.

They'll get tired and won't be able to put out much effort. And if they do manage to push through, they'll be exhausted because that endless supply of energy they've got locked up in their fat tissue isn't readily available to their cells for fuel.

Worse, because they can't tap into their fat cells very well, when a sugar burner does manage to grit his teeth and push through a grueling aerobic workout through sheer will power alone, he'll likely be breaking down his muscles for fuel.

Cortisol—the stress hormone will go way up—but there won't be a corresponding increase in the hormones that build and maintain lean muscle (testosterone and growth hormone). Cortisol breaks down muscle, and that's not a good thing if you're trying to lose body fat.

No wonder exercise and fat loss is damn hard for sugar burners.

A SIMPLE EXERCISE EVEN SUGAR-BURNERS CAN USE TO BURN FAT

The exercise program in *New You in 22* is designed to fix this problem once and for all. It is a scientifically sound, progressive program based on something nearly all of us can do—walking.

By walking every day, you're going to be conditioning your body in three ways:

1. **Improved Blood Flow.** You'll be conditioning your circulatory system to be better able to do its job of delivering oxygen and nutrients to the tissues more efficiently. Both oxygen and nutrients are critical to building a fat-burning metabolism.
2. **Improved Endurance.** You'll be building two kinds of endurance: muscular and cardiovascular. Your muscles, your lungs, your heart, and your entire circulatory system will be stronger and able work longer without fatigue. And the increased circulation will help you sweep away toxins that have been liberated from your fat tissue, minimizing the metabolic damage they can cause.
3. **Improved Fat Burning for Fuel.** And, you'll be training your body to use a higher percentage of fat as fuel and to keep that percentage higher for longer periods of time. In exercise physiology terms, you will be keeping your respiratory quotient—the percentage of the calories you're burning that come from fat—as high as possible for as long as possible.

Then, after the program, when you decide to increase the intensity of your exercise and consider a rigorous fat-blasting program like High-Intensity Training (discussed below), your metabolic engines will already be primed.

You'll be able to really take advantage of that type of powerful exercise to upgrade your metabolism even more—not something you can do when you are stuck in the sugar-burning swamp. You won't avoid it like the plague because for the first time, your body will be able to access your fat stores and thus produce enough energy for you to actually do it!

And it all starts with walking. Walking is the key to transforming your metabolism from sugar burning to fat burning.

But first a word about high intensity exercise.

A FAT-BLASTING EXERCISE THAT WORKS … *IF* YOU'RE A FAT BURNER

There's a considerable body of evidence that the most effective training you can do (for fat burning, and probably general health as well) is high intensity training (HIT)... but *only* when it's done right.

The idea behind HIT is that you alternate short intervals of high-intensity exercise with short rest periods. Drs. Jade and Keoni Teta, leading proponents of this style of exercise, describe it this way: "Push till you can't, then rest 'till you can."

Now the problem with this style of exercise is that most of the people that are touting this as the next fat-loss miracle are totally ignoring a critical factor: the metabolic status of the people they're teaching it to. In other words, these so-called "experts" aren't taking into consideration whether someone is a sugar burner or a fat burner.

And that's an absolutely critical point. If you're a fat burner, HIT is the best thing to come along in years.

But if you're a sugar burner, HIT is a complete disaster.

For HIT to be effective, it has to be done when the metabolic groundwork has already been laid. That is to say after you've shifted from a sugar-burning to a fat-burning metabolism. If you try HIT while you are stuck in sugar-burning hell, you'll be doing an even better job of burning muscle and dismantling other important bodily structures for energy while your fat just defiantly sits there on your hips, belly and thighs.

Don't get me wrong. I'm a huge fan of HIT.

But we don't want you doing it for the next 22 days.

In fact, we don't want you doing it until you are ready.

But here's the thing that may surprise you. The most important thing in these next 22 days is not the intensity of the exercise you do. No. The most important thing in these next 22 days is about switching you from a sugar-burning kitten to a fat-burning beast! That's what the *New You in 22* exercise program is going to accomplish.

Once you accomplish this, you'll truly be able to reap all the benefits of any exercise program you choose to do, ever. So, be patient and lay the metabolic groundwork. You won't regret it.

Look, if you're already exercising I don't want to tell you to stop, but I do want to suggest that you pull it back a bit as your body gets accustomed to a new kind of fuel. That's what we're going for here—a fuel change. Don't worry about "not doing enough."

You can always beef up the level of your exercise later on (and I hope you will), but I want you to do that once your hormonal symphony is playing like the Juilliard String Quartet, your mitochondrial factories are humming along like a Ferrari engine, and your cells are pumping out barrelsful of ATP.

That's the infrastructure we're going to build in the next 22 days.

Now, we're about to get to the part you've been waiting for—the part that tells you exactly how to put the tools of the program to use. You're about to learn exactly what to d*o* to activate each of the five major pathways to a fat burning metabolism.

As Michael Buffer, the ring announcer famously said, "Let's get ready to rumble!"

WHAT YOU LEARNED IN THIS CHAPTER

- Exercise alone is a very ineffective way to lose body fat.
- The undisputed benefits of exercise include living longer and a significant reduction in risk for heart disease, stroke, certain cancers, diabetes and depression.
- Exercise lowers stress.
- Exercise has been shown to boost brain function and, in some studies, increased brain volume.
- Exercise improves insulin sensitivity.
- Walking is the simplest, most efficient exercise in the world.
- Walking for thirty minutes every day for the next 22 days will help shift over to a fat burning metabolism.
- High-Intensity Exercise is an extremely efficient and effective way to exercise and lose body fat, but it has to be done once the metabolic infrastructure of a fat- burning metabolism is firmly in place.

SECTION 3:
YOUR FAT BURNING STEP-BY-STEP BLUEPRINT



Chapter Twelve

THE *NEW YOU IN 22* DAILY ACTION PLAN

Are you ready to turn your body into a fat-burning machine?

Do you want to be finally free of the fat that's piled up all over your butt, thighs and belly?

I thought so.

And that's why I'm going to share with you the quickest, most powerful way I know to burn fat.

But I won't lie to you. There are five pathways that lead to fat burning and EACH has to be addressed if you want optimal health and a fat-burning metabolism. Period.

Shortchanging any one of these pathways will compromise your results. In fact, ignoring all but the nutrition and exercise pathways is the big mistake that dooms most of the programs I've seen.

That's why the *New You in 22* program addresses each of the five pathways you need to trigger the powerful upgrade—from a metabolism that sputters along like a motorboat in molasses, to one that feasts on fat, running like a Formula One car in the Grand Prix at Monaco.

I'll tell you precisely what to do, step by step, week by week, to make this happen in only 22 days.

I'll start with a quick review of the five pathways so that you understand how optimizing them will turn you from a sugar burner into a fat burner, and will finally allow you to access those fat stores that have been sitting on your butt, thighs, hips and middle, and driving you absolutely crazy.

Once you go from sugar-burning hell to fat-burning heaven, not only will you start erasing that stubborn fat that's piled up in all of the wrong places, you'll also get some nice bonuses—like more energy, supreme health and a slower aging process.

But before we get started, you need to make a choice: Do you want to go on the basic plan or accelerate your fat-loss results with the advanced plan?

THE BASIC PLAN OR THE ADVANCED PLAN

To make this program accessible to as many people as possible, I've create a basic version and an advanced version. The very first thing you need to do is decide which one you want to follow. Let me tell you a little about each. Then you can choose which version is best for you.

Let me be honest with you. I originally designed this program with only using the advanced plan. Here's the reason: I'd love it if every person reading this chose to do the advanced plan, with all the extra steps in this fat-burning system. Taking those steps is going to give you the biggest bang for your buck, and pull the necessary metabolic triggers to really get your fat-burning engines humming.

But then I realized something …

Not everyone will want to do—or even be capable of doing—every single thing in the pages that follow. And the truth is, you don't have to—you'll get terrific results doing the basic plan, and you can always add the additional steps later.

So I created the basic plan, which anyone can follow.

On *both* plans you will address *all five* of the pathways needed for optimal health and fat burning. The only difference in the two plans is that the advanced plan gives you some additional steps you can take if you want to go a little deeper and master the five pathways to optimal health and a fat-burning metabolism.

Both the basic and the advanced plan will dramatically overhaul your metabolism, turning you into a fat-burning beast, but the additional steps on the advanced plan will help you accelerate your fat loss even further.

The Basic Plan

Here's what you will do on the basic plan:

1. **Nutrition:** The basic and advanced nutrition plan is very similar. You'll eat a controlled carb diet of protein, fat and unlimited vegetables for the first ten days, followed by a carb feast on the 10th night. The remaining days will also be low-carb, with carb-feast meals strategically placed on the night of the 14th, 18th, and 22nd day. For the basic plan, there is no restriction on what you can eat on the carb feast. (Details below.)
2. **Sleep:** The goal for the basic plan is to increase the number of hours you sleep each night. Each week you will go to bed 15 minutes earlier than you usually do so that by the end of the program, you will have added one hour of high-quality, stress-reducing, fat-burning, metabolism-enhancing sleep.
3. **Stress:** You'll be doing a simple, very effective, 4-minute breathing exercise (called the "Relaxing Breath") twice a day. This exercise will lower your stress hormones which are the mortal enemy of a fat-burning metabolism.
4. **Detox:** The key action in the basic plan is to take a warm-to-hot, relaxing, detoxifying 15-minute bath three times a week in magnesium sulfate (Epsom salts). Toxins are stored in fat cells, and as you lose fat on the program, you'll be releasing toxins, which can mess with your fat-burning hormones. The warm bath will help flush them out and wash them away.
5. **Exercise:** The basic plan is built around walking, which you'll do for 15-30 minutes, 3-5 times a week. Walking will help burn fat, help set your metabolism up for more effective fat burning, increase circulation, help with detoxification and stress reduction, and reduce the risk for cardiovascular disease, diabetes, cancer and depression.

That's it. Just taking these steps and this will be enough to start the metabolic ball rolling, create a fat-burning metabolism, and get rid of the pudge hanging around on your butt, thighs, hips and stomach.

But if you want to take it to the next level, and get every last benefit from optimizing the five pathways, then the advanced plan is for you.

The Advanced Plan

I've found that once people really commit to altering their behavior, that commitment is a major sea change in their lives. They'll often want to dive right in with a take-no-prisoners attitude. They won't want to just begin the process, they'll want to go whole hog, take it to the highest level, and optimize the five pathways completely.

Hence, the advanced plan.

On the advanced plan, you do everything that's on the basic plan plus a bunch of cool, additional steps that will really get your metabolic engines humming, such as:

1. **Nutrition:** Your carb feasts will adhere to stricter nutritional guidelines than on the basic plan. The carb feast will still give you the metabolic benefit of an insulin surge, but the meal itself will be healthier without any of the potential metabolic damage that could arise from toxic ingredients in our diet.
2. **Sleep**: We're still going to add an hour of sleep over the course of the program, but we're also going to take specific steps to increase the quality, depth and restorative ability of your sleep.
3. **Stress:** You'll still do the foundational "Relaxing Breath" exercise. In addition, you'll identify some activities that you really like to do—which can range from reading to hiking to gardening to stamp collecting—and then you'll make time to actually do them!
4. **Detox:** In addition to the detoxifying bath, those on the advanced plan will also be taking specific steps to minimize exposure to additional toxins in three facets of their life—their food, their beverages and their environment. I'll tell you what kinds of meat and fish to eat, give you guidelines for buying organic vegetables, and explain what ingredients and products to avoid.
5. **Exercise:** In the advanced plan, you'll be walking longer and more frequently, and you'll be introduced to the phenomenal fat-burning technique called high-intensity interval training.

Why am I asking you to take these extra steps? And why, if I had my druthers, would everyone do the advanced plan?

Well, the advanced plan is more thorough. It reduces stress more, it deepens your sleep, it ups the intensity on your exercise, it provides a deeper detoxification program, and it's a little more stringent in the nutritional realm.

That all equates to shifting your metabolism to fat burning faster.

So if you're looking for that extra edge and want to jump in feet first, the advanced plan is the one to choose.

But make no mistake about it—the basic plan will give you great results. Remember, the average person hasn't even tackled one of the pathways, and the basic plan tackles all five of them.

That's what makes this program so different—most programs just focus on nutrition, and maybe a little on exercise, but the reality is your fat-burning hormonal symphony is affected by much more than just nutrition and exercise, which is one of the major reasons why traditional diets fail so many people.

You're going to get a fat-burning metabolism with either plan, but you'll get some extra health benefits and quicker results when you choose the advanced plan.

Whichever you choose, you'll still get great results. I guarantee it!

WHAT YOU WILL EXPERIENCE ON THE 22-DAY PLAN

I won't lie to you. With either the basic or the advanced plan, you're going to experience some serious metabolic changes. And because of this, for the first few days, you'll probably feel like crap.

Why?

Well, for one thing, those toxins stored in your fat cells will be released. For another, your body is switching over to a different fuel source—fat—and that adaptation takes about ten days or so. (Of course, once you're adapted to that new fuel, you're going to be unstoppable!)

You'll also be cutting out many foods that are addictive—stopping them will actually produce symptoms in some people that are very much like withdrawal. (If you've ever stopped smoking cigarettes, you know what I'm talking about.)

And although they don't happen to everybody, you may feel a bit spacey and fatigued the first couple of days or so. (The word "grumpy" has been used—more than once.)

But, believe it or not, this is actually a good sign. Whatever you do, don't let those few days of feeling crummy discourage you. What you're experiencing is a powerful signal from your body that it's undergoing the metabolic transformation from sugar burner to fat burner.

Stay the course! Stay strong, and if you do experience symptoms—and not everybody does, mind you—let those symptoms be a source of motivation and pride for you, because they're telling you you're doing the right thing for your body.

And, of course, if you don't experience any symptoms, good for you! Many people don't, and if you don't, it certainly isn't a bad thing.

I urge you to stay on the plan. The fog lifts, the fatigue goes away, irritability evaporates, and all of a sudden—usually within the first week—you're feeling more energetic than you've felt in a very long time.

When you reach that point—and it won't be very long—you'll hear yourself saying, "Man, that was worth it!" Once the toxic garbage is out of your system, once the default setting on your metabolism has moved to fat burner, then everything is going to get better.

You're going to have more energy to power you through your day. You'll experience a significant loss of body fat. Your sleep will be more restful and relaxing. Your stress levels will come down. Heck, your sex life may even improve!

In addition, you'll be lowering your risk for a host of chronic diseases (from heart disease to Alzheimer's to diabetes to stroke). In a very real sense, you won't be accelerating the aging process, and you very well may be slowing it down—not a bad result from a fat-burning program.

IMPORTANT NOTE

The key to success on this (or any) fat loss plan, is tracking your results. This is incredibly powerful because by using these quantitative measurements, you'll be able to quickly and easily spot when you've gone off track and when you need to course correct and make changes.

These measurements will also serve as a baseline for the progress you make on the program. By creating this baseline measurement and then coming back to it at the end of the 22 days, you'll see with your own eyes the powerful results you are experiencing in hard data and this will give you that extra jolt of motivation you need to continue on your journey toward optimum weight and health.

This is what is called a positive feedback loop and it's critical that you create one for yourself

So before you go any further, please turn to Appendix C on page 114, and complete your "Program Start" measurements. You will then go back and complete your "Program End" measurements after the 22 days are over. This will allow you to see how powerful *New You in 22* is for yourself.



Chapter Thirteen

OPTIMIZING PATHWAY #1—NUTRITION

There are an awful lot of ways to lose body fat. And frankly, some of them suck.

Listen, back when I started in personal training, you couldn't turn around in the gym without bumping into some model who kept her weight down with a steady diet of cocaine, cigarettes, coffee and a few spears of asparagus. Obviously, that's not what we're going for here.

What we're going for here is optimal fat loss coupled with optimal health. We want you lean, but we also want you energetic, filled with vitality and optimism, raring to engage with life, and ready to live it to its fullest.

And the first step on that path is to strategically improve the way you eat.

THE NUTRITIONAL PLAN OF *NEW YOU IN 22*

New You in 22 is a controlled-carb program—*most* of the time. And that's the big difference between *New You in 22* and other nutritional programs.

The cornerstone of the *New You in 22* program—which makes it different from every other program on the planet—is what we affectionately call the "carb feast." The carb feast happens at strategic points in the program—it's basically a meal in which you can eat just about anything you want.

Whether you choose to do this basic plan or the advanced plan, the core of the nutrition program is the same: you will strategically alternate carb-controlled meals with carb feasts. This has a number of important benefits. (I will explain in a moment.) Here's what the daily breakdown looks like:

- Carb controlled: Days 1-10
  ~ Carb feast: night of Day 10
- Carb controlled: Days 11-14
  ~ Carb feast: night of Day 14
- Carb controlled: Days 14-18
  ~ Carb feast: night of Day 18
- Carb controlled: Days 19-22
  ~ Carb feast: night of Day 22

In addition to alternating carb-controlled meals with carb feasts as specific above, I want you to follow three simple rules:

Rule #1: Stick with Three Squares

Forget all that "eat every two hours" junk you've been hearing since the 1970's. For the next 22 days, you'll eat three times a day. That's it. This is the best way to control the hormonal response to food and set you up for fat-burning nirvana.

Rule #2: No Snacks

Snacking just keeps your blood sugar and insulin elevated, and that shuts down fat burning. So no snacking. You don't need it. Eat the meals as recommended on the menu plan or "roll your own" according to the instructions below, and there'll be no need for snacks. Really. Your body will naturally be snacking away on all that stored fat around your belly instead!

Rule #3: Breakfast Should be Mostly Shakes

Breakfast is challenging for most people, but not on this program. You'll be enjoying delicious, protein- and fat-packed, metabolism-boosting shakes that you can make in just a couple of minutes. They will keep you satisfied and energized until it's lunchtime.

That's pretty much all there is. It's simple as can be, and it's startlingly effective.

Alright, now let's dig into the details ...

CARB-CONTROLLED MEALS

For the first ten days, you'll be eating mostly protein, vegetables and fat, which accomplishes the following:

1. **Controls Insulin and Blood Sugar.** High blood sugar and high insulin (the fat storage hormone) are the twins of fat storage. Both cause your body to keep cranking out the "fat storage" message. Both blood sugar and insulin are elevated by carbohydrates, so the first ten days will be low-carb all the way.
2. **Cools Inflammation.** A diet low in sugar and starch and higher in healthy fat, protein and fiber is by definition less likely to contribute to inflammation. And remember: inflammation = less effective fat burning, not to mention a host of health problems.
3. **Crushes Cravings.** Most addictive foods are loaded with sugar and literally create their own cravings. A diet high in protein, fat and fiber will eliminate the craving-producing foods and eliminate the blood sugar roller coaster that perpetuates those cravings.
4. **Accelerates Fat Burning.** This happens by depleting energy stored as carbs, called glycogen. And remember, for maximum fat burning, your stored carb energy must be used up first so your body is forced to burn fat as its primary fuel source. This is step *numero uno* in building a fat-burning metabolism.

To create your carb-controlled meals you have a couple of options.

The first—and simplest—is to turn to your *Metabolic Meals Blueprint* right now, and follow the meal plans exactly as outlined. I guarantee your taste buds will be satisfied—the meals we've developed are truly outstanding—and you will automatically be sticking to the exact nutritional guidelines I laid out for this program, since all the recipes were developed to my precise specifications.

Following the *Metabolic Meals Blueprint* is a no-brainer, but many people prefer not to be locked into a specific meal plan, or would rather not cook.

So you can also create "roll your own" meals, using the guidelines below. Or, you can mix the two together—follow the menu plans from *Metabolic Meals Blueprint* on some days, and make your own meals on others.

The choice is yours—just remember to choose the plan you're most likely to actually follow, the plan that's the easiest for you to do, as that will dramatically increase the chances that you follow through with this powerful fat-burning program.

Now in the event you do decide to make your own meals, instead of following the exact meal plan, putting them together is super simple. Here's what you do:

Carb-Controlled "Roll Your Own" Breakfasts

I consider the morning shake an essential part of this program for the following reasons.

1. It's easy to make.
2. It primes your metabolism.
3. It sets you up for a clear, clean pattern of eating for the day.

Equally important, the ingredients in it provide the right blend of extremely high-quality protein, fat, fiber and a nice variety of important nutrients all of which are needed for healthy cells and a smooth-running metabolism.

If you want to "roll your own" shakes, here is what to do:

Step 1: Begin with Core Shake Ingredients

- 1 Scoop High-Quality Whey Protein Powder. Your powder should be between 15–25g of protein, less than 6g of carbohydrate, less than 2 grams of sugar and preferably at least 2 grams of dietary fiber. I like whey protein best, but you can also use pea protein.
- 1 Tablespoon Chia and/or Flax Seed. This adds some healthy omega-3s and fiber to your shake.
- 1/3 Cup (or Less) of Approved Low- to Moderate-Glycemic Fruit (Optional). Low to moderate glycemic fruit choices include:
    - ✓ Berries (blueberries, raspberries, strawberries)
    - ✓ Cherries
    - ✓ Pear
    - ✓ Peach or Nectarine
    - ✓ Melon
    - ✓ Orange or Tangerine
    - ✓ Apple
    - ✓ Kiwi
- 4–8+ Ounces Dairy-Free Liquid. You may use one liquid alone or a combination of two different liquids (i.e., half water and half unsweetened almond milk). Less liquid may be used if you prefer a thicker consistency shake. Add more liquid if you prefer a thinner consistency shake. Please be very careful when buying these dairy-free alternatives, as many flavored versions are absolutely loaded with sugar; therefore, always look for the unsweetened versions and always check the nutrition label to ensure there's very little (less than 2–3 grams) or no sugar. Dairy-free liquid choices include:
    - ✓ Water
    - ✓ Unsweetened plain almond milk
    - ✓ Unsweetened plain coconut milk
    - ✓ Canned full-fat coconut milk
    - ✓ Chilled herbal tea

Step 2: Choose Any of the Following Smoothie Add-In Options

The add-ins will provide additional nourishment to your smoothie. Adding nutrients in the form of fiber and/or fat will help keep you satiated and satisfied for several hours. I recommend you choose at least two items from the list below:

- ✓ ½ to 1 ripe avocado
- ✓ Additional chia seeds (soaked or un-soaked)[5]
- ✓ 1 Tbsp hemp seeds
- ✓ 1 Tbsp unsweetened coconut flakes
- ✓ 1 Tbsp melted coconut oil
- ✓ 1–2 raw pasture eggs
- ✓ ½-1 ounce nuts (e.g., almonds, cashews, walnuts) or 1 TBSP nut or seed butter (e.g., almond or cashew butter)
- ✓ 1 Tbsp flaxseed oil
- ✓ 1 TB Barlean's Flavored Omega Swirl (http://www.barleans.com/omega-swirl.asp)
- ✓ Lemon or lime rind or juice for extra flavoring
- ✓ 1 Tbsp cinnamon
- ✓ 1 scoop of a greens and reds powder6

You may also consider adding:

- ✓ Additional water or ice, depending on how thick or thin you like your shake
- ✓ 1 TBSP cocoa or cacao powder for an added chocolate flavoring
- ✓ Stevia or Xylitol, to taste

Step 3: Blend and Enjoy!

I've got to tell you that some of the most delicious shakes I have ever tried in my life are the ones our team developed for the *Metabolic Meals Blueprint,* so if you're looking for a delicious breakfast—or something to inspire your own shake creations—you should definitely check them out. (We also included some delicious hot breakfasts for those of you who prefer them.)

Carb-Controlled "Roll Your Own" Lunches and Dinners

If you want to "roll your own" carb-controlled lunches and dinners, all you have to do is look at the chart (below) and choose one food from column A, and all you want from column B. (Like the old-school Chinese restaurant menus I used to order from when I was in college!)

Then season with, cook with, or include anything from column C that happens to come along with the food listed (meaning, for example, the fat that's found in the fish or in the grass-fed beef) *or* that makes the food taste better (butter, coconut oil), *or* is a good accompaniment (avocado). It's pure simplicity.

For example, here's a meal I frequently eat when I'm working at home and don't have a lot of time to cook or prepare food. I'll sauté some onions and mushrooms (Column B) in butter (Column C), cook up a big patty of grass-fed beef (Column A), and eat it with a couple slices of avocado (also Column C). This meal takes less than six minutes to prepare.

5 To soak chia seeds, in a small jar mix a few tablespoons of chia seeds into about 6 ounces of water and keep in the fridge for about a week. The seeds will expand and gel over time. Mix well to prevent clumping.

6 These are powders made of freeze-dried fruits and vegetables that are very low in sugar, and very high in phytonutrients—an easy way to increase your daily intake of fruits and vegetables.

New You in 22 "Roll Your Own" Meal Chart

Column A (Protein)[1]	Column B (Vegetables/ Fiber)	Column C (Fats and Oils)
• Beef • Chicken • Eggs • Turkey • Pasture-raised Pork • Bacon (from pastured pork) • Lamb • Salmon • Flounder • Herring • Sole • Tuna • Trout • Cod • Halibut • Sashimi • Shrimp • Scallops • Clams • Crabmeat • Mussels • Oysters • Lobster • Veal • Venison • Duck • Ostrich • Buffalo • Bison	• Broccoli • Cabbage • Onions • Mushrooms • Spinach • Chard • Collard greens • Kale • Bok choy • Celery • Zucchini • Brussels sprouts • Scallions or Green onions • Snow peas/Snap peas • Tomatoes • Artichokes • Pumpkin • Spaghetti squash • Cauliflower • Carrots (limit 2 per day)	• Butter • Ghee • Coconut oil • Palm oil (Malaysian Palm oil is best) • Sesame oil (limited) • Flax oil (salad dressing only) • Olive oil • Macadamia nut oil • Walnut oil (salad dressing only) • Avocado • Nuts (limit to 1 ounce per day)

Okay, that covers it for the carb-controlled portion of the program. Now let's have some fun.

CARB FEASTS

On the tenth night there's a special treat waiting—you're going to have a carb feast!

During this feast, you'll intentionally gorge on foods you thought were totally off limits, using them strategically to help keep your fat-burning engines roaring strongly throughout the 22 days.

Sounds crazy, I know, but it works ... and here's why:

- **The Carb Feast Resets Your Metabolism.** The carb feast is a kind of metabolic reset button that reignites your fat-burning hormones, resulting in a powerful fat-burning afterglow that lasts for several days. It works by triggering a very short-lasting spike in insulin, which is the signal your body waits for to ramp up your metabolism.

  This is an extremely powerful, targeted technique that helps do battle against those metabolic adaptations that commonly thwart most fat-loss efforts. The key here is that the insulin increase is a very quick spike—so it goes up fast and comes down fast, minimizing the "store fat" message, but lasting just long enough for signal to your body that it needs to ramp up its metabolic fat-burning engines again.
- **The Carb Feast is Fun!** A break every few days is just what the doctor ordered, and can actually help keep you on track by giving you something to look forward to and enjoy. One of the benefits of the carb feast is that it's one of the surest ways to keep you motivated and engaged.

The next day (day 11) you'll return to the basic program, but this time you won't have to wait ten days for another carb feast—it will happen on night 14, after just four more days in controlled-carb land. Another four days of controlled-carb, then a carb feast on night 18, followed by one more controlled-carb stretch (days 19-22) and a carb feast on night 22.

The cycles become smaller, because the hard work of depleting glycogen (energy stored as carbs) and priming the metabolic engine to run on fat has been done during the first ten days. After that, it's maintenance, and that can now be accomplished by a carb feast every fourth day.

The carb feast is specifically designed to create a spike in insulin which, in turn, will prevent the hormonal adaptation that seems to plague virtually every diet I've seen. This hormonal adaptation results in plateaus, weight regain and frustration. The insulin-spiking carb feast, "used as directed," will prevent all that.

Which leads me to a dilemma, which I'm going to share with you now.

THE CARB-FEAST DILEMMA—GO HOG WILD OR CONTROLLED INDULGENCE?

The fact is, you can spike insulin with some of the worst food on the planet, or you can spike it with some of the best. You can do it with Hostess Ding Dongs® or you can do it with raisins and watermelon. You can do it with Ramen noodles or you can do it with baked sweet potatoes. You can do it with Coca-Cola®, or you can do it with freshly squeezed grapefruit juice.

We worked long and hard with our recipe developers to create incredible carb-feast entrées and desserts for the *Metabolic Meals Blueprint.* Everyone on our team agrees they are absolutely scrumptious. Sinful-tasting, really.

And here's the kicker …

Every one of those meals and desserts—including those specifically designed for the carb feast—is free of every ingredient that's on our nutritional guidelines "no-fly" list. (You can learn more about the specifics of

the rigorous nutritional guidelines my team and I developed for this in Appendix B.)

You'll see no trans fats, no junky vegetable oils, no gluten, no artificial sweeteners, no chemicals, no MSG, and only a minimal amount of sugar in the recipes in the *Metabolic Meals Blueprint*. I highly recommend you follow the plan, and make as many of the meals in that guide as you can manage.

But I realize that not all of you can make the commitment to prepare the meals exactly as directed. Some of you will want to eat out for your carb feast, or buy a ready-made dessert that you've been craving for days.

The likelihood is that many of those pre-made desserts and restaurant dinners will likely contain ingredients that aren't that great for you—some of the very ingredients on our forbidden list, ingredients I could not in good conscience sign off on when we designed the recipes for this program.

But I made a promise to you that during your carb feast night you could eat whatever you want.

Thus my dilemma.

The truth is I don't want you eating Hostess Ding Dongs®, and the reality is you don't have to in order to enjoy the metabolism-boosting, fat-burning benefits of the carb feast.

On the other hand, I am well aware that the psychological relief of being able to eat whatever you want every few days may be the very thing that keeps you on the program.

So here is the compromise I offer you.

Guidelines for Eating Out

I recognize that if you're going out to eat for your carb feast, you're not going to ask the chef for the ingredients list before ordering dessert. But there are some guidelines you can follow when eating out.

1. Start your meal with a small green salad or a cup of vegetable soup.

2. Divide your plate into thirds (mentally, that is—you don't have to actually break the plate into thirds!) Fill one-third with protein, one with vegetables, and fill the remaining third with any starch you choose. (Sweet potatoes are better than white, just for the record.)

3. The "best" desserts will be fruits like berries, although you can have them with whipped cream! (But if you want something else, this is the night to have it.)

4. If you can, have your carb feast while avoiding gluten—this would be a really good thing to do. Ditto with trans fats.

THE BASIC NUTRITION PLAN: EAT WHATEVER YOU WANT FOR CARB FEAST

If you go on the basic plan, I'm going to stick to my original promise. On the carb feast you can have that dessert you've been craving, heck, you can even go out and buy the worst junk food you can find.

(But I strongly suggest you don't.)

Nothing is off limits during the carb feast on the basic plan, but the more you can begin to gravitate towards the healthier options, the better for your overall health.

I want you to look forward to your carb feast—it's a big reason why a strategically placed, periodic carb feast works. And I want you to be able to know that you're never more than a few days away from eating your favorite food.

In a perfect world, that "favorite food" would be cooked from scratch, made with natural, organic ingredients, and it would have absolutely no artificial sweeteners, chemicals, high-fructose corn syrup, trans fats or vegetable oils.

But this is very far from a perfect world.

If your favorite dessert—the one you've been waiting for, the one you've been looking forward to all week—happens to be a commercially-made pastry from the restaurant, or some pie, ice cream or a delicious chocolate-chip cookie, the fact is, it's going to have some less than healthful ingredients. Ingredients I'd recommend staying away from for long-term health.

But life is a compromise. I want you to get the results I know you can get with this program, but I don't want you obsessively reading ingredient lists, or minimizing your success because it's too hard to follow.

So, for the basic plan you can have what you want on the carb feast. If there's something you've been craving all week, some comfort food that makes life worth living for you, something you just can't imagine living without—the carb feast is by all means the time to eat it.

But I strongly encourage you to move away from the metabolic poisons that are destroying your fat burning and your health, and choosing the highest-quality carbs you can find. The relatively small amount of "bad" ingredients you might consume during the carb feast won't kill you—but for overall fat-burning potential, and health in the long run, I'd recommend staying away from those ingredients whenever possible.

If you want to know more about the specific ingredients on my "no-fly" list, you can check out the blow-by-blow nutritional guidelines in Appendix B, or you might consider doing the advanced plan.

THE ADVANCED PLAN: A MORE CONTROLLED CARB FEAST

On the advanced plan, you'll be getting all the benefits of the insulin spike—with no metabolic damage whatsoever. How? You will avoid the top toxins, allergens and "trigger foods" in our diet even when you do your carb feast. These are:

1. Gluten
2. Dairy[7]
3. Corn
4. Canola oil, soybean oil and most vegetable oils
5. Trans fats

All these foods or ingredients have the potential to trigger a delayed food sensitivity (or even an allergy) and all of them can be—and frequently are—inflammatory. Better to skip them altogether.

Now if you've decided to go all the way and do the advanced plan, I strongly recommend sticking with the recipes and meal plans in your *Metabolic Meals Blueprint* as closely as possible, especially on carb-feast night. There is one main reason for this: It's a lot easier to "roll your own" meals when protein, vegetables and fat are the ingredients, than when you're trying to "roll your own" dessert without any of the ingredients that make us sick, fat, tired and depressed.

The recipes in the *Metabolic Meals Blueprint* accomplish that difficult feat for you. They were specifically designed to allow you to have your cake and eat it too—not only do you get to eat common comfort foods like Pasta Bolognese, Barbecue Beef Burger, Sweet Potato Fries, and Chicken Fried Rice, but you get to eat the healthiest versions of those foods on the planet.

We've designed them to be delicious *and* free of toxic, metabolism-killing ingredients.

I strongly encourage you to give them a try—your taste buds and your waistline will thank you.

The choice is yours. You can go on the basic plan and eat at your favorite Italian restaurant for the carb feast, or you can go on the advanced plan, go the extra mile, get the metabolic fat- burning surge that's needed, but without any metabolic damage tagging along for the ride.

7 Butter and whey protein are exceptions. Dairy is allowed for the carb feast. I want you to be able to have ice cream!

Either way—as George Zimmer, the founder of Men's Wearhouse used to say—"You're going to like the way you look."

CAFFEINE AND ALCOHOL—ALLOWED OR BANNED?

Caffeine and alcohol are two commonly used substances about which there is passionate debate and considerable controversy.

On the one hand, modest amounts of alcohol, for example, are associated with a number of cardiovascular benefits. But alcohol use also has a strong association with accidents, addiction, abuse, domestic violence and vehicular homicide. And it's one of the most abused substances on the planet. It can also drain your energy and "detune" your hormonal symphony.

On the 22-day plan, I'm asking you to forgo alcohol. I'm not saying alcohol is bad or you can never have it again, I just want you to stay off it for 22 days.

Regarding caffeine, there are numerous studies showing that coffee drinking is associated with a number of health benefits, probably due to the presence of antioxidants and compounds like chlorogenic acid. But it also raises stress hormones—which can increase inflammation and interfere with metabolism—and coffee drinking frequently interferes with deep, restful sleep.

Coffee, like alcohol, also has a tremendous potential for overuse, particularly in a population that is overworked, overstressed, depressed, fatigued and burned out.

I recognize that giving up coffee is a major challenge for many people, so I haven't made it mandatory on the basic plan, but I strongly advise you to cut back to 1 cup a day. Go organic, and limit any coffee drinking to the morning hours.

You might also consider switching to tea, especially green tea, which contains compounds that mitigate some of the effects of caffeine, like the relaxing, anti-anxiety amino acid L-Theanine.

On the advanced plan, coffee is not permitted.



Chapter Fourteen

OPTIMIZING PATHWAY #2—SLEEP

If you want to stay in sugar-burning prison, there's no better method than depriving your body of sleep. No kidding. Remember, some of your most powerful fat-burning hormones—such as growth hormone—are released during deep sleep.

And sleep is also important for brain function and overall health. Biochemicals are replaced. Connections in the brain are pruned, or strengthened. That's why solutions to problems often appear after you "sleep on it."

Performance, energy, appetite and mood are all profoundly influenced by the quality of your sleep.

If that weren't enough, not sleeping long enough—or deeply enough—is a huge stressor.[1] And, stress makes you fat. (Seriously.) You don't need to be a scientist to put those two facts together. Do the math. Lack of sleep = increased stress hormones = increased fat storage + decreased fat burning.

The good news is that improving your sleep is as easy as 1, 2, 3. See for yourself—here are the three most important steps to take in the next 22 days to leverage the incredible power that sleep has on your ability to burn fat!

BASIC PLAN: GET TO BED EARLIER

Before we begin the program, I want to ask you a question: What time do you go to bed? That's important because studies show that the earlier you go to bed, the higher quality of sleep you get, which is critical priming your fat-burning engines.

Now I know it's hard for a lot of people to answer the "bedtime hour" question because we frequently go to bed at different times, depending on what else is going on that day. If that's the case for you (as it is for me), take the average of the last four nights and make that your answer.

For example, if you went to bed on four consecutive days at 10:00 p.m., 9:30 p.m., 10:30 p.m. and 10:00 p.m., your number would be 10.

Okay, got your number?

Good. Now, for the basic plan here is what I want you to do: For the first week decrease it by 15 minutes.

On Days 8, 15 and 21 you will do it again—15 minutes earlier than the time before. At the end of the 22 days you'll have effortlessly added an entire hour of high-quality to your sleep.

That means more energy, less cravings, and more fat burning. It also means less stress, which, in turn, means less damage to the fat-burning mitochondria. You feel better, you burn more fat, and everybody's happy!

For those of you who want to jump ahead, go ahead and try getting to bed an hour earlier on the first night—the results will come faster, and you'll be leaner, happier and healthier that much sooner. But increasing your sleep in 15-minute chunks may be a more practical way to achieve the goal of getting more sleep.

Studies show it's far easier to improve sleep quality by getting to bed earlier than it is by trying to stay in bed later, counterintuitive though that may seem. And our goal here is to increase the quality, as well as the quantity of your sleep.

But when it comes to sleep, several other things are important to keep in mind, so if you're thinking of diving in and doing the advanced plan, here is what I'd like you to do.

ADVANCED PLAN: MORE SLEEP *PLUS* BETTER SLEEP

In reality, you should be getting between 6-9 hours of sleep a night. Research shows this is the optimal amount of sleep for human beings—the exact amount needed varies from individual to individual. So shooting for at least 7 hours of sleep a night is a good goal to start with, and you can refine it from there.

For most people, the extra hour you'll be getting by the end of the program will put you in the 7–hour range. If you're starting at something ungodly like 4 hours a night, you still won't be at your target by the end of the program, but you'll be a whole lot closer, and you can continue gradually adding 15-minute additions until you reach the goal of a healthy 6–9 (preferably 7–9) hours.

That seven hours of restful, restorative sleep is going to make a big difference in your metabolism, ultimately shifting your sugar-burning metabolism into fat-burning territory.

However, if you want to take it to the next level, you'll want to take some further steps to make sure you are sleeping soundly. Now if getting enough restive sleep is a real problem for you, there are other techniques you can use over the course of this program. For the advanced plan, try the following:

- **Adjust the temperature of the room so that it's between 60–68 degrees Fahrenheit.** The National Sleep Foundation tells us that if our bedroom is above a balmy 75 degrees Fahrenheit or below a cool 54 degrees Fahrenheit, we could be in for a night of disrupted sleep.
- **Turn off the television 30 minutes prior to bedtime.** Even though you may feel like it helps you fall asleep, in fact it's just more data and info creeping into your overcrowded mind at exactly the time when you want your mind to be on idle.
- **Use this time to prepare for bed, relax, and decompress.** Going from 60 to zero is never a good idea, not on the highway and not in life. Give yourself some time to wind down. You'll have much better sleep as a result.
- **No checking e-mail or using the computer for 30 minutes prior to bedtime (this includes surfing the Internet).** There's a high degree of probability that every one of these activities will stimulate rather than soothe. They're way more likely to create anxiety than they are relaxation.
- **Turn off all the lights, including any glows from computers or devices.** Get as close as you can to total blackness. Studies have shown that release of hormones important to the fat-burning hormonal symphony, like melatonin and growth hormone, are highly influenced by the presence of light. Even a little light can stop melatonin production.
- **It's okay to read in bed—books only, no news.** Technically, I guess you could say that reading is also "input," but it's such a solitary, relaxing, stress-reducing activity that we'll give you a pass. But news—and news magazines—are just stress waiting to happen, even if you're not consciously aware of it. Put a moratorium on them 30 minutes before bedtime.
- **Don't drink coffee or any caffeinated beverage after 12 p.m. (at the latest).** A cup in the morning shouldn't interfere with sleep at night, but drink it later in the afternoon and you're asking for trouble, which is why nothing after 12 p.m. is a safe bet. (And, if you're really into this and want to go whole hog, why not try dumping caffeine altogether?)
- **Try a relaxation exercise before bed like the "Relaxing Breath," outlined in the next chapter.** Deep breathing promotes alpha waves in the brain; alpha waves enhance the overall sense of relaxation.



Chapter Fifteen

OPTIMIZING PATHWAY #3—STRESS MANAGEMENT

Stress makes you fat. And not just any fat—it gives you a nice pouch around your belly

Seriously.

One of the most memorable books I ever read was *Fight Fat After Forty* by Pamela Peeke, an Assistant Clinical Professor of Medicine at the University of Maryland School of Medicine. Peeke was one of the first to research the connection between stress hormones and belly fat, pointing out that even in thin women, stress produced a little stomach pouch, which could be traced to the direct effects of stress hormones

Bottom line: stress is the mortal enemy of a fat-burning metabolism.

There are several things you can do on a daily basis to reduce your stress, and in this chapter I'm going to give you some exercises that will be like natural a tranquilizer for your nervous system.

But unlike tranquilizing drugs, which are often effective when you first take them but then lose their power over time, these exercises are subtle when you first try them, but gain in power with repetition and practice.

Why is it important to manage stress? Simple. Stress hormones are secret fat makers. Excess cortisol (the main stress hormone) leads to excess insulin (the fat-storage hormone), which in turn leads to more inflammation—and to more cell damage. This means less energy production, less fat burning, and a virtual nightmare of aging and disease.

And it ensures that you'll stay a sugar burner.

If the details are confusing, just remember this simple saying—stress makes you fat; relaxing makes you thin.

So relax! Doctor's orders—it's a vital part of the program. Here is exactly what I recommend:

BASIC PLAN: BREATHE

One of the most powerful (and simplest) techniques I know to relax and neutralize the fat-packing stress response is called the "Relaxing Breath" exercise. You'll be performing this technique twice a day.

This method is utterly simple, takes almost no time, requires no equipment, and can be done anywhere. Although you can do this in any position, sit with your back straight while you are learning it.

Here's how you do it:

Place the tip of your tongue against the ridge of tissue just behind your upper front teeth, and keep it there throughout the entire exercise. You will exhale through your mouth around your tongue: try pursing your lips slightly if this seems awkward.

1. Exhale completely through your mouth, making a "whoosh" sound.

2. Close your mouth and inhale quietly through your nose to a mental count of four. Hold your breath for a count of seven.
3. Exhale completely through your mouth, making a "whoosh" sound to a count of eight.
4. This is one breath cycle. Now inhale again and repeat the cycle three more times for a total of four cycles.

Note that you always inhale quietly through your nose and exhale audibly through your mouth. The tip of your tongue stays in position the whole time. Exhalation takes twice as long as inhalation.

The absolute time you spend on each phase is not important, but the ratio of 4:7:8 is important. If you have trouble holding your breath, speed up the exercise but keep to the ratio of 4:7:8 for the three phases. With practice, you can slow it all down and get used to inhaling and exhaling more and more deeply.

Every day of the program I'd like you to do this at least twice a day, but you can certainly do it more often if you like. You cannot practice it too frequently.

Do not do more than four breaths at one time in the beginning. Later, if you wish, you can extend it to eight breaths. If you feel a little lightheaded when you first breathe this way, don't be concerned; it will pass. (If it doesn't, just discontinue using this technique.)

Once you develop this technique by practicing it every day, consider it a useful stress-management tool that you will always have with you. Use it immediately after anything upsetting happens—before you have time to react. Use it whenever you are aware of internal tension. Use it to help you fall asleep.

I can't recommend this exercise highly enough—everyone can benefit from it.

ADVANCED PLAN: BE YOURSELF

Whenever I used to hear someone say, "Just be yourself," I always secretly thought that was silly advice. After all, who else could a person be *but* himself?

But the truth is, there's some genuine wisdom in that advice, and we ourselves don't follow it often enough.

Let me explain.

No matter how terrific the "Relaxing Breath" exercise is for lowering your stress hormones temporarily, if you really want to lower them in a significant, ongoing way, you're going to have to do more.

And there's no greater stress reduction "exercise" I know of than getting in touch with yourself, reconnecting with the things that make you feel good, that you like to do, that make you feel calm, serene, joyous, optimistic and valuable, and then making time for that reconnected self.

Spending time with your most authentic self is one of the best activities you can do for your health. And that's what we're going to do in the advanced plan.

See, a big part of our stress comes from constantly doing things for other people, or doing things that you don't necessarily want to do but feel obliged to do (such as work), or taking care of children, husbands, wives or bosses—just being on other people's schedules.

Stress is almost a natural consequence of our overbooked lifestyles. And the more stressed we are—the more we are multitasking through life—the less in touch with our real selves we are. We forget what *we* need, we forget what we even like.

Unless, and until, you do something about the "stress assault," you'll forever be condemned to sugar-burning, accelerated-aging hell. And that's not what you want, and it's not what I want for you.

It's time for you to take a stand—if there's one thing I've learned in life, if you don't make the time for things you like to do, other people will happily fill up your time for you, fulfilling their needs, not yours.

This part of the advanced lifetime stress-management program is to get back in touch with what you like to do—what's fun, relaxing or even creative time wasting—for *you*.

If you like reading Danielle Steel novels, or taking bridge lessons online, or listening to 16th-century madrigals—for goodness sake, put some time aside for the things you enjoy. The activity doesn't have to meet any standard for productivity or usefulness, it just has to be something you like to do, that gets your heart rate down, and that makes you feel relaxed and calm.

Here are some suggestions, but they're only suggestions. Some are things from my personal list, some are things that people have told me fit the bill for them. Make your own list.

It can include:

- Hiking
- Gardening
- Sitting in the garden
- Playing with an animal
- Making love
- Sitting quietly in the sun
- Yoga
- Tai chi
- Qigong
- Meditating
- Watching Comedy Central®
- Getting a massage
- Taking a sauna (far infrared highly recommended)

Or just about any other "non-essential" thing you like.

Except that these things aren't "non-essential" at all. They're probably the best stress management techniques in the world. And remember, stress is the worst enemy of a lean and healthy body.

My nutrition mentor, the late, great Robert Crayhon, once said something that's profoundly influenced my approach to health: "Pleasure is a nutrient."

You'd think we wouldn't really need a "prescription" for pleasurable activities, but, frankly, some of us have so lost our way in these particular forests that we actually need to rehab our ability to do something pleasurable for ourselves for no other reason than it's pleasurable.

Well, I'm giving you another reason—these activities will lower your stress hormones, and therefore set in motion a cascade of hormonal and biochemical events that will lower inflammation and, ultimately, contribute to the development of a healthy, fat-burning metabolism.

I'm actually going to give you a "prescription" for pleasure here.

For the advanced plan, I want you to spend three hours a week doing an activity that you find personally relaxing, fun and non-stressful. I'd prefer it wasn't a mindless activity such as watching a football game, but if, for example, watching a stand-up comedy act on TV qualifies for you as a stress-free escape, go ahead and throw it in. But try to find activities that you can actually be present for and engage in, such as the ones listed above (plus, of course, the Comedy Central® option!)

Now let's be honest: Some of you have moved so far from the habit of just taking care of yourselves that three hours is going to seem like "*three hours???*" If that's you, work up to it. Try three 30-minute sessions, or three 45-minute sessions, but I want you to get to three hours a week during this program.

The good news is, there are more than enough activities to spend that time on, so you shouldn't have any trouble filling it. The only challenge is going to be to relax enough to enjoy it, and to find the time to schedule it. For the advanced-plan followers, this is your challenge.

Schedule it, do it … and enjoy it. Three hours a week. You can do it!

You'll never be able to make stress disappear—nor should you want to, since some stress is good for us. But you will be able to defeat its ability to damage your health, shorten your life, and keep you firmly planted in sugar-burning territory.



Chapter Sixteen

OPTIMIZING PATHWAY #4—DETOXIFICATION

Detoxification is a complex topic worthy of a book on its own (and many good ones have been written). What we're going to do on *New You in 22* is tackle some of the basics.

Remember, toxins are a huge promoter of fat. Toxins damage the mitochondria—the energy factories located inside the cells—and when the mitochondria are damaged, fat burning suffers.

Meanwhile, toxins also injure the membranes of the cell, and that's where your hormone receptors are located. The hormonal symphony—those messages that control appetite and fat storage—is forced to play out of tune, cellular energy decreases, and fat burning grinds to a standstill.

In this chapter I'll give you several steps you can take to detoxify your body and your life.

Basic Plan: Detoxifying Bath

Here's the part of the program everybody secretly (and not-so-secretly) loves: I want you to take a warm, relaxing, detoxifying bath for at least 15 minutes, at least five times a week.[8] (I told you this was easy!) And I want you to do it soaking in magnesium sulfate.

Before you say, "Huh?" let me reassure you that you've probably already had an experience with magnesium sulfate. You know it as the popular household product, Epsom salt.

The nightly (or almost nightly) detoxifying bath is a defining activity in the *New You in 22* program for several reasons, the first of which has to do with the Epsom salt itself.

Epsom salt contains both magnesium and sulfate. Sulfates play an important role in the formation of brain tissue, joint proteins and the proteins that line the walls of the digestive tract.

They're also one of the most detoxifying compounds on earth, which is why people flock to spas that offer natural hot sulfur baths. Sulfates stimulate the pancreas to generate digestive enzymes and are thought to help detoxify the body of medicines and environmental contaminants.

Then there's magnesium.

According to the National Academy of Sciences, American's magnesium deficiency helps to account for high rates of heart disease, stroke, osteoporosis, arthritis and joint pain, digestive maladies, stress-related illnesses, chronic fatigue and a number of other ailments.[1]

Magnesium relaxes your nervous system and it relaxes the walls of the arteries (one reason magnesium is so good for blood pressure).

All of this means that the toxins stuck in your fat cells that are mobilized and freed up as you start burning fat on this program will be detoxified from your body more effectively. This is very important because if you

8 Suggested schedule: Mon., Wed., Fri., Sat. and Sun.

don't get rid of those mobilized toxins, they can potentially dull the fat-burning message your hormones try to deliver, which is exactly the opposite of what you want.

The bath itself should be warm enough to stimulate sweat, and you should picture the toxins your fat cells have released just melting off your body and washing away.

A warm bath—bubbles as desired—with a couple of heaping scoops of Epsom salt and some nice soothing music (try Bach's Goldberg Variations or the Mozart Piano Concerto No. 21), along with the extra high-quality sleep you'll be getting, is the perfect way to lower stress, so you get the extra benefit of further building on this important pathway.

Magnesium sulfate is one of the most relaxing compounds on earth. It's also great for drawing toxins out of the body, so taking a bath will be a winner on two counts—detoxification and stress reduction.

ADVANCED PLAN: DETOXIFY YOUR LIFE

While the detoxifying bath is the cornerstone of the detoxification program, you can do even more by minimizing your exposure to additional toxins in your food, your home and even your environment. For the advanced plan, you'll add the following steps.

Step 1: Eat Clean

The big focus of *New You in 22* is improving the quality of the foods you eat. And if you did nothing but improve your eating over the next 22 days, you'd go a long way to detoxifying your body and your life.

The "clean eating" mandate of the program is already built into the eating plan. As long as you follow the nutritional program highlighted in Chapter 13, you'll already be limiting your exposure to some of the most highly-processed, damaging foods.

Now if you want to try the advanced plan and take all this a step further, there are two more areas I want you to focus on:

- Improving the quality of the protein you eat.
- Choosing organic versions of the most toxic vegetables in your supermarket.

This is actually a very important and highly-undervalued step in any detoxification plan because so much food of the food we eat contains pesticides, chemicals, and, in some cases, known carcinogens (albeit in amounts the government thinks is "safe").

Those chemicals—some of them hormone mimics, some of them potentially even more dangerous—can damage your cells and interfere with the operations of the energy production factories (the mitochondria), compromising both energy levels and fat-burning ability.

To add insult to injury, factory-farmed meat contains antibiotics plus a large dose of pro-inflammatory omega-6 fats.

And that's why I want you to choose the foods you eat on this plan carefully.

Choosing Healthy Sources of Protein

While organic versus non-organic vegetables have gotten a lot of press recently (see section on detoxification, below) the source of your protein may be even more important than whether or not it's organic.

Most of the protein we get in the supermarket comes from what's called factory farms, or CAFOs (concentrated animal feeding operations—quite a name). If you're an animal lover, I can promise you one thing—you don't want to visit a factory farm. Ever.

But don't worry, because it's next to impossible to visit one, even if you wanted to. Factory farms are notoriously secret about their meat-processing practices, and almost never allow visitors to observe. For good reason, because you'd probably have a heart attack on the spot if you saw first-hand the conditions these animals are forced to live in.

Cows are kept in tiny, confined spaces and fed a diet of grain. This is a problem. Cows don't digest grain very well—the stomach of a ruminant is not suited to grain, and it causes terrible acidity. Not only that, grain diets are very inflammatory, and the meat of factory-farmed beef is very high in pro-inflammatory omega-6 fats.

If the grain-based diet weren't enough to make the cows sick (which it usually is), the crowded conditions in which they live ensures that most of them won't be the healthiest specimens. As a result, factory farms routinely shoot their animals full of antibiotics, which winds up in the packaged meat, which winds up in your body.

Antibiotics are just the beginning. Factory-farmed animals are routinely fed hormones (like bovine growth hormone) and steroids to fatten them up and hasten the time to slaughter. That's in addition to whatever pesticides and chemicals they're exposed to by eating a mostly grain diet. The result is a meat "product" that is, indeed, anything but healthy.

Chickens and pigs exist in even more horrendous conditions. If you want a full review of them, I suggest the movie *Food Inc.*, which is an eye-opening exposé on this industry.

Now let's contrast that with how animals are raised on pasture. And let's use cows as our example.

Cows were meant to graze on pasture. Grass is their natural diet. When cows are grass-fed, their meat is higher in the amazingly healthy omega-3 fats (the same fat found in cold-water fish like salmon). The fat of grass-fed cows also contains a cancer- and obesity-fighting fat called CLA that is conspicuously absent in the fat of factory-farmed beef. Though there are some minor distinctions I will get into in a moment, grass-fed cows are almost always raised organically.

All the studies that show bad effects from a meat-eating diet look at populations that consume large amounts of processed meats. That includes deli meats, which, in addition to all the problems stated above, also contain nitrates and high levels of sodium.

Meat in general has gotten a bad name, but all meat is not created equal. Real, pasture-raised protein, with no antibiotics, steroids or hormones, is a very different food from factory-farmed protein. And it's a very different food from processed deli meats as well.

The same thing is true with wild-caught versus farmed fish.

At salmon farms, thousands of fish are crowded into small, roped-off areas called "net pens" with serious health repercussions for both the fish and the surrounding waters. They're fed grain—the wrong diet for fish, just as it is the wrong diet for cows—and they are likely fed antibiotics as well.

In addition, according to independent lab tests by the Environmental Working Group, farmed salmon is likely the most PCB-contaminated protein source in the US food supply. On average, farmed salmon have 16 times the dioxin-like PCBs found in wild salmon.

I recommend you go for wild salmon from Alaska whenever possible. Many health professionals like Vital Choice, which is available online at http://www.vitalchoice.com/shop/pc/home.asp.

I realize it's not always possible to get grass-fed, pastured, or wild-caught animal products, but I feel strongly that whenever possible you should try. It really makes a difference.

When you do eat deli meats, I always suggest nitrate-free and low-sodium varieties. This eliminates two of the most problematic compounds in processed meats and significantly reduces the dangers associated with eating it.

Go Organic

I also want you to choose as much organic produce as your budget allows. Focus especially on finding organic sources of these "Dirty Dozen Plus®" list of foods from the Environmental Working Group[2]. They include:

1. Apples
2. Celery
3. Cherry tomatoes
4. Cucumbers
5. Grapes
6. Hot peppers
7. Nectarines (imported)
8. Peaches
9. Potatoes
10. Spinach
11. Strawberries
12. Sweet bell peppers
13. Kale/collard greens
14. Summer squash[9]

Why is it so important to find organic sources of these vegetables?

Well, according to the Environmental Working Group, these fruits and vegetables are the 14 crops that are most contaminated with pesticides. By going organic on only these foods, you will substantially reduce your toxic exposure.

Remember, one of the worst side effects of these environmental toxins is that many of them are hormone disruptors or hormone mimics—either way, they interfere with the natural messaging of your hormonal symphony, and that results in a major hit to your fat-burning pathways.

Now another thing you can do to reduce your toxic exposure from foods during this first week is to avoid GMO foods. Pay particular attention to corn, soy, canola oil, zucchini, squash and Hawaiian papaya. All are very likely to be GMO. If you want to be on the safe side, these would be good choices to add to your "organic only" list.

9 The list was expanded to include two crops—domestically-grown summer squash and leafy greens (kale and collards)—which did not meet the EWG's "Dirty Dozen" criteria, but were commonly contaminated with pesticides exceptionally toxic to the nervous system. Also note that the list changes every few years, so you may want to go to EWG's website (http://www.ewg.org/) periodically to check for the most up-to-date list.

I also encourage you to avoid foods that contain MSG (monosodium glutamate). Researchers frequently use MSG to induce obesity in animals,[3] and there's long been evidence that MSG is what's called an "excitotoxin" (meaning it can damage the brain).[4,5] I say avoid it like the plague.

In addition, MSG is added to food to make it taste better and to make you want more of it. There's no other reason to add MSG to food, so why not stick with foods that naturally taste great on their own, and don't need chemical enhancement, especially when that chemical enhancement comes at a considerable cost? Just saying.

Step 2: Drink Clean

Eating clean doesn't stop with eating. It also means drinking clean. Toxins can get into the body from a myriad of sources, and beverages are definitely high on the usual suspects list.

- **If you *do* drink coffee, go for organic.** Coffee is one of the most sprayed crops on the planet.
- **Try raw milk.** I realize it isn't available in all states, but it's the only milk I drink, and I recommend that you read about it and consider trying. If that's out of the question, at least stick to organic pasteurized milk, ideally from grass-fed cows. (If you can't get raw milk, Organic Valley Grassfed is the next best thing. Horizon also has excellent organic milk, but their cows are not grass-fed.)
- **Don't drink from Styrofoam cups.** Styrofoam can release potentially toxic breakdown products such as styrene, particularly when heated. Stick to ceramic, glass, paper or safer plastics (those which have recycling numbers 1, 2 or 5)
- **Move to filtered or purified water.** Any filter is a good starting point, but better quality ones will remove more junk.
- **Dump all plastic bottles and containers with the recycling numbers 3, 6 and 7 on the bottom.** These leach plastics into your beverages.
- **Switch to stainless steel bottles for all your drinks.** If you can, avoid plastic containers altogether.

Step 3: Clean House

Finally, our own environment is a potential minefield if you're trying to avoid toxic chemicals. We probably won't be able to remove every last vestige from our living quarters, but why not try to do damage control? Here are some positive steps you can take.

- **No plastics in the microwave. Ever.** Use only glass containers. Plastics heated in a microwave will leek harmful toxic by-products into food.
- **Switch to all-natural, "green" detergents, soaps and cleaning products.** It's a good way to reduce the amount of unnecessary toxins in the house.
- **Switch to all-natural, "green" personal hygiene products such as aluminum-free deodorant.** Look for products that are free of parabens, phthalates and propylene.
- **Avoid the antibacterial chemical triclosan** that is found in some antibacterial soaps. This accumulates in our bodies and is linked to hormone disruption and the emergence of bacteria resistant to antibiotics.[10]
- **Invest in an air filter** (a HEPA filter with charcoal filter) to help clean the indoor air.
- **Don't leave plastic bottles in the direct sun** or in extremely warm rooms (such as a garage in the summer).
- **If you have a garden, go organic.** Don't use synthetic chemicals or fertilizers on your lawn, flowers, vegetables or fruits.

10 As far as I'm concerned, you can avoid antibacterial soaps altogether. My favorite Dr. Oz comment of all time was the three-word answer he gave in an interview when asked what he thought about antibacterial soaps. Here's what he said: "They are bull---t."



Chapter Seventeen

OPTIMIZING PATHWAY #5—EXERCISE

For the exercise program, the only thing I'm going to have you do for the next 22 days is walk. There's one reason for that: *We're training you to be a fat burner*. And that's going to take a little time (22 days to be precise!).

Remember, if you're reading this, you are very likely a sugar burner. We want to build the infrastructure of your metabolism so that when you do raise the bar on your exercise program, fat will be providing the bulk of the fuel. And the energy-producing factories in your cells will be pumping out ATP—the energy molecule—faster than you can say "spin class."

But for now, stick with walking—amounts and intensities described below. Here's why …

Walking is a good fat burner—it's a terrific way to prime your body to use fat for fuel. Remember, exercise is very ineffective for fat loss *if* it's not accompanied by diet. But several studies have shown that walking—even in the absence of dieting—*will* knock a few percentage points off your body fat.[1]

Also, if you were to do higher intensity training right now, you'd be cheating yourself. For one thing, your sugar-burning metabolism wouldn't be able to handle it.

Since as a sugar burner you can't really access your fat cells to burn fat for the energy needed to support high-intensity exercise you'd have to break down muscle instead. So, figuratively speaking, you'd actually be "eating" your own muscles as your body tried to find a source for sugar, since it can't go into the fat cells and grab the "good" stuff.

Let's hold off on High Intensity Training (HIT) for now. There is a place for HIT—and at the end of this program, I'll tell you what HIT program is the best one I know of, and I'll also tell you where to find it.

But for now, we're about building infrastructure, getting your fat-burning metabolism online, and improving your circulation and endurance while your body does the switchover to fat as its main source of fuel.

So it's walking. All the way.

Walking also boosts circulation, speeding nutrients through the bloodstream to feed hungry cells. The improved circulation will help your body get rid of toxins, making walking the perfect exercise to complement detoxification.

And best of all, moderate to vigorous walking will lower your stress responses, which in turn will ultimately help to repair the damage to your cells—the membranes specifically—and your fat- burning pathways generally.

Put more simply, walking is good for the heart, the lungs, the brain, and—especially if you do it outside amid the beauty of nature—the soul.

And should you decide to increase the intensity of your workouts with a HIT program after *New You in 22* is over—something I strongly recommend—the amount of body fat you'll burn will be significantly increased. The fuel nozzle on the fat cells will be open, and the harder you exercise—after setting the metabolic groundwork—the more fat you'll burn.

So here's your whole exercise program for the next three weeks. I've outlined two options. One for the basic plan, and one for the advanced plan.

THE BASIC PLAN

If you can walk, you can do the basic plan. (Heck, if you can walk, you can even do the advanced plan, but we'll come to that in a minute.)

For the basic plan, I want you to walk for between 15–30 minutes, three to six days a week.

Now why did I give you those choices?

Because I know that for some of you, any exercise at all is a challenge. Some of you have been sedentary for years. I don't want to start with a program that's going to defeat or discourage you. I firmly believe that, in the beginning, establishing the habit of exercise is way more important than what exercise you actually do.

If you're an absolute beginner and haven't done any physical activity in ages, 15 minutes of moderate-paced walking three times a week is a great place to start.

If you can do more, do more. That's why I gave you the range of 15–30 minutes a day, and why you can do it as few as three or as many as six times a week. In this case, more is better, but the minimum is enough, at least enough to start getting your metabolic engines primed and the fat metabolism rolling.

Do what you feel you can, but as an absolute minimum, do 15 minutes three times a week. And don't be afraid to push yourself a little more—you'll be surprised at what you're capable of, especially when you're doing all the other steps in the program along with walking.

THE ADVANCED PROGRAM

The advanced plan is also based on walking, except you'll do more of it, at a higher intensity. You'll also begin to experiment with one of the most exciting advances in exercise physiology and fat-burning technique I've seen in a long time: interval training.

Interval training is based on the idea that you alternate an interval of high-intensity effort with an interval of "active rest," during which you still exercise but at a much lower effort.

Here's what it might look like in a walking program: One minute of really fast walking—where you push yourself to an effort of, say, 8–10 on a scale of 1–10. Then, for two minutes after that, you really bring it down to a much slower walk, a "catch-your-breath" walk where your heartbeat begins to return to normal. (That's the "active rest" part of the cycle.) During a given workout, you might repeat that cycle anywhere from 3–10 times.

Here's what to do for the 22 days of the program.

Five days a week, you're going to walk 45 minutes a day, total exercise time. But on three of those days you're going to be incorporating intervals (on the other two days, you'll just walk).

Monday, Wednesday and Friday

Total time: 45 minutes

- Steady warm-up walk for 10 minutes
- Ten three-minute cycles: one cycle = one minute of very fast walking followed by two minutes of "regular" walking
- Five minutes of cool-down walking at the end

You can do this walking around the block, on a track, through your neighborhood, the woods or at the local mall. You can even do it on a treadmill, using the manual settings to vary the intensity and times.

Tuesday, Thursday

Total time: 45 minutes

- Walk 45 minutes at a moderate to brisk pace, no intervals

Obviously, there's nothing magical about which days you choose for your interval training and which days you choose for your "steady state" walking. I used Monday, Wednesday, Friday for intervals alternating with Tuesday/Thursday just for convenience, but you can substitute any day you wish, as long as you get three sessions of interval training and two sessions of "steady state" training in each week.

That's the exercise program for *New You in 22*. It will help you build your fat-burning infrastructure so when you're ready to bump up the intensity of your exercise program, your body will be primed for it. By then, your fat-burning metabolism will be firmly established and you'll melt off even more fat and keep it off for good.

Now, to keep this whole daily program as simple as possible, I've developed handy-dandy checklists. They are located in Appendix A. Use these while you are on the program, and becoming a fat-burner will be as easy as pie (or, a delicious piece of grass-fed beef).

CONCLUDING THOUGHTS: WHAT TO DO WHEN THE PROGRAM IS OVER

When I'm doing a motivational workshop, I'll frequently pose the following question to the audience:

If I could offer you, right now, the home of your dreams—on all the land you would like, with all the amenities you would like, with all the bedrooms and bathrooms you want, and with tennis courts and a pool thrown in for good measure, would you take it?

Everyone raises their hand, yes.

But here's the thing: 99% of them would lose the house within a year.

That's because most people wouldn't have the ***infrastructure*** to keep that house going. A house like I just described requires a certain income level. It requires staff. It requires management. It takes an extraordinary amount of maintenance. If you're not prepared to provide those things, you'll lose the house. Simple as that.

It's the same thing with bodies. If you could snap your fingers and suddenly find yourself in the body of your dreams, the journey would not stop there.

That body—like the dream house—would take maintenance. You could not go back to the way you ate before and expect to keep the new body. And if you didn't make the changes to your diet, your exercise program, and to all the other pathways that got you to health—you'd "lose" that new healthy body just as fast as the new homeowner would lose his shiny new house.

You've made those changes over the last 22 days. Sure, they may require tweaking, and perhaps a more extended program, but you are well on your way to success now because you've done the hard groundwork.

I know for many of you it's been really hard, really challenging, and if you made it through to reading this, I want to congratulate you.

But it's my job to also remind you that this is just the beginning.

The hard work is maintenance.

My father, who, for most of my childhood was an inveterate smoker of Phillip Morris® cigarettes, once joked with me, "Stopping smoking is easy! I've done it twenty times!"

Fat loss can be like that—it frequently is, in fact—but it doesn't have to be.

Look, if you've stuck with me this far, you now have a metabolism that's trained to feast on fat. And that fat-burning metabolism is the brass ring on the metabolic merry-go-round. It's like a gift from the gods of biochemistry.

A smoothly running fat-burning metabolism makes everything go easier—you can access your fat stores, you'll have more energy, you'll be able to continue to lose body fat (and maintain your weight once you're happy with it), and you'll be reducing many of the promoters of chronic disease (like our old nemeses inflammation, oxidation, glycation and toxins).

You've learned tools to master your diet, right the hormonal merry-go-round, lower stress, increase sleep, and begin the ongoing, lifelong process of detoxification. That's a huge start.

Now it's up to you to keep it going. I know you can do it. If you've made it through these 22 days, then one thing I know about you is that you are committed. And you are motivated. And you are strong, and you keep your word to yourself.

The next—and hardest—thing is to keep on doing it. And after you've done *that*… to keep on doing it some more.

Remember, the real meaning of the word "diet" is—*a manner of living*. And that's what we're going for.

A *manner of living*. With health and vitality.

WHAT SHOULD I DO NOW?

Well, your first choice is to continue on this program. That's right. This is a really healthy way to eat and I see no reason why you can't do it forever, sticking with really low-carb for about four days, broken by a carb feast on the fourth night. (And even that carb feast can get healthier over time, while accomplishing the same thing from a hormonal point of view.)

And if you're a graduate of the basic plan, why not continue with the advanced version and see how that goes for the next few weeks?

Now if you feel you'd like to scale back to a slightly less rigorous program which concentrates just on food, gives you some more choices, is particularly good for dealing with food sensitivities to foods such as wheat and dairy, and is very helpful for people who are addicted to the foods that make them fat, sick, tired and depressed, you might like to try my other, highly successful weight-loss program, available at http://www.newyouin22.com/unleash.

And if you're ready to go to the next level with your exercise program, well then, have I got something for you.

Now that your metabolism is happily burning fat for fuel, you'll really be able to take advantage of the fat-burning power of high-intensity interval training. Since you're no longer a sugar burner, you won't have to worry about burning muscle and bone.

Now you've got access to your fuel stores so you can actually burn a bunch of fat while getting all the wonderful benefits of high-intensity exercise such as reduction in risk of a number of chronic diseases.

And when you're ready to go after some really stubborn fat and kick some "fat butt," I recommend a program that was specially designed by Drs. Jade and Keoni Teta, brothers who are naturopathic physicians and world-renowned experts in exercise for fat loss and health. To find out more, go http://www.newyouin22.com/metabolic.

AND ONE MORE THING

Now, if you'll allow me a moment, there's one thing I'd really like to say to you before closing. Thank you.

The fact is, you bought this program—and invested your time in doing it—because you had a commitment. And I want to thank you for that commitment, to your health, your well-being and your vitality. Because, believe it or not, when you invest in your health, you're not only benefiting yourself, you're benefiting everyone around you.

You're making a statement that you want your life to count for something. You're choosing health over sickness, optimism over pessimism, happiness over depression, and vitality over exhaustion.

And when you invest in those things, you increase the possibility that you will make a real contribution on this earth, and that benefits everyone—including me.

I also want to thank you for your personal belief in me and my team. I realize there are a ton of people out there telling you what to do to be happy, to be thin, to be rich or to be sexy. I am honored and humbled by the fact that you turned to me and one of my programs for guidance in how to achieve lasting health and vitality. I take that responsibility very seriously.

Together, we can change the world—one body at a time.

Let's start today.

Enjoy the journey.



APPENDIX A:
NEW YOU IN 22 DAILY CHECKLISTS

The following weekly checklists represent all of the steps you need to take to successfully complete the *New You in 22* program. If you want to use them every day, simply make photocopies, or go to http://www.NewYouIn22.com/checklists and download a PDF version that can be printed.

Basic Plan Checklist

Week One (Days 1–7)	✓
On morning of day 1 of the program, make sure to complete your "Program Start" assessments in Appendix C on page 114.	
Nutrition	
Eat the meals as specified on page 21 of your *Metabolic Meals Blueprint,* or "roll your own," as in your *Metabolic Transformation Guide* on page 83. No snacking in between meals, no foods not on the lists.	
No carb feast this week.	
Exercise	
Walk at least 15–30 minutes 3–6 times this week.	
Sleep	
Go to bed 15 minutes earlier this week.	
Stress Management	
Do the "Relaxing Breath" exercise (4:7:8) at least twice a day.	
Detoxification	
Take five warm baths this week with Epsom salt and soothing music. Each bath should last at least 15 minutes.	

Week Two (Days 8–14)	✓
Nutrition	
Eat the meals as specified on page 22 of your *Metabolic Meals Blueprint,* or "roll your own," as in your *Metabolic Transformation Guide* on page 83. No snacking in between meals, no foods not on the lists.	
Carb feast on the night of day 10.	
Carb feast on the night of day 14.	
Exercise	
Walk at least 15–30 minutes 3–6 times this week.	
Sleep	
Go to bed 15 minutes earlier than you did last week.	
Stress Management	
Do the "Relaxing Breath" exercise (4:7:8) at least twice a day.	
Detoxification	
Take five warm baths this week with Epsom salt and soothing music. Each bath should last at least 15 minutes.	

Week Three (Days 15–22)	✓
Nutrition	
Eat the meals as specified on page 23 of your *Metabolic Meals Blueprint,* or "roll your own," as in your *Metabolic Transformation Guide* on page 83. No snacking in between meals, no foods not on the lists.	
Carb feast on the night of day 18.	
Carb feast on the night of day 22.	
Exercise	
Walk at least 15–30 minutes 3–6 times this week.	
Sleep	
Go to bed 15 minutes earlier than you did last week.	
Stress Management	
Do the "Relaxing Breath" exercise (4:7:8) at least twice a day.	
Detoxification	
Take five baths per week with Epsom salt and soothing music. Each bath should last at least 15 minutes.	
Program End (Day 23)	
Make sure you complete your "Program End" assessment in Appendix C on page 114.	

Advanced Plan Checklist

Week One (Days 1–7)	✓
On morning of day 1 of the program, make sure to complete your "Program Start" assessments in Appendix C on page 114.	
Nutrition	
Eat the meals as specified on page 21 of your *Metabolic Meals Blueprint,* or "roll your own," as in your *Metabolic Transformation Guide* on page 83. No snacking in between meals, no foods not on the lists.	
No carb feast this week.	
Exercise	
Walk for 45 minutes 5 times a week (3 days of interval training and 2 days of steady state training).	
Sleep	
Go to bed 15 minutes earlier this week.	
Your goal is to get at le*ast* 7 hours of restive sleep per night. Integrate the other steps above as needed to achieve this goal.	
Stress Management	
Do the "Relaxing Breath" exercise (4:7:8) at least twice a day.	
Find activities you enjoy doing, and schedule 3 hours each week to do them.	
Detoxification	
Take five baths per week with Epsom salt and soothing music. Each bath should last at least 15 minutes.	
Buy organic versions of the "Dirty Dozen Plus®."	
Stick to grass-fed, pastured protein and eggs, and wild-caught fish as much as possible.	
Avoid GMOs and MSG	
Drink clean	

Week Two (Days 8–14)	✓
Nutrition	
Eat the meals as specified on page 22 of your *Metabolic Meals Blueprint,* or "roll your own," as in your *Metabolic Transformation Guide* on page 83. No snacking in between meals, no foods not on the lists.	
Carb feast on the night of day 10.	
Carb feast on the night of day 14.	
Keep the "no-fly" list of foods out of your diet, even during your carb feast.	
Exercise	
Walk for 45 minutes 5 times a week (3 days of interval training and 2 days of steady state training).	
Sleep	
Go to bed 15 minutes earlier than you did last week.	
Your goal is to get at least 7 hours of restive sleep per night. Integrate the other steps above as needed to achieve this goal.	
Stress Management	
Do the "Relaxing Breath" exercise (4:7:8) at least twice a day.	
Find activities you enjoy doing, and schedule 3 hours each week to do them.	
Detoxification	
Take five baths per week with Epsom salt and soothing music. Each bath should last at least 15 minutes.	
Buy organic versions of the "Dirty Dozen Plus®."	
Stick to grass-fed, pastured protein and eggs, and wild-caught fish as much as possible.	
Avoid GMOs and MSG	
Drink clean	

Week Three (Days 15–22)	✓
Nutrition	
Eat the meals as specified on page 23 of your *Metabolic Meals Blueprint,* or "roll your own," as in your *Metabolic Transformation Guide* on page 83. No snacking in between meals, no foods not on the lists.	
Carb feast on the night of day 18.	
Carb feast on the night of day 22.	
Keep the "no-fly" list of foods out of your diet, even during your carb feast.	
Exercise	
Walk for 45 minutes 5 times a week (3 days of interval training and 2 days of steady state training).	
Sleep	
Go to bed 15 minutes earlier than you did last week.	
Your goal is to get at least 7 hours of restive sleep per night. Integrate the other steps above as needed to achieve this goal.	
Stress Management	
Do the "Relaxing Breath" exercise (4:7:8) at least twice a day.	
Find activities you enjoy doing, and schedule 3 hours each week to do them.	
Detoxification	
Take five baths per week with Epsom salt and soothing music. Each bath should last at least 15 minutes.	
Buy organic versions of the "Dirty Dozen Plus®."	
Stick to grass-fed, pastured protein and eggs, and wild-caught fish as much as possible.	
Avoid GMOs and MSG	
Drink clean	
Program End (Day 23)	
Make sure you complete your "Program End" assessment in Appendix C on page 114.	

APPENDIX B: *NEW YOU IN 22* NUTRITIONAL GUIDELINES

This appendix is a kind of "cheat sheet" for which foods and beverages are allowed on *New You in 22,* and which foods and beverages aren't. We've also addressed some of the questions that frequently come up about portion sizes, diet sodas, and specific food groups (like meat, dairy).

A WORD ABOUT PORTION SIZE

As a general guideline, have about 1–2 palm size servings of protein at each meal. The amount will depend on your size and activity level (if you're a petite woman, you will need less than an ex-football player).

You can have anywhere between 1–2 servings depending on hunger, but think of a serving as the size of a deck of playing cards.

For eggs, eat the number of eggs you can hold in your hand (this will typically be 2–5 eggs).

A WORD ABOUT CALORIES

We don't count calories on *New You in 22*, but for those who are wondering: you can eat a very well-balanced, low-carb diet with moderate protein and healthy fat that weighs in at anywhere from 1300–2300 calories (or even more).

Most women will maintain a healthy weight at the lower end of that spectrum (1400–1600 calories depending on size, activity and metabolism). Most men will maintain a healthy weight at somewhere between 1800–2200 calories (also depending on size, activity and metabolism).

But remember, the quality and composition of those calories are more important than the number of calories.

MEAT

I feel very strongly that factory-farmed, commercial meat (and meat products) are profoundly unhealthy due to the antibiotics, steroids, hormones and the high levels of pro-inflammatory omega-6s.

Whenever possible please buy and eat only grass-fed, pasture-raised meat. I haven't made that a requirement of the program due to cost and availability issues, but I strongly recommend that you make every effort to go grass-fed only, whether you're following the basic or the advanced plan.

WILD SALMON

Wild Alaskan salmon is infinitely preferable to farm-raised (Atlantic) salmon. Farm-raised salmon are fed grain diets and antibiotics and are one of the biggest sources of PCBs in the American diet. Wild salmon isn't a requirement of the program due to cost and availability issues, but I strongly recommend that you opt for it as often as possible.

VEGETABLE OILS

Correcting the unhealthy balance in our diet between omega-6 (inflammatory) and omega-3 (anti-inflammatory) should be a primary goal of any diet.

Our "no-fly" list for vegetable oils are:

- Corn oil
- Soybean oil
- Canola oil
- Safflower oil
- Sunflower oil
- Cottonseed oil

The worst of the high-omega-6 vegetable oils are also highly processed and refined. We've put the worst of them on the "no-fly" list, but try to cut back on vegetable oils in general. We need some omega-6, but far less than we're consuming, and we need much more omega-3 in our diet.[2]

Experiment with cooking oils like coconut (we like Barlean's), or palm fruit oil (Malaysian palm fruit oil is particularly good). Use olive oil (but not at high heat), butter, ghee, and, from time to time, a seed oil such as sesame.

Whenever possible choose cold-pressed organic oils from companies like Spectrum®.

FRUIT

The natural sugar found in fruit is usually not much of a problem if fruit isn't overeaten, but fruit should be consumed much more carefully than, say, non-starchy vegetables, which are basically an unlimited food group.

We use small amounts of low-glycemic fruit, such as berries, in many of the shake recipes. You can have up to a half-cup of low-glycemic fruit per day.

THE "NO-FLY" LIST FOR *NEW YOU IN 22*

The following are some of the most inflammatory, toxic foods in the American diet and should be avoided to get optimal results from the program.

- Gluten
- Dairy[11]
- Corn
- Fruit juices or fruit drinks
- Beans (can be added in after the initial 22 days)
- Energy drinks
- Diet sodas (unsweetened, non-caloric seltzer waters/club sodas are okay)
- Alcohol
- Coffee (on the advanced plan)

11 Butter and whey protein are exceptions. Dairy is allowed for the carb feast. I want you to be able to have ice cream!

APPENDIX C: TRACKING YOUR RESULTS

You'll take a variety of measurements – physical, metabolic, and biological – that will help you establish a baseline of where you are today, so you can monitor the progress you'll be making while on this program.

This is incredibly powerful because by using these quantitative measurements, you'll be able to quickly and easily spot when you've gone off track and when you need to course correct and make changes.

These measurements will also serve as a baseline for the progress you make on the program. By creating this baseline measurement and then coming back to it at the end of the 22 days, you'll see with your own eyes the powerful results you are experiencing in hard data and this will give you that extra jolt of motivation you need to continue on your journey toward optimum weight and health.

This is what is called a positive feedback loop and it's critical that you create one for yourself.

So, your first step is to go to go through each of the exercises below and record your measurements in the "Program Start" column.

Then come back after the 22 days is over—on the morning of day 23—and record your measurements again in the "Program End" column.

Trust me. I think you'll be pleased you did this.

To make tracking your results even easier, you can download and print out all of the assessment tools that follow at http://www.newyouin22.com/tracker

PHYSICAL MEASUREMENTS

This is very easy. There are four physical measurements I want you to record before the program begins and after it is over. This will give you a "just-the-facts-ma'am" view of how your body changes over the 22 days—the fat that will be dissolving, the inches that will be disappearing from your hips and waist and more. The four measurements I want you to take and record are:

1. **Weight**—You have a scale. Use it!
2. **Waist size**—Wrap a tape measure around your back and over your belly button. This is your actual waistline, not where your belt lies.
3. **Hip size**—Simply measure them at their widest point around your pelvic bones with a tape measure.

Body fat percentage—You have two options. You can either go here: www.naturalhealthsherpa.com/body-fat-calculator and enter a few simple measurements to get your numbers, or you can go to your gym and have it taken there if you prefer. It's important that you take it the same way each time as wildly different results can occur if you don't. Whatever you choose, *make sure* you come back and enter your scores on this table as this is the number that's going to give you one of the best assessments of your change on the program.

The first time you take these measurements should be the morning of the first day you start the program. So, for example, if you start the program on a Sunday, you would take your measurements Sunday morning. That data will go in the "Program Start" column.

Then come back at the end of the program—on the morning of day 23—and enter your "Program End" information as well as your "Total Change".

Physical Measurements Chart

	Program Start	Program End	Total Change
Weight			
Waist			
Hips			
Body Fat %			

METABOLIC MEASUREMENTS

Remember the "Are You a Sugar Burner?" quiz you took all the way back in chapter 1? Well, it's actually a little more than simply a quiz. It's a tool that's designed to help you determine how much your metabolism improves over the course of the program.

So I want you to use it as one of the key assessments that will help you understand just how much *New You in 22* has helped you upgrade your metabolism to burn fat instead of sugar.

I want you to take this quiz before you start the program and after it is over, just as you did with your physical measurements. Do the quiz the morning of the first day you start the program. So, for example, if you start the program on a Sunday, you would take your measurements Sunday morning. That data will go in the “Program Start” column.

Then come back at the end of the program—on the morning of day 23—and enter your "Program End" information as well as your "Total Change".

Hint: Place a checkmark in the box on the right for each statement you say "yes" to. Don’t think too much about each question. Go with your gut—your first instinct on this is probably right. (If you’re not sure, it’s probably a “yes.”)

Are You a Sugar Burner?	Program Start	Program End
I am very hungry first thing in the morning.		
I need coffee/caffeine to get going in the morning.		
I usually drink more than one cup of coffee or cola a day.		
I have a difficult time maintaining my ideal weight.		
I can’t easily go more than 3-4 hours without getting hungry.		
Eating often relieves my fatigue.		
I often get moody or irritable before meals.		
I often feel weak or dizzy if I wait more than 3-4 hours to eat.		
I often crave sweets and/or caffeine between meals.		
I often get "shaky" when I’m hungry.		
I suffer from frequent fatigue or fuzzy thinking that eating relieves.		

I frequently nibble food between meals because of hunger.		
I crave candy or coffee/caffeine in afternoons		
I'm often tired or drowsy at work.		
I get anxious and/or depressed when I'm hungry.		
Once I begin eating sweets, it is very difficult for me to stop.		
I prefer sweets and starches over all other kinds of food.		
I can't fall asleep at night without a snack before bed.		
I frequently awake in the middle of the night hungry.		
If I awake at night, I can't easily go back to sleep without a snack.		
TOTAL		

Your Results

Program Start	Program End	Total Change

BIOLOGICAL MEASUREMENTS

Moving from a sugar-burning to a fat-burning metabolism not only guarantees that you will automatically burn fat, but provides a host of other benefits as well. You may see chronic symptoms resolve. You'll sleep better. You'll have more energy. Your moods will improve. You'll notice that your skin looks better. And you'll probably be having better sex!

Once you become aware of the incredibly profound changes that your body and brain will both go through, you'll have an even stronger positive feedback loop to motivate you to stay on course and to do even better. And this will increase your odds of long-term success.

That's why I want you to take a simple Health and Wellness Quiz both before the program and after the program. This will show you how profoundly you can change your health in as little as 22 days.

Health and Wellness Quiz

The following quiz should be completed before you start the program, and once again after the 22 days are over. This will give a good overall assessment of how your health changes in this time.

Please review each of the symptoms below and rate your experience with them over the last three weeks as follows:

- 0 = Did not experience this symptom
- 1 = Minor problem
- 2 = Moderate problem
- 3 = Severe problem

Symptom	Did not experience this symptom	Minor problem	Moderate problem	Severe problem
Skin				
Acne	0	1	2	3
Itching	0	1	2	3
Hives	0	1	2	3
Rash	0	1	2	3
Bruising	0	1	2	3
Head (includes eyes, ears, nose and throat)				
Headaches	0	1	2	3
Blurred or poor vision	0	1	2	3
Bags or circles under eyes	0	1	2	3
Swollen red eyes	0	1	2	3
Ringing in ears (tinnitus)	0	1	2	3
Itching in ears	0	1	2	3
Nasal congestion	0	1	2	3
Runny nose	0	1	2	3
Hay fever or sneezing attacks	0	1	2	3
Swollen tongue	0	1	2	3
Gagging	0	1	2	3
Need to clear throat	0	1	2	3
Digestion				
Nausea	0	1	2	3
Constipation	0	1	2	3
Diarrhoea	0	1	2	3
Cramps	0	1	2	3
Stomach pain	0	1	2	3
Heart and lungs				
Palpitations	0	1	2	3
Rapid heart beat	0	1	2	3
Difficulty breathing	0	1	2	3
Wheezing	0	1	2	3
Chest congestion	0	1	2	3
Joints and muscles				
Joint pain	0	1	2	3

Joint stiffness	0	1	2	3
Arthritis	0	1	2	3
Joint swelling	0	1	2	3
Muscle pain	0	1	2	3
Muscle weakness	0	1	2	3
Energy				
Easily fatigued	0	1	2	3
Wake up feeling tired	0	1	2	3
Difficulty concentrating	0	1	2	3
Sleep in the afternoon	0	1	2	3
Hyperactive	0	1	2	3
Restless	0	1	2	3
Sleep				
Hard to get to sleep at night	0	1	2	3
Wake up frequently in the night	0	1	2	3
Wake up tired	0	1	2	3
Can't sleep at all	0	1	2	3
Sleep is not restful	0	1	2	3
Mood/Mental Attributes				
Sad/depressed	0	1	2	3
Stressed/anxious	0	1	2	3
Angry/irritable	0	1	2	3
Difficult time remember things	0	1	2	3
Difficult time focusing	0	1	2	3
Brain fog	0	1	2	3

Your Results

Program Start	**Program End**	**Total Change**

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