# No Meat Athlete <br> Marathon Roadmap: 

# The Vegetarian Guide to Conguering Your First 26.2 

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Foreword by Robert Cheeke

No Meat Athlete Marathon Roadmap: The Vegetarian Guide to Conquering Your First 26.2
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## Foreword

## by Robert Cheeke, author and former NCAA distance runner

When preparing for your first marathon there are meaningful lessons to be learned and applied, many of which you will read about in this book. The principles outlined and described by the contributing athletes will enhance your training and your overall marathon experience.

As a vegan athlete for more than 15 years, and a collegiate distance runner in the NCAA for part of that period, I've come to some conclusions about the difference between success and failure in athletics that I'd like to share. In my talks around the country I often reference running as a perfect example of the roles that application, consistency, adaptation, and improvement play in the process toward achieving success. There are three powerful lessons I've learned about the relationship between our attitudes about sports and life and the impact they have on the achievement and happiness we will experience that I would like to pass along.

1. Ask the question "why" often and answer the question as honestly as you can, finding meaning and purpose in your decision making. Why do you care about running a marathon anyway? What does it mean to you? How hard are you willing to work? What are you willing to sacrifice? Why is it even important and why does it even matter? So....what are your answers? Your genuine responses to questions you pose to yourself will reveal your true meaning behind your actions, will fuel your drive and will provide foundational purpose to see your vision through to completion.
2. Aside from determining purpose, there is nothing more effective in eventual achievement than application. Most of us aren't willing to run every day or complete the necessary training required to excel. We simply don't care enough to do so and will find other things to do with our time. But once you establish Lesson \#1, application is fundamental and actually becomes second nature because running is something you'll not only look forward to, but you'll find yourself in a state where you'd rather run than not run. That is one element that separates those who will from those who won't and those who achieve from those who don't. Simply prioritizing your time and putting one foot in front of the other, day in and day out, will take you far. It may seem elementary but I promise you, if you're totally transparent and honest you'll find out that most of us aren't even doing what we think we're doing and what we tell others we're doing. Rather than say you'll make training a priority, just do it.
3. Once you have a firm grip on Lessons 1 and 2 and it's totally clear what it means to you to run a marathon and you've outlined exactly how you'll prepare for it and you commit to complete dedication to consistency, it's time to eat. Much like our training programs, perhaps even moreso with food, when it comes to our nutrition programs we're simply not being honest with
ourselves or others. We tell people, "I'm healthy and I eat (fill in whatever inaccurate information you tend to tell people)," but that simply isn't the case for most of us. We want to believe that we eat fresh whole foods all the time and that is what we tell ourselves and others because we're conditioned to remember the things we want to remember and conveniently forget the things we don't want to remember. We feel bad about the things we didn't do (like the times we miss workouts, or eat junk food, or didn't get enough sleep, etc.). We enthusiastically share our best workouts, not the ones we missed because we got "busy" and the same is true with foods. We may have a great, healthy meal and can't wait to share it with others, but if asked, "What did you eat yesterday?" we'd rather not answer. Perhaps I'm being a little harsh, like an overbearing distance running coach, but this final lesson may be the most important one in the future of your health. What are you really eating? What are you not eating? How honest are you being? Can you prove it? Do you have a food journal you track your daily intake, supporting accountability and providing a legitimate record to reflect upon? If not, it's time to start one. The only way to create positive change is to be aware of what we're doing in the present and to have some awareness of what we've done in the past. Creating a food journal where we simply record what we eat, in what quantity and at what time of day will reveal a lot about ourselves. Do the same for liquids consumed. Try it every day for a month. I guarantee you'll learn a lot about yourself.

If we claim to want to be our best, shouldn't we eat that way? If vitamins, minerals, amino acids, fatty acids and glucose are essential for life and for athletic success, and we know they come in their original forms from plant-based whole foods (fruits, vegetables, nuts, grains, seeds, legumes), shouldn't we make those foods our primary interest?

Focus on consuming whole foods, record what you eat so you're aware of your complete nutritional intake and seek assistance from an expert to enhance your nutrition program to assist peak performance.

Apply all three lessons I learned from my experiences as a successful athlete and the ensuing principles discussed throughout this book. Athletic success and enjoyment from your pursuit to run is in your near future.

Have a great race and enjoy the entire marathon experience! You've earned it.

## Robert Cheeke

## Author of Vegan Bodybuilding © Fitness - The Complete Guide to Building Your Body on a PlantBased Diet (Healthy Living Publications 2010)

www.veganbodybuilding.com

## Introduction

Congratulations!

Not for buying my book, anyone could have done that. But for even daring to think that you can do what so many people consider impossible for themselves. And you're not just going to run a marathon: By doing it without relying on meat for your nutritional needs, you're going to be an example to those who know you of the incredible possibility of a plant-based diet.

I'd like to thank you for valuing my advice enough to spend your hard-earned money on it, and to invest your time reading it. As I'm sure you realize, I'm not a world-class runner. You can go to virtually any bookstore and find a marathon training book by an Olympian or a well-known running coach. But here's what this training guide can offer that those other ones don't.

First, the nutrition program here is, of course, vegetarian (vegan, if you want it to be). While recently there has been far more attention paid in the mass media to plant-based sports nutrition than in the past, the guide you're reading presents vegetarian/vegan nutrition in the context of marathon training. So it's targeted to your specific purpose of running your first marathon, and the focus is on a reasonable, family-friendly diet that even new vegetarians will not find too foreign or tough to swallow.

Second, while a world-class marathoner or coach would certainly be far more capable than I am of, well, teaching you to be a world-class marathoner, that same gifted athlete probably hasn't had the experience of struggling to complete his or her first marathon, or finishing in anything resembling the $4: 52$ that was my first marathon time. (Many elites run their first marathon more than two hours faster than that.)

So why would I possibly be proud of struggling like that in my first marathon and battling injuries through the next four years before I managed to successfully run another one?

Because when compared to the 3:09:59 that I ran to qualify for Boston in 2009, over an hour and 40 minutes faster than my first time (that's almost four minutes faster per mile), that first marathon serves as an indicator of how incredibly far I've come in nine years of running. If you're worried about how your body will handle the distance, or if you already know the frustration of struggling with injuries and your goals as a runner seeming so far off, you can take comfort in the fact that I've been there. I've been stuck in that same place and I've found the way out of it, making dozens of small distinctions and learning exactly what was necessary to eventually train my body to the point of running 50 miles at a time. (And at the time of this writing, I'm training for my first 100 -miler. Still on a vegetarian diet, of course!)

The final feature that makes this book different is its focus on a first marathon, as opposed to any subsequent one. Section 4 of this book is entirely about the mechanics of the race and the days leading up to it, from what to pack in your suitcase and race bag, to what you should expect at the expo, to how
you should eat in the few days before your race and in the hours right before it starts, to what you should do to handle each section of the race itself. Basically, it's all the stuff that nobody bothers to warn you about.

I wish you the best of luck in your incredibly inspiring endeavor.
Ready? Here we go!
P.S. If you're not already subscribed, don't forget to sign up for free No Meat Athlete post updates, and to the email newsletter and free vegetarian running e-course that comes with it, because you'll get all sorts of information there that will help you as you train for your first marathon.

A note about the terminology: This book is intended to serve as a guide for both vegans and non-vegan vegetarians. Since the diet I advocate does not depend on dairy products or eggs, only listing them as optional, the nutrition advice for both groups is nearly identical. Throughout this book, I use the term "vegetarian" to include both groups, except for a few instances where the distinction is made clear by the context.

A note about the links: Several of the links to products in this book are affiliate links, which means the seller pays a commission to me when someone buys their product through my link. I probably don't need to tell you that I would never recommend something I didn't think would help you - but just in case, now you know.

## Section 1

Making It Real: Coals and Commitments

## Makelt Real by Puttingltin Writing

A$s$ with any endeavor, the first step is to make a decision. A real decision, right here and now, that says you are going to run a marathon as a vegetarian. There's immense power in that alone, so I want you to actually DO this. (Hint: Marathon training requires a lot of DOING, so you might as well get used to it.) I've included these questions in the Goal Setting Worksheet in a separate file that you can print off and fill out.

So how do you make a real decision? Three steps:

1. You figure out WHY you're going to do this. What would it mean to you? How would your life be better if you were to make this happen? What would you look like and feel like if you were a vegetarian marathoner? If it motivates you, what would other people think about you? What would happen if you DIDN'T do this?
2. You make the decision. Make your outcome crystal clear in your mind and write it down and put it in a place where you'll be reminded of it daily. You need to become so certain of your decision that it feels inevitable - almost as if you've already done it.
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3. You take some sort of action that commits you. There's no getting around the fact that training for your first marathon is hard (though I'm going to help you make it as easy as it can be). But it's much easier to take some action that makes sure you'll follow through when it gets hard.

By picking up this e-book, you've already taken some sort of action. Putting up even a little of your own money has tremendous power to motivate some people. But I'd suggest you do even more to commit yourself to following through.

One example of a committing action that's a favorite of runners is choosing your race and signing up for it before you even begin training. That's a pretty powerful motivator, but it does involve some financial risk, since injury is sometimes beyond your control. We'll cover how to choose a race in the next section, in case you want to make that your committing action.

If you don't want to risk losing your entry fee should you get injured, do something else that commits you. Another good action is writing down your decision on the back of a few business cards and giving them to the people in your life whose respect you value more than anything in the world. Sure, itd be embarrassing, even painful if you didn't follow through - and that's exactly the point. (At least in this case, you could include a clause that gives you more time in the event of an injury.)

A few more ideas: Go get a pair of running shoes to train in, or buy your race-day outfit. Find a partner to train with and commit that you'll both run this race (if you can get them to go vegetarian with you, more power to you). Check out fundraising opportunities, like Team in Training. If you don't have a regular running route where you'll be able to run up to 20 miles, do some research and find one in your area. (If you're going to run on roads, Gmaps Pedometer is a simple tool for calculating distance. More on this later.)

Get the idea? Do something. Write down what you're going to do, then do it.

## Should You Have Time Goal?

Hmm, how should I put this? Let's see...NO!

Listen, I'm all for having big, audacious goals. In fact, for me, that's what makes training worth it. But what I hope you realize is this - your first marathon ALREADY IS THAT GOAL.

Running 26.2 miles is an incredible thing that only a small percentage of people ever achieve. And for a good reason - when you're new to running such long distances, training is tough on your body. Why make it any tougher?

It's your marathon. If you're so type-A that finishing the marathon isn't enough of a goal in itself, then I can't stop you from having a particular time in mind. But I'd highly advise against it, and I hope that a story from my own experience will convince you.

When I signed up for my first marathon, I was not a runner. I was into weightlifting, and I thought running a marathon would be a good way to lose fat and get "cut." But then I found out that if I could run it in 3:10 (that's a 7:15 minute-per-mile pace) they'd let me run Boston. And of course, being competitive and overly confident, that was exactly what I decided to do.

So I tried my best to keep my pace under eight minutes per mile, even on long runs. But as they got longer, recovery got harder. Soon my shins started hurting. I taped them up and kept going, and pretty soon I found myself in an aircast with a stress fracture, under instructions from the doctor to shut it down.

Stupidly, I still ran the race two months later, with nothing longer than a 13miler under my belt.

And you know what? Even on the day of the race, my time goal still got the best of me. Caught up in the excitement of 20,000 people, I ran my first mile in under seven minutes. My adrenaline now surging, somehow 3:10 felt possible.

It wasn't. As the miles wore on, my goal turned to 3:30. Then, after about 15 miles, it became 4:00.

When I crossed the finish line with a time of 4:52, having walked the last eight miles and barely finding the energy to fake like I was running for the finish photo, my accomplishment of running a marathon felt like anything but a success.

Having an unreasonable time goal can ruin your race. Worse yet, it can get you injured, and make it so that there is no race at all.

As you train, you'll learn what kind of time you should expect, based mainly on the pace at which you're able to comfortably complete your long runs. You'll want to be aware of this estimate so that you'll know you're running a safe, sustainable pace on race day.

But please trust me on this one - the whole experience will be more enjoyable if the goal in your head is to finish the race. And while you're at it, make sure you enjoy every minute of it.

## But IfYou Must Havea Time Goal...

I understand. I'm the same way. If you absolutely cannot train without a particular time in mind, here's what I recommend.

First, use a prediction chart to translate a recent race time into an "equivalent" marathon time. This will give you a rough idea of a reasonable finish time to expect, so make sure your goal is at least in this neighborhood.

Your actual, day-to-day training won't differ too much from the standard program I prescribe. The main difference is that you should run several time trials throughout your training. The best way to do this is to plan actual races in place of several workouts, on courses similar to what you'll run your marathon on. I'd shoot for a 5 K , a 10 K , and a half marathon, scheduled for days when you'd be running a similar distance on the standard training plan.

Then use these race times with the prediction chart to adjust your goal as necessary during the training. Along with giving you valuable race experience, this will prevent you from going out too fast in the marathon, chasing a time that's unreasonable and risking everything you've worked for. (According to the authors of Run Less, Run Faster, for every minute too fast that you run the first half of a marathon, you'll lose two minutes in the second half.)

Finally, you might consider running a few of the scheduled long runs, preferably the shorter ones, at or close to your goal marathon pace. When you do this, you increase your chances of getting injured, but if you're set on a time goal, training faster is the way to hit it.

## How to Choose Your Race

It's hard to overstate the importance of choosing the right race.
You need to pick a target that will inspire you, even when you get home from work and the last thing you want to do is go run. One that will make your first marathon experience every bit as magical as it should be once you get there. So how do you go about selecting your race, when there are so many to choose from?

It comes down to several factors, each of which I'll address here: time frame, location, weather conditions, course, size, and what I call the "wow" factor.

Note: As you'll see, I'm a big fan of making your first race a real event. To me, it's much easier to keep running when it really hurts if the race feels like one huge party. But if you're more low-key and a festive atmosphere is not what fires you up when all you want to do is stop running, then by all means adapt my advice to whatever gets you going.

## Time Frame

Picking a race that gives you the time you need to train properly is the most important factor for avoiding injury, and the part so many first-timers get wrong.

I recommend a training program of at least 18 weeks, which is pretty standard, plus six or more weeks of base-building at the beginning if you haven't been regularly running around half of the race distance in total weekly miles. So you want to be running 12-15 miles a week before you officially start training for a marathon. If you're already there, 18 weeks is enough. If not, choose one that's at least six months away to give yourself time to build a base.

## Location

Should you stay close to home or travel to a destination race?

The way I see it, you only run your first marathon once. (And everyone wants their first time to be really special, right?)

My first marathon was in San Diego, on the opposite coast from where I live, so two friends and I spent four days there and had an absolute blast. If I had it to do over, I wouldn't change a thing about the location. (I might go back and change our choice to walk all around the world's largest zoo the day before the race, though.)

Going somewhere fun and making a mini-vacation out of your first race is the way to go, as far as I'm concerned. Of course, traveling to your first marathon also has its downsides.

You have the added stress of travel and jetlag, not to mention the added cost of a flight and hotel. Most of your friends from home won't be there to cheer you on, and your comfort and sleep the night before and after the race might not be quite what they would be at home. There's also the risk that you'll get injured and won't be able to cancel your hotel and plane tickets. But hey, then you could just be like a normal person and take a vacation that doesn't involve running 26.2 miles!

Bottom line: If you're the type that loves to travel and you don't mind giving up some comfort and taking a little extra risk in return for an awesome locale, then run wild with your choice of location. Otherwise, stay close by and enjoy the comfort of your own bed and familiar faces at the race.

## Weather Conditions

The previous two factors, time and location, also determine the likely weather conditions of race day. For most people, 50-60 degrees Fahrenheit is a pretty ideal temperature range to run in, but keep in mind that most races start early in the morning so you usually won't be running during the hottest part of the day.

Rain isn't much fun to run in, and wind will slow you down way more than it will help you. Also, be aware that differences in humidity and elevation between your race location and what you're used to training in can have a significant impact on your performance.

Obviously, you can't control all of these things, but do what you can to keep from being caught off guard by the weather.

## The Courseliself

Most races offer elevation profiles on their websites - for your first marathon, you'll have an easier time with something that looks like this (Chicago Marathon),

than like this (Pike's Peak):

(The elevation profiles are from MarathonGuide.com, where they have a good marathon directory to help you choose one.)

If you'll be able to do a lot of your training on hills, then you might be able to handle a hilly race. But in general, flat equals fun for your first big race. You're running 26.2 miles for the first time. Why make it any harder than it needs to be until you've got one under your belt?

Another thing to keep in mind is terrain. Most marathons you'll find are road races, but trail marathons are becoming more popular. If all your training will be on roads or paved trails, be cautious about choosing a trail race, especially if you're not sure how technical the trail is. Trail running is very different from road running, far more than just "picking your feet up so you don't trip on roots," which
is what I thought it was before I started trail running. Bottom line: If you only train on the roads, race on the roads.

## Size

Do you want an intimate 1,000-person race or a 30,000-runner spectacle, complete with bands, cheering squads, and spectators several rows deep?

I've run both, and I can tell you firsthand that there's an enormous difference when it's mile 18, the doubts are creeping in, and you're all alone, versus having the support of a crowd with music and festivities to keep you going. I can understand that some people enjoy being alone with their thoughts, but when you're running farther than you ever have, those thoughts can sometimes drive you crazy.

As I said, big races aren't for everyone. They're generally more expensive, and you'll have to deal with crowds and traffic before and after the race. And even during the race you'll likely find that you don't have as much room as you'd like until the crowd thins out, often not until several miles in. But if you can handle that, the adrenaline rush of a screaming crowd when you need it most is totally worth it. (Check out the Rock ' n ' Roll series, my favorites of the big races.)

> One added benefit of a big-city marathon, specifically for vegetarians and vegans, is having more choices when it comes to food. What you eat in the day before and the hours following the race is important to make sure your stomach doesn't revolt and you recover properly. If you're in the middle of nowhere out in huntin' country for your race, that could pose a problem - salad isn't going to cut it now. With a little planning though, you should be able to find something, even if it's just plain pasta. So keep the food factor in mind, but don't let it completely dictate your choice of race.

## Wow Factor

Listen. You're going to run a marathon. You might as well make it awesome.
Pick something that inspires YOU. If that's running through the desert, surrounded by mountains and red rocks, then do that. If it's running down the Las Vegas strip, do that instead. If it's cruising through city blocks in between skyscrapers, pick one of those. If it's a peaceful journey along rolling hills through farmland and tiny towns, you can find plenty like that, too.

There are so many different types of marathons. For your first one, pick something that moves you one that when you download a great picture or the course map and set it as your desktop wallpaper, you'll get butterflies just imagining yourself running it.

Training for a marathon is tough, and that's why so few people will ever do it. Let yourself be inspired along the way.

Matt Ruscigno, vegan Registered Dietitian and ultra-endurance athlete, TrueLoveHealth.com:
I have a confession to make. I hate exercise. In high school gym class my friends and I would hide behind the bleachers so we didn't have to do anything. I think treadmills might as well be torture devices. When I read other people's training programs it makes me want to sit on
 the couch and eat popcorn (I love popcorn). So why have I done 5 marathons, 3 Ironmans, 2 dozen 200+ mile bike races, 3 solo 24 hour mountain bike races and even longer events? Because I love adventure. Not to "challenge myself" as others like to say, but to reveal myself to myself. There's a clarity that comes after 10 hours of straight physical exertion that is better than any drug (at least any I did when I was hiding behind the bleachers in high school) and cheaper than any therapy. It's an unfiltered view inside of oneself.

One year racing Vineman, an independent iron-distance race in Sonoma County, California, I was nearing mile 20 of the run and I came upon another struggling racer. I said hello and asked how she was doing, as I always do, and she responded, "Miserable!" Maybe it wasn't the time to get philosophical, but I told her that I was miserable too, and that we were fortunate to be experiencing such strong human emotions and that we should embrace it and enjoy it. She looked at me like I was crazy. She told me that she'd enjoy it when she was done and could tell everyone she had done Ironman. She then made it very clear that our conversation was over. Maybe she is the type of person who enjoys running on a treadmill?

My point is that if you make the process of physical activity more enjoyable than the end result you can never be let down. Everyone suffers. But our ability to suffer (and to enjoy it!) is greatly underestimated. The more you suffer the more you can enjoy what you are doing. Here's another example from the same race: I'm notoriously bad at swim training. This year I got in the pool a grand total of

5 times before Vineman. At about mile 2 of the 2.4 mile swim I was not stoked. I was sore, out of breath, slightly disoriented and down on myself for not training enough. I wanted to quit. So I slowed down a little. I looked at the trees along the river and the sun peeking through the clouds. I thought to myself, "It's summer and I'm spending my morning swimming in a river and later I get to ride my bike around. How lucky I am!" If I was only out there to exercise I don't think I would have had the mental toughness to continue. I finished the swim in my slowest time ever, but fortunately made it up on the bike and went on to run a marathon PR.

When I work with clients who are taking on new physical endeavors the first thing I ask is if they enjoy the process. If they aren't sure I tell them they need to find something they enjoy and do that instead! Because if your only goal is to have finished something, it's not going to get you through the lowest of lows. But if you are out there because you truly want to be then you'll welcome the lows and be thankful you are experiencing them. When's it 2 a.m. and I've been on my bike for 19 hours I don't care about the finish, I care about what I'm feeling and that is the only thing that gets me through the night.

I implore you to see exercise (and life!) not as goals to accomplish, but adventures to experience. You'll be amazed at what you find out about yourself.

## Section 1 Additional Resources

Spirit of the Marathon - A documentary following several runners in their training for the Chicago Marathon. Hugely inspiring for the first-time marathoner, this film puts into perspective just how incredible an accomplishment running 26.2 miles is. I used to watch this one the night before every marathon, to get psyched up.

Born to Run by Christopher McDougall - Bar none, this is the most exciting book I've ever read about running, and the only book that has compelled me to put it down just to go for a run. Though it's more about ultramarathons than marathons, this is a fantastic book for getting yourself excited about running and questioning limits.

## Section 2 <br> The Training

## The Marathon is the Goal, the Plan is Just a Roadmap

It's helpful to think of your training as a roadtrip, with the marathon being the destination. Let's say you want to drive across the country (and pretend this is before we all had GPS devices), so you take out the old map and a highlighter and plan out the best and fastest route to get where you want to go.

Now imagine that the first half of your trip goes according to plan, then all of a sudden you get lost. You realize that you missed a turn a while back, and you've been driving for two hours in the wrong direction. What do you do now?

Do you keep looking for whatever turn is next on your direction sheet? Of course not. Those directions were the ideal, but they didn't work out. So now, trying to follow the same directions will only get you more lost.

The obvious thing to do is plot a new course. You look at where you are and where you want to end up, and you figure out the new best way to get there, given the present circumstances. And as you're driving along the new route, you certainly don't feel guilty about making your new turns instead of the old ones. Even if those old ones would have been ideal at one time.

What this means, in terms of your training, is that you need to be flexible. If at any point your body tells you something isn't right, the best course of action is now different from the ideal plan that was set up at the outset of your training. You now have more information, a new constraint, and if you follow the original training plan you'll likely end up sitting at home on race day instead of running.

So if something doesn't go quite according to plan, you must be willing to adjust. Don't feel guilty about missing runs that were part of your original plan, and make whatever modifications the situation dictates. (We'll talk more about some possible adjustments later.)

Remember: Your goal is to get to the finish line. The plan is just your map.

## About the Training Plan

I have a theory about why so many people get hurt while training for their first marathon. When someone, let's just call her Jenn, first gets the itch to train for a marathon, here's how I picture it going down:

1. The idea of running a marathon has always intimidated Jenn. It'd be cool, but she doesn't have time, and it really does seem like a long way to run.
2. Then one week, the thought won't leave Jenn alone. By the end of that week, her concerns have been replaced by confidence and excitement, and running a marathon is all she can think about or talk about.
3. On Friday, Jenn has a glass of wine or two, and resistance is now futile. She googles "marathon training plan" and clicks the first site that comes up. She sees that it's 18 weeks long, and doesn't worry about the part that says she should have a good base of 15 miles a week (she doesn't).
4. Jenn searches for marathons that are five months or so from now, picks one she really likes but that's only 16 weeks away, and starts training on Monday. She'll skip two of the easier weeks to make the program 16 weeks long.
5. Jenn follows her training plan to the letter, except that she skips Week 3 to make up for lost time. When pain in her knee starts to worsen, Jenn keeps plugging along with the scheduled workouts until she can't complete the long run in Week 9 because the pain has gotten so bad.
6. Jenn can't run for several weeks as a result and has to scrap the marathon, depressed and arguably in worse shape than when she started.

So where did Jenn go wrong? (And by the way, you can replace her name with Matt and have a pretty accurate picture of my first marathon training experience.)

Well, there are two big problems here.

## Problem 1: Choosing a marathon that's too soon

I know, deciding to run a marathon is exciting. Once you've made the decision, you don't want to wait another minute to start training.

It's hard to resist signing up for the perfect race that's just a little too early. But do yourself a huge favor and do this right. If you don't already have a good base of about 15 miles a week, you'll need to add at least six weeks of base-building easy runs. That brings the total training time to almost six months, so pick your race accordingly.

## Problem 2: Being unwilling to adapt the training plan

Most of us like to have someone tell us exactly what to do when we're doing something new. That way, we don't have to think about whether we're doing the right thing, and thinking is work. Even better, as long as we're just following orders, it's not really our fault if it doesn't go well.

I'm going to lay out a training plan here that tells you exactly what to do. It's essentially the plan I followed to run my first successful (i.e., injury-free) marathon, with a few modifications to account for things I've learned in many marathons and ultras since then. But I'll tell you right now that you must be willing to make changes to it when things don't go to plan. As much as I believe in this training schedule, it's not a magic formula for an injury-free marathon, because nothing is that.

So yes, it'd be great if you were to stay injury-free and do every workout as it's written. And since this program is designed to minimize the chance of injury, that's quite possible. But if you want to succeed going in, you must be willing to make modifications along the way.

For example, if it's been four weeks and you're feeling worn out rather than feeling stronger, then you need to change something. Try one less workout per week, or if you're doing the speedwork, scale it back. Keep making adjustments until it works.

Along those same lines: If, say, in Week 8, you notice that shin splints are making it incredibly painful to run, then attempting the scheduled long run that weekend is absolutely the wrong decision. There's no room for perfectionism in marathon training.

Remember, your goal is to finish the race. It's not to do every single run on a training plan that was laid out before you started training. The training plan is a map to get you to that goal of finishing the race, but it's not the goal itself.

## The Roadmap: How to Get from Here to There

You'll find the actual Marathon Roadmap training plan included in a separate file. This plan is very similar to the first plan that allowed me to run a successful, injury-free marathon after many failed attempts with other plans. The focus is on keeping mileage low and allowing ample time for recovery between increases in long-run distances. Once the training plan is in full swing and mileage begins to creep up, you'll see that each increase in long-run distance is followed the next week by a decrease to give your body time to recover.

You'll notice that the longest long run is 20 miles, rather than 22 miles as some plans prescribe for their longest run. I'm of the belief that during the training for a first marathon, the risk of injury and the wear and tear on your body are simply not worth the benefit of improved comfort and confidence that having run an additional 22 -miler might bring. (It could also create lots of uncertainty if it doesn't go well!)

In my opinion, there's not time in a 24 -week first-marathon program to get in both a 20- and 22-mile run. You could extend the program to 26 weeks if you really wanted to get both of these runs in, but as I said, I don't think it's worth the risk.

I'm a big fan of saving some miles for the race day. The way I see it, "twenty is plenty."

## The First Six Weeks

The first six weeks of easy running are designed to get your body accustomed to running 12-15 miles per week. If you've never run this amount before, or if by the end of six weeks these miles (which are to be done at Easy pace) feel difficult, I urge you to extend this base-building period even longer until this amount of mileage is nearly stress-free on your body. If, on the other hand, you've been maintaining this volume or greater for a few months prior to starting the program, this initial six-week period could be shortened or omitted entirely.

Note: The workouts of the first six weeks, which are meant to be easier and less stressful than the workouts in the main part of the program, assume you can run three miles without difficulty. If you can't run (or run/walk) three miles at Easy pace without difficulty yet, you are not ready for this program, and attempting it will put you at increased risk for injury. In such a case, I'd recommend starting with something like the Runner's World 8-Week Beginning Runner's Training Program and running several 5 K 's (and ideally, longer races) before beginning a marathon training program.

## Weeks7-24

After the six-week introductory phase, the training program shifts to incorporate five types of workouts for the remainder of the 24 weeks. These workouts are Long, Easy, Tempo, Hill, and Interval.

Of these five workouts, the long run is by far the most important for reaching your goal of eventually running 26.2 miles. This is especially true in weeks where the long run increases in distance: If you're unable to complete it then, you'll fall behind in the training and have trouble two weeks later when the long run distance increases again. For this reason, a large section of this book is devoted to the long run and how to maximize your chances of success with it.

While the other workouts all serve their own unique purpose, none is as important as the long run. If you have to miss one of the shorter workouts due to a minor injury, a scheduling issue, or simply not feeling up to it on a given day, I wouldn't recommend trying to rework your schedule to make it up. Enjoy the day off and move onto the next scheduled workout when it's time.

If, on the other hand, you miss a long run - for any reason other than injury - on a week where the distance increases, I'd recommend reworking the training schedule to make up that run before you try increasing the distance again. (We'll talk about what to do if you get injured later on.)

Finally, make sure that the shorter workouts are not overly stressful on your body. They should be mildly difficult and invigorating, but recovering in time for the next run should not be an issue. If it is, lower the intensity at which you perform these workouts, or even replace them with Easy runs, if that's what it takes to be ready for the next long run.

## Aim for "Peaks and Valleys" of Intensity During Interval and Hill Workouts

During interval and hill workouts, you want your work intervals to be very distinct, in terms of intensity, from your rest intervals. At first, if you haven't yet developed your anaerobic system or if you simply overestimate the proper intensity (as many people do), you'll find that you tire quickly after the first few sets. This leads to inadequate recovery during rest intervals, making subsequent work intervals slower, and causing work and rest intervals to blend together.

Once you've found the proper pace and improved your fitness, you should find that your work intervals can be fairly intense (peaks), followed by recovery intervals during which your heart rate drops and your breathing becomes less labored very shortly after you complete the work interval, and in plenty of time for the next one (valleys). This quicker recovery is a sign of improved fitness.

## Tapering

You'll notice that the mileage drops off significantly after the 20 -mile long run. This is standard in almost all training programs and gives your body time to recover before the race, so that you show up to the start line feeling fresh, rather than worn down. The tapering period is notorious for driving nervous, addicted runners crazy with the urge to run.

If this is you, resist that urge. It's very important that you do this tapering. If injury earlier in the training program requires you to shift the long run schedule around, you can probably get away with one less week of tapering, but definitely don't try to do a long run on the weekend before the marathon. It won't do you any good to run long that close to the race, and it will leave you significantly less fresh on race day.

Susan Lacke, Ironman finisher and Resident Triathlete, NoMeatAthlete.com:
You can't fake your first marathon, kid. Don't even try. Whether you're feeling down about yourself, trying to impress someone, or otherwise just an idiot, please don't ever think it's something as simple as waking up one morning and deciding, "Gee, I think I'll run 26.2 miles today. That sounds like fun."


You've got to respect the distance. People who try to attempt the 26.2 without adequately building up to it in the weeks and months beforehand quickly find that Madam Marathon knocks them off their feet, stands on their chest, spits on their neck, and hollers, "SAY MY NAME <BLEEP>!"

Ahem...Madam Marathon's a wee bit of a dominatrix.

Build into the distance, though, and you'll have a much more pleasant experience. Put in your base miles, your tempo runs, your hill runs -- it's the running equivalent of taking Madam Marathon out for dinner and a couple glasses of wine before suggesting you both go back to your place. Trust me on this one.

## Should You Warm Up?

There's a good rule of thumb regarding if and how much you should warm up: "The longer the run, the less you need to warm up." (Or if you prefer, "The shorter the run, the more you need to warm up.")

Think about it in terms of two extreme cases -- a sprinter and an ultramarathoner.

The sprinter is going to be performing for a few seconds, maybe a few minutes at the most. Her muscles will go from a state of rest to a state of extremely quick, intense firing in an instant. This makes it imperative that her muscles be warm before she starts, not just to avoid injury but to maximize performance. (Note that her warmup shouldn't necessarily involve stretching, which could weaken her performance by fatiguing her muscles, and might even cause an injury.)

The ultrarunner, on the other hand, will be running at a very low intensity by comparison, even walking some, but for 6 or 12 or 24 hours. In this case, the first few miles of his run are the warmup. The intensity is low enough that there's little to be gained in terms of performance or reduced injury risk from warming up. While there's probably no harm in it, I don't see why this runner would want to make his day on his feet any longer than it has to be.

Think of these extremes when you decide how much to warm up for your runs. If it's an easy run day, save time by treating the first few minutes of the run as the warm up. If, on the other hand, you're doing a 4-mile speed workout or hill workout, or running a 5K as a time trial, you'd certainly want to warm up with a little light jogging or even a few short "strides," which are comfortable almostsprints covering 50 to 100 meters, focusing on good form, light steps, and a fast leg turnover. On your long run days, treat the first few miles as your warmup, unless you're trying to maintain race pace (not recommended for your first marathon) and will be going at fairly high intensity right from the start.

Foam Rolling, Compression, and the Dreaded Ice Bath: How to Recover from Your Run
In the diet section, you'll find plenty of guidelines about how to eat before, during, and after your runs to maximize performance and recovery. But what about considerations for recovery that don't have to do with food?

I'm a big fan of foam rolling, and after a long run is when it feels best. I've also found that wearing compression socks for a few hours immediately after a long run or hard tempo run or hill workout significantly reduces soreness in the days afterward.

But there's one method that's more effective than any of these at reducing nextday soreness, and it's a place few runners are willing to go: the ice bath.

Feeling brave? Buy a 20-pound bag of ice, sit in the tub as you fill it with water, and add as much ice as you can handle. If you can manage to stay in there for 15 minutes, you're tougher than I am, and your legs will feel better the next day for it.

If you're going to try ice baths, I'd recommend leaving your running shorts on while you do it. Maybe it's psychological, but for me that makes it just a little less excruciating when the cold water line reaches that oh-so-critical point and I wonder what the hell I am doing to myself.

## Demystitying the Long Run

The long run is the most important part of training for a marathon, and for most people, it's also the scariest part. Here we look at where to do your long run, how to plan it, and the proper mindset for avoiding injury and getting through the most daunting workout of the week.

## Where to Do Your Long Run

In any training program for your first marathon, the long run will be the most trying workout of the week. Since your speedwork and hill training in this program are relatively light, the long run will be your big test in the weeks where it increases in distance.


The point is to make this test as easy as possible on your body and your mind. Your form and speed have a lot to do with this, but so does where you choose to do your run.


The best place you can do your long run is on a trail, if you can make it work. Trails are generally much softer than roads, meaning that the pounding your legs and hips take is much less than on asphalt or concrete. In addition, trails usually wind more than roads and have more varying terrain, all of which serves to break up the monotony and give your legs a change of pace.

So what do I mean by "make it work," you ask?
Well, trail running is a different sport than road running. It brings with it some additional considerations, just a few of which are safety, getting lost, and dealing with technical terrain. For these reasons, I'd recommend you don't try to do many long runs on serious trails, simply because increasing your mileage up to marathon distance is enough to worry about without these added concerns.

If you really want to incorporate technical trail running, I'd recommend doing it in place of your tempo runs and hill workouts at first. Once you're extremely comfortable with trail running, it's possible that you can do it for your easy runs.

What I do recommend for your long runs is finding a non-technical trail to run on. Non-technical means the trail is user-friendly: rather than pure dirt, roots, and rocks in the woods, the trail is covered in fine gravel or crushed limestone or is even paved, and might have some decent hills and turns, but nothing compared to what you'll find if you get into serious trail running.

Above, a non-technical trail is shown on the left, with a technical trail on the right.

The American Trail Running Association has free directories of trails, both in the United States and elsewhere. You can tell from most of the descriptions whether a given trail is technical or non-technical. Trails.com offers more information, but requires registration to access certain features.

If you do decide to do your long runs on trails, it's advisable to do some research ahead of time consider asking your local running store about nearby trails. You want to make sure the trail is nontechnical and to find out whether the trail has mile markers, if there are water stops, and where the best place along the trail to start is. You might even consider checking out the trail in advance, just to make sure that, say, your scheduled 14 -miler doesn't get messed up because you can't find the trail, you get lost while you're running, or you realize two miles in that the slopes on the trail become treacherous.

For a more comprehensive guide to trail running for beginners, see a post I wrote for Zen Habits on that very topic.

First and foremost, you want to get your miles in. If you can make that happen on a soft, non-technical trail, your legs will be better off for it, come the final weeks of your training and going into the marathon.

## Howt PPan LongRuno on Roads

Even if you're able to find a good, non-technical trail to run on, I'd still recommend doing several of your long runs on roads, assuming that's the surface you'll be running on in your marathon.

The reason for this is that while trails do save your legs from the pounding that comes with running on pavement or asphalt, I've also found that if I don't run on roads for several weeks, then when I return to them I haven't built up a "tolerance" to hard surface.

So if you're going to race on roads, you should try to do at least a few of your long runs on roads. The question, then, is how to plan a route that will get you the distance you need.

## Tools for Planning Your Run

Back in the Stone Ages, the way it used to be done was to drive around in the car, watching the odometer and writing down distances for various stretches of road, then carving a long run route out of it. Thankfully, we now have the internet.

Even if you have a GPS watch that tells you how far you've run, it's smart to plan your route in advance so that you don't get lost, or find yourself totally spent and farther from home than you intended to be.

The site I use for planning long runs is Gmaps Pedometer, an application built on the Google Maps framework that shows you how long your route is and lets you easily adjust your route to get the distance you need. Another popular one is MapMyRun.com, which offers far more features, including the ability to save runs, log your training, and connect with other runners.

Personally, I like the simplicity of Gmaps Pedometer. For the community stuff and logging runs, I like DailyMile.com (username NoMeatAthlete, come friend me!).

## Other Things to Think About

I probably don't need to say this, but be safe. Don't plan to run on a road that you know has no shoulder, or on any type of highway, and make sure it's bright out and that you're easily visible to drivers. If you must run in the dark, wear a headlamp and reflective gear and be extremely careful.

Some other considerations for your long run:
$\downarrow$ Hills: A few are good, especially if your marathon will be hilly, but too many and too big can make your long run unduly stressful on your body.

- Where you'll get water: You can carry it with you (see the equipment section), but if you don't mind running loops, you can plan your route to pass by your house or your car so that you can grab a drink or some food.
- Traffic: Obviously, less is better - in addition to the safety concerns, lots of traffic usually means lots of standing around waiting to cross the street, not to mention breathing in exhaust fumes.


## The Long Run Mindset

Most training programs and running coaches will tell you to do your long runs at 1-2 minutes per mile slower than what you're capable of running for that distance. This is sound advice, and I'd say that for your first marathon, you should be at the slower end of that spectrum.

Don't get me wrong: I've found tremendous benefit in running long runs at closer to my marathon goal pace, even as close as 15 to 30 seconds per mile behind goal pace. But for a first marathon, there is no doubt in my mind that slower is better.

As I'm sure you've sensed by now, the biggest hurdle in training for a first marathon is injury. Running slower combats this by dramatically reducing the stress on your body. If you listen to only one piece of advice in this entire book, make it this one: Avoid the temptation to run too fast during your long runs.

As a simple measure to know if you're going slow enough, consider whether or not you could comfortably carry on a conversation with someone while you're running. If you can't, you're going too fast for your long run.

## The Rur/Walk Method

The former Olympic marathoner Jeff Galloway advocates a popular training method known as run/ walk. It's designed to prevent injury and is extremely popular among slower runners, but Galloway claims that many runners have broken three hours in the marathon using the run/walk method!

The idea is to run for a prescribed amount of time (for example, three minutes), and then take a walk break for another prescribed amount of time (usually one minute). You then repeat this process until you've completed your long run, or if you're using this method in a race, until you've reached a point in your race at which you know you can finish faster without walking.

On Galloway's website, he lists suggested run/walk ratios, which vary according to training pace, and he goes into far greater detail in his book, Marathon.

## Is the run/ walk method for you?

Like so many things, it depends. If you've trained for 5 K 's and half marathons and found yourself injury prone, then it's worth a shot. If injury has never been an issue for you, maybe run/walk is playing it overly safe.

When I was constantly dealing with major shin problems, I experimented with the run/walk method. Personally, I found it unsatisfying, because part of the allure of the marathon for me was knowing that I could "run" a marathon, without having to walk. Call it macho or even stupid, but that was a big part of the motivation for me. My wife, on the other hand, couldn't care less whether she walks or runs, as long as she's doing what will get her to the finish line the fastest.

Let your personality and perceived risk of injury dictate whether you incorporate the run/walk method into your training. If you want to work it into the plan given in this book, I recommend implementing it as Galloway recommends for the long runs, tempo runs, and easy runs, and walking during the recovery intervals of the interval and hill workouts.

Interestingly (or perhaps deservedly), I found myself dealing with a last-minute injury a few weeks before my second marathon. I now suspect it was an iliotibial band issue, but whatever it was, it all of a sudden hurt to run even four miles, when my long runs by that point were pushing 18 miles!

Not knowing what else to do, but insistent on running this marathon (this was almost four years after my first attempt and I was so close), I started taking walk breaks during all of my runs. Five or six minutes running, one minute walking.

And it was just what I needed. On the day of the race, I did that same run/walk routine for about the first 20 miles of the race, and let my adrenaline carry me the last 6.2 miles. I finished in 3:52, over an hour faster than in my first attempt, and it was one of the happiest days of my life. When I looked back at the race, not for one second did I feel ashamed about taking walk breaks, nor have I ever looked at them that condescending, "macho" way since.

## Running Form

Not too many new runners worry about how they should run - we've been running all our lives, so it's hardly a "skill" we need to learn, right?

Some would agree. Plenty of great runners - Paula Radcliffe, Emil Zatopek, and Bill Rodgers, to name a few - ran or still run with idiosyncrasies in their form. The argument goes that as you log in more and more miles, your body automatically learns what's most efficient for it, so there's no reason to purposely try to change your form.

Others claim that this thinking is incorrect, and that your body simply learns to adapt to whatever you force it to do, even if that's less than fully efficient. The well-known running coach Pete Pfitzinger claims you can increase your running efficiency by two to four percent if you practice proper form.

My belief is that for a first marathon, it's worth knowing the basics to make sure you're not doing anything that's killing your efficiency (or worse, putting you at risk for injury). But since we don't want to get caught up in making dozens of tiny tweaks that may or may not make a difference, we won't go too far with it.

## Upper Body Form

For the purposes of running your first marathon, don't worry too much about your upper-body form unless you're doing something really funky. There's no guarantee that changing your form from what's natural won't actually harm your running economy, and there's not a whole lot to gain from changing anyway.

If you're the type that's got to know you're doing everything right, though, you can keep a few basic principles in mind:
$\downarrow$ Keep everything relaxed: neck loose, head looking forward, shoulders down, hands very loosely closed
$\downarrow$ Let your arms swing from front-to-back, not across the front of your body, and keep the motion controlled - since each arm swing corresponds to a step, large swings will make it hard to get your leg turnover as fast as it needs to be

- You want your whole body to lean forward slightly, but don't bend at the waist
* "Dinosaur arms holding butterflies" is a mental image, courtesy of ultrarunner Stu Mittleman, that perfectly describes the relaxed look and feel of the arms and hands for distance running

For more details about upper-body form, see a Runner's World post called The Perfect Form.

## The Lower Body

How your legs move and your feet land has a much greater impact on your running than what you do with your upper body, so it's natural that there's more debate about it.

When it comes to what your lower body should do, there are essentially two schools of thought, the old school and the new school. The funny thing is, the new school is actually pretty old. Older than old school, even.

Allow me to explain.

## TheOld School

When I talk about the old school, I'm talking about the way most people have run since the modern running shoe came along in the 1970's.

You see, wearing a big, cushy shoe allows one to comfortably run in a way that "shouldn't" be comfortable - in short, it lets you land on your heel, and with your landing foot way out in front of your body. And since most runners land this way, including the ones winning races, old-school coaches decided that it must be correct.

For sprinting and short-distance running, taking a longer stride is beneficial. For longer distances, it's debatable. Enter the new (actually really old) school.

## A Brief Lesson in Evolution

If you've read Chris McDougall's smash-hit, Born to Run, then you know all about persistence hunting and barefoot running. (Don't worry - I'm not going to tell you to run barefoot. Or to hunt.)

Here's the idea. Some scientists now believe that humans went through a long period in their evolution where, without the gift of speed to outsprint their prey, they found a different way to hunt.

Humans, it turns out, can run for much longer, especially in hot temperatures, than most other animals. So these early hunters would isolate a weak animal from the herd and keep chasing it, wearing the prey down over the course of several miles until it collapsed. McDougall and the scientists who believe this point to it as evidence that we were, in fact, "born to run."

But what do you think those early humans wore when they ran these long distances? (Hint: Nike and Brooks wouldn't be around for another several million years.)

That's right: Nothing! At least, not on their feet. (Let's assume loincloths when we make pictures in our heads.) They ran barefoot, and over many years, humans evolved to run as well as possible with nothing between their caveman feet and the ground.

This is what the barefoot running movement is based on: the idea that even though we have all these fancy shoes, the way we should run is the way we're best suited to run, which happens to be barefoot.

## TheNew School

This way of thinking has led to a new ideal of how we should run, particularly of how our feet should strike the ground. Rather than striking the ground first with their heels, most people running without shoes have the natural tendency to land on their midfoot or even their forefoot.

Why? Because it hurts to land on your heel if there's nothing protecting it!
This is borne out by tests that show sharp increases in the force of the impact at the moment of a heelstrike, versus the comparatively smooth force increase that results from mid- or forefoot striking. You can see these graphs, along with simultaneous videos of the different footstrikes, at a site created by Harvard's Dr. Daniel Lieberman and his collaborators at the Harvard University Skeletal Biology Lab.

New-schoolers, then, tell us that we should run in this same manner, striking the ground with our forefoot and taking the shorter stride that is required for pain-free barefoot running. And it's not just barefooters who say this - the Pose method and ChiRunning both promote non-heelstrike methods of running, sharing other similarities as well.

## So you probably think 'lm going to tell you to run barefoot...

Well, I'm not. I'm not even going to tell you to run in barefoot-simulating shoes, like Vibram Five Fingers.

It's not that I think barefooting is bad. Far from it, I think running barefoot, or at least in minimalist shoes, is a good thing for most people to work into their training.

But for you, the anxious soon-to-be first-time marathoner, I think running barefoot or even in minimalist shoes introduces more risk than it's worth. When you've been running the same way for 20 or 30 or 60 years, your bones and muscles are used to it. To abruptly change that at the same time you're ramping up your mileage is asking for a stress fracture or other lower-leg injury. So unless you've already been running barefoot or in minimalist shoes for some time, I don't recommend it while you're trying to train for your first marathon.

But here's the kicker: You can still run like a barefooter without running barefoot or with Vibrams. True, the hardcore barefooters won't let you into their club (not that they would if you were wearing FiveFingers, either), but the effect on your form is similar.

How? Mainly by landing on your midfoot when you run. Or at the least, by taking smaller, quicker steps. And that's what I'm going to show you how to do next.

## A Simple Techniquefor Injury-Proofing Your Stride

As I said before, I dealt with injuries ALL the time when I was a new runner. From the time I trained for my first marathon (during which I got injured) to the time I ran my next, I suffered through four years of starts and stops due to injury. Mostly tibial stress fractures, but knee problems as well.

In my frustration, I tried all kinds of ways to prevent injuries. Icing, running on softer surfaces, abstaining from speedwork, taking walk breaks, taking anti-inflammatories, changing my shoes, stretching religiously before and after every workout, walking around on my heels, even shaving my lower legs so I could tape them (really). The list goes on. Some of it seemed to help a little, but none of it solved my problem.

Until I discovered the answer. I read a piece by running coach Jack Daniels, where he wrote that most of the world's best marathoners have a leg turnover rate of about 180 steps per minute.

What this does, as I discovered upon trying it, is force you to take shorter, lighter steps. Although there are more impacts, they're significantly smaller than they are with a normal stride. In addition, to step this quickly requires that your feet land directly underneath your body, which is exactly what you want, as opposed to landing on your heel with your foot way out in front of you, effectively slamming on the brakes with every step.

## How to Increase Your Turnover Rate

Next time you're running, do a quick test to figure out your own turnover rate: In a safe spot where you won't fall or get hit by a car (ideally on a treadmill), record how many times your feet land on the ground in 15 seconds. Multiply this number by four, and you've got your leg turnover per minute. (Note: You want to count impacts from both of your feet, not just one. If you prefer to count the number of impacts by just one foot, then double the figure you get after multiplying by 4.)

Well, what'd you come up with? If you've never consciously thought about this, then chances are you're way under 180. That's ok - so was I, and with a little practice, 180 steps per minute can become second nature. And you won't believe what it can do for your running and resistance to injury.

Here's how to get yourself running at 180 steps per minute:

1. Get on a treadmill.
2. Set it to a brisk but comfortable speed (running really slow is actually harder than fast with this).
3. Start running and line your steps up so that each time a second ticks, your third step impacts the ground.

For example, if your right foot lands when the clock shows one second ( $0: 01$ ), then it'll be "left" then "right" before your left foot lands exactly when the clock hits 0:02. Then "right", then "left" before your right foot hits on 0:03. And so on.

This is a lot easier than it sounds. Once you get into the rhythm, you'll find that it's pretty easy to keep it going (it just feels like you're a cartoon character and your legs are spinning like wheels, and you're wondering what other people must think).

Now you've got to condition it. All you need to do is keep running with this faster turnover rate until it feels natural, which I promise it eventually will.

If you normally run on a treadmill, this is no problem. You can stare at that clock for 15 or 20 minutes and just lock in every third step with each second on the clock, and you'll be used to it in no time at all. (Okay, maybe not "no time," but soon. Give it a few runs.) If you don't normally run on a treadmill, you have a problem - staring at your watch is a great way to get hit by a car or trip over your own feet.

What I recommend in this case is finding a song you can listen to that has a beat that matches up with your ideal 180 step-per-minute turnover. The one I listened to literally hundreds of times, and still go back to every now and then to recondition my turnover rate, is an instrumental rock song called Cliffs of Dover, by Eric Johnson. (I think it's about 178 BPM. Close enough.) It's a good song too, but listen to it on iTunes to make sure you don't hate it. Keep in mind that even running with music in your ears can be dangerous on some roads or trails, so use your judgment here.

Plenty of other songs will work; that just happens to be the one I used. Even slower songs will work, as long as you can take 2 or 3 steps in between each beat to get to around 180 per minute.

The clock-and-music stuff works well for me, but not everyone always runs with either of these two things. In that case, you can use the mental images of running on glass or eggshells, which causes you to take lighter, shorter, quicker steps. Another good one is to think of lifting your feet off the ground just enough for the earth to move underneath you. This will force you to take shorter steps, and the only way to keep up your running speed is to take more of them.

Once you've conditioned this so that you don't even have to think about it, you'll notice that running gets easier. You might lose a little speed while your body is adjusting to the new form, but after a while, you'll be able to run faster and farther than when you were taking big, lumbering steps and landing on your heel. And you might just notice that your injury problems melt away.

## EquipmentBasics

"How to Buy Running Junk: What You Need and What You Don't" could be a book in itself. In terms of shoes alone, there are so many options that buying a pair can be overwhelming. But since this book as is aimed at first-time marathoners who have already done some running, it's likely that you've already had a little experience buying shoes and other accessories.

Assuming that you have at least that minimal experience, I'll give only a cursory overview here, and recommend a few products that you might not have considered before. But for the details, head to your local running store and talk to someone in person.

## The Most Important Rule of Running Clothes

"Over the course of $\mathbf{2 6 . 2}$ miles, if anything can chafe, it will chafe."
Along these same lines is another favorite: Cotton is rotten.
That's right. You don't want anything made out of cotton, or anything that has a seam or tag that's going to rub your skin repeatedly while you run. Instead, it's best to buy dedicated running apparel (socks, shorts or pants, shirt, gloves, hat or headband) that's made of wicking fabric and has minimal exposed seams.

Obviously, you'll have plenty of time to take things out for a test run before race day, but when in doubt, choose smooth over rough.

## 60 Bucks for *\%\#ing Running Shirt?

Nice running stuff is expensive. Starting from scratch, you'd have no trouble dropping 500 bucks on running clothes and shoes for just a few outfits at a specialty running store.

Fortunately, you're not restricted to shopping at running stores. Stores like Wal Mart and Target carry technical running apparel that's surprisingly high-quality, and you can often get a decent running shirt for around 10 bucks. (I actually like the Champion brand shirts at Target.) And a lot of times, you can find more than you might expect at discount stores like Marshalls and TJ Maxx, for really cheap.

# No, it's not going to be quite as cool, or warm, or good at wicking as the latest and greatest thing that costs 50 dollars in the running store. But the difference is small, and if you're new enough that you don't yet know what you like (Sleeves or tank top? Loose or skin-tight?), going cheap is the way to try some different things without blowing your kid's college fund. 

So how do you know what you need, and what you should look for? Here are a few basics about the different equipment you might consider for your marathon training:

Shoes - Considering the issues surrounding minimalist shoes discussed earlier, I recommend a neutral running shoe (as opposed to a "stability shoe" that has posting in the sole to correct for overpronation), unless you have severe overpronation issues. If you buy one with a soft, cushy sole, be sure to pay attention to proper running form and not land too hard on your heel, even though the shoe will allow you to do so without pain.

Most good running stores will analyze your stride with video and recommend a running shoe for you. But you should give a lot of consideration to what feels good to you. I was unable to successfully run a marathon without injury until I went against the running store's advice to wear a stability shoe, instead opting for a neutral shoe simply because it was the most comfortable and I was fed up with the injury problems I was having in stability shoes. Treat the video analysis and the advice of the running store as one opinion, but be aware that there are differing philosophies and you won't know which is right for you until you've experimented with different shoes.

I recommend starting your training with a relatively new pair of shoes, because again, you want to do everything possible to avoid injury during the mileage buildup. A pair of shoes is good for 300 to 500 miles, but a significant amount of the cushioning is lost in the first 50 miles you run in a new pair. For this reason, you should ideally get a new pair of shoes (the same model as what you've trained in) during the taper period before your marathon. Do a few easy runs and your final 10-miler in the new shoes, and then save them for the race.

If, for whatever reason, the shoes you start the program with aren't even close to new, they'll probably be worn out by the time you get to your longest training runs of 18 and 20 miles. In this case, at least get new shoes at this point in the training, and just wear that same pair for your marathon if you don't feel like shelling out money for a third pair before the race.

Shirts - Not too much to worry about here. You'll probably want a few long sleeve shirts and a few short sleeve shirts. Reflective is good. If you'll be running in extreme cold, the skin-tight undershirts really do a good job of keeping you warm. Watch out though - if two miles into a 12-miler you realize you're way too hot, that's a pretty tough layer to shed.

Socks - The obvious issue with running socks is avoiding blisters. Socks are one thing I don't recommend skimping on, and a good pair of socks for 12 or 14 dollars is well worth it. I personally like Balega socks. If you have trouble with blisters caused by your toes rubbing together, check out Injinji socks, which separate the toes to avoid this issue.

Shorts - The most important things that I look for in shorts are the liner and the pockets. With the liner, you just want to make sure there aren't any seams that could cause painful chafing, and that it's made out of a high-quality wicking material. Almost all shorts have at least a small inside pocket, but a larger pocket with a zipper comes in handy. For race day, consider shorts that have mesh pockets all around them so that you can carry whatever you need. RaceReady is one brand that has lots of pockets, but there are plenty of others.

Running Bra - According to my wife, who used to manage a running store, most women are in the wrong size running bra or one that is not supportive enough. She recommends visiting a specialty running store to be fit by the experts. Fitting and support issues aside, it's absolutely essential that the bra is made from wicking material, to prevent chafing.

Compression Socks, Sleeves, and Tights - The idea behind compression clothing is that it improves bloodflow, thus preventing pooling in the lower legs and feet, for improved performance. While I can't say that I run any faster with compression gear, I do notice a significant increase in comfort in my feet and legs towards the end of long runs when I wear compression socks. I'd recommend compression socks (or "sleeves," which are essentially socks without feet that are worn on your calves), but I haven't noticed any benefit to wearing compression shorts. CEP is the highest-quality brand I've tried.

Hydration Systems - If you'll be doing your long runs in a place without access to a car or another "home base" where you can get water and food, you'll need to carry it with you. There are a few options here.

A hydration vest, like Camelbak or Nathan brand, is worn on your back and has a long straw to drink from, often with a bite valve. These can hold more water than bottles, many up to 80 ounces, and they're surprisingly comfortable to wear, even for long periods of time.

Handheld bottles are popular among ultrarunners and those who run trails, where aid stations are generally spaced far apart and there's a need to carry water to drink in between them. Handheld bottles usually have a velcro or other type of strap that makes them easy to carry. They often have pockets that are handy for carrying a small amount of food or a car key. The problem with handhelds is that they don't hold much water, so they only work for short-ish runs, or runs where there are opportunities to refill.

Waist-worn bottles are the other option. Fuel Belt systems of four or more bottles worn around the waist are popular, though I find the bouncing of the bottles to be terribly annoying. Other systems exist for securing a single, large bottle to your back just above the waist; these seem to minimize bouncing.

Anti-Chafe Lubricant and Anti-Blister Powder - For me, this is a must. Chafing in the wrong spot can make a long run a miserable experience, as you're bound to learn at least once. (Just wait until the shower afterward!) Once you feel it, you'll know where you need to apply anti-chafe lubricant. I use Blister Shield roll-on all the time. (In a pinch, you can use Band-Aids to prevent chafing in some places.)

Blister Shield also makes a powder that goes in your socks for preventing blisters. I've found it to be very effective, so if you struggle with blisters on your feet, it's worth a try.

Road ID - Road ID is simply a convenient way to carry your identification and emergency information, by putting it on a bracelet or anklet to be worn while you run. A piece of paper or an ID card might serve the same purpose, but besides the inconvenience of carrying something else, there's the risk of sweat or rain making the writing illegible or the rescuer having difficult locating your information. Not too terribly exciting, I know, but it sure keeps loved ones happy.

Watch - While I suppose it's possible to be a runner without owning a running watch, you'll probably want one if you plan on doing any sort of speedwork or even tempo runs, since you'll want to track your progress. The main reason is so that you can quickly start and stop the watch at different intervals and save the information so that you can review it later to record your workout.

For starters, though, especially those who don't plan on doing interval workouts, a simple stopwatch can suffice.

GPS - Technology has gotten to the point that a GPS device can fit inside a slightly-oversized watch. For runners who don't mind paying for it, it's a great way to get accurate distance and pace data. Some GPS devices report elevation change data, latitude/longitude, and can even give directions for following a running route that someone else uploaded to the web.

Heartrate Monitor - Though it's not something that's necessary to train for your first marathon, heart rate training is a great way to learn about your body and how it feels in different training zones. It also makes training more interesting because you have another, more precise form of feedback (How "easy" should an easy run be, for example). Polar is a trusted heartrate monitor brand.

## What to Do When You're No Running

In the process of training for a marathon, you're going to be running a lot (duh). Probably more than at any other time in your life. And that means you'll want to make the most of your time between runs, getting plenty of food, rest, and sleep in order to recover properly before your next run.

Which begs the question: Should you even do any cross-training?
Some say don't bother. "Look at the Kenyans," they say. "They're the ones winning marathons, and all they do is run."

That argument doesn't work for me. Even if it's true that elite runners don't do much cross-training, what's best for the body of an elite runner isn't necessarily what's best for you and me.

Elite runners can handle 100+ mile training weeks. Beginning runners and even many experienced runners can't. For elite runners, it might be the case that spending an extra hour running each week pays more dividends than spending that hour in the gym or in the pool.

For the rest of us, especially new runners, our weekly mileage limit is reached before the available time we have for training is exhausted. So even though we can't run any more without risking injury, it's possible that we can do some other activity to improve our fitness that doesn't put us at risk for injury.

If running performance is your goal, then running should be the number one priority. If you find you have extra time and energy for some cross-training, though, go for it.

If you're going to cross-train, the best day for it in this plan is the day after your long run. If you'd like to do more than one day of cross training each week, I'd suggest doing it on the same days as your Interval, Hill, and Tempo workouts, a few hours before you run. If your cross-training is not intense, you can get away with doing it immediately before the run; just make sure your run is not negatively impacted by it.

## Recommented Types of Cros-Training

There are two resistance-training programs that I've done during marathon training or ultra training that I can say from experience are effective for maintaining total-body fitness (and possibly helpful for running), yet light enough that they won't take away from your recovery.

The first is the Core Performance series. My favorite is the Core Performance Endurance program, which is built specifically to go along with training for endurance sports. The program requires a set of rubber bands you can buy for less than 20 bucks. Or if you have a gym membership, that works too.

Core Performance Essentials is similar, with slightly easier exercises and quicker workouts. A pair of adjustable dumbbells and a stability ball are required for some of the exercises.

The other program I really like is 7 Weeks to 100 Pushups. The author, Steve Spiers, is an excellent runner - he's even won a marathon - and claims that pushups, done correctly, work far more muscles than just the chest. This includes the glutes and calves, as well as more upper body muscle groups, and Steve says that pushups make him a better runner. I recommend the 100 Pushups program as a great way to maintain overall fitness in only about 5 or 10 minutes a day, three times a week.

There are plenty more good options out there. Among the ones I like and recommend:
$\downarrow$ Swimming

- Cycling
- Elliptical machines
$\uparrow$ Rowing machines
$\downarrow$ Body weight exercises and plyometrics
$\star$ Weight training with light weight and high repetitions


## Non-Recommented Typeso O Cros-Training

When I trained for my first marathon, part of my motivation came from my desire to lose fat. I was really into lifting weights and packing on muscle, but with that bulk came some fat that I wanted to get rid of.

Not knowing anything about marathon training at the time, I continued lifting in the same manner I had been - squats, deadlifts, bench presses, and so on, all with weights so heavy that often I could only get one or two reps in a set. While this had worked great before, when I was getting all the rest and calories I needed in between gym days, it was completely wrong for marathon training.

Suddenly adding 20 to 30 miles of running a week into that program without scaling back the lifting was asking for disaster. And as I told you before, that was exactly the result.

I'm not saying heavy lifting doesn't have a place in a marathon or ultra training program. I'm saying it has no place in a first marathon training program. Big difference.

Besides heavy weightlifting (and by heavy, I mean weight you can't get more than about eight reps at a time with), the other types of cross-training I DON'T recommend for the purposes of this program are:
$\downarrow$ Sports where sprains or other sudden injuries are common
$\downarrow$ High-impact exercises or sports
$\uparrow$ High weight-bearing exercises

## Foam Rolling

For most marathoners-in-training, aches and pains are a fact of life. They accumulate over the weeks as you build mileage, and there's not much you can do to prevent them other than increasing your mileage extremely slowly and backing off whenever a minor ache pops up. While this approach is probably the
best way to avoid injury altogether, nobody wants to spend years training for their marathon.
This is where foam rolling can help. Rolling over a compressed piece of foam or tennis ball helps soften brittle muscles, so that they become more pliable, elastic, and resistant to injury.

Of course, those brittle muscles only happen to people who sit at desks for eight hours a day with less-than-ideal posture, commute another hour to work in the car, and don't devote plenty of time to stretching, yoga, and regular massages. Of course that's not you, so you have nothing to worry about, right?

Seriously, foam rolling can help just about anybody. A foam roll is like your own private deep-tissue masseuse who never gets tired and only costs 10 or 20 bucks, one time, and lives in your closet.

I won't lie - at first, it hurts. (So does a good massage though, right?) That's just a sign that you need it. And after a few sessions, it's incredibly gratifying to know that the reason you're starting to enjoy it is because your muscles are softening and you're becoming more injury-proof.

Here are several foam rolling exercises I recommend. For lots more, check out Core Performance Endurance or any other book in the Core Performance series.

Do them while you watch television. Do them after hard runs, on your off days, whenever you can fit them in. Just make sure you do them, at the very least once per week. It can make in incredible difference in how your body handles the stress of marathon training.

## Foam Roll Exercises

Here's a sampling of the foam roll (and tennis ball) exercises I do about once per week, while watching television. Most of these exercises target knee and shin pain. I learned them from Core Performance Endurance, which includes routines for all different types of pain. Knee and shin just happen to be my pains of choice.

By the way, I use a GoFit foam roll. I got it at Target for around 20 bucks. But it's just compressed foam, so you might be able to find or make one for cheaper. Some running stores carry them as well.

For foam roll exercises, roll back and forth for 30 seconds to a minute. For tennis ball exercises, find pressure points and keep as much weight as possible on the ball for one minute.

If you find it painful at first, you should ease into it, doing only as much as is reasonably comfortable. It should become much less painful after a few sessions.

Quads - Cross your legs so that most of the weight is on one leg. After rolling on one leg for 30 seconds or so, switch to the other and roll for another 30 seconds. If this is too painful at first, roll on both legs simultaneously.


Iliotibial band - Lie on your side and place the tennis ball in a sensitive spot on the outside of your leg near your hip joint. After about 30 seconds, move the ball farther down your leg. Switch legs and repeat.


Hamstrings - Cross your legs so that most of the weight is on one leg. After rolling for 30 seconds to a minute one leg, switch to the other and repeat.


Calves - Cross your legs so that most of the weight is on one leg. After rolling for 30 seconds to a minute on one leg, switch to the other and repeat.


Glutes - Find a sensitive spot and put as much weight as possible on the ball. After about a minute, find a new sensitive spot and repeat on as many spots as necessary. Switch to the other side and repeat.


Arch - Place the ball under your foot and, with as much weight as possible, move the ball back and forth 30 to 50 times. Repeat on other foot.


Front of shins - Keep as much weight as possible on the roll, not on your hands, while you roll back and forth for 30 seconds.


Side of shins - Roll by alternately bringing your knees to your chest and extending your legs. Roll for 30 seconds and repeat on other side.


Tensor fasciae latae (TFL) - Extend one leg out to side for support. On the other leg, target the very top of your quadriceps near your hip, just outside the center of your leg. Spend about 30 seconds rolling on each side. Don't skip this one; improper firing of the TFL muscle can cause iliotibial band syndrome and knee pain!


Knee - Lie on the floor and place the ball just above your knee on the inside of your leg. Roll it around to find a sensitive spot and hold for 30 seconds to a minute. Repeat on other knee.


Adductor - Lie mostly flat and place the roll under your thigh for about 30 seconds on each leg. To roll back and forth, you may need to lift yourself up with your arms a bit.


Happy rolling! Remember, once a week, minimum!

## Stretching

A previously heretical idea, and one that is finally gaining acceptance as statistical studies make it irrefutable, is the point that static stretching before a workout does nothing to prevent injury or improve performance. Worse, it may actually increase the likelihood of injury, due to fatiguing the muscle prior to a workout.

What defines "static" stretching? Simply the fact that you're at rest while you do it. This is the type of stretching most of us did before gym class, and that you see many runners do before they start moving.

If there's a place for static stretching in a marathon training program, it's after your run. Static stretching can be used to improve flexibility, and the best time to do it is after your muscles are warm, generally immediately following a run.

For the most part, the only kind of stretching that's worthwhile as a pre-workout ritual is of the dynamic variety, where some sort of movement accompanies the stretch. Before a speed workout, tempo run, hill training session, or weight training session, it's beneficial to perform movements that simultaneously raise your core temperature and activate muscles.

Rather than try to give written descriptions of dynamic stretches here that'll be hard to follow and end up getting you hurt, I'll simply refer you to an excellent RunnersWorld.com video describing a short dynamic stretching routine.

For lots more dynamic stretches and warmups, check out the "Movement Prep" exercises favored in the Core Performance program.

## Running Safety

I know, safety is boring. But it's likely that in training for your first marathon or half-marathon you'll be doing a lot more running than you ever have before, so it doesn't hurt to be aware of basic running safety practices.

Carry some ID: If you have pockets or one of those nifty key pouches that attaches to your shoelaces, carry a card with basic "in case of emergency" information on it. Name, contacts, allergies and anything else someone who finds you on the side of the road might need to know. Road ID is a convenient way to wear your important information on your wrist or ankle.

Keep the volume low: Not training volume, but music volume. The danger of listening to music while you run on the roads is obviously the risk of not hearing approaching traffic. On the trails or woodsy roads, the danger is that a branch will fall on you (it actually happens). So whichever type of running you do, if you're going to wear headphones, just make sure you can hear the rest of the world too.

Run against the traffic: Not all drivers are going to see you, so you need to make sure you see them. Run on the side of the road that faces the oncoming traffic, rather than having the cars on your side pass you from behind.

Wear reflective gear or a light: If you run anywhere or anytime there's not a lot of light, wear something that makes you obnoxiously bright and shiny. A reflective vest, reflective tape, or reflective clothing all work well, but best would be a headlamp with a "flash" mode. I know it's dorky, but dorky is better than dead.

Run with a friend: As often as you can, run with a buddy. It makes you less of a target in bad areas, makes you more visible to cars, is helpful in an emergency, and makes you less likely to go crazy.

Consider pepper spray: If you're running in a bad area or are afraid of being attacked by an animal on a trail or the neighbor's insane dog, carrying a small can of pepper spray isn't paranoid, it's smart.

Know your route: If you know where you're going, you're less likely to get lost or find yourself in desperate need of food or water when there's none within five miles. Drive the route first, or at the very least, map it out using Gmaps Pedometer.

Carry a spare energy gel or two: I don't like them either, since they taste gross and make me want to gag. But there have been times when I was glad I had one with me. Since you never know when something might unexpectedly go wrong, it doesn't hurt to have an emergency gel on you just in case.

## Dealing with Injury

Nagging aches and pains that accumulate throughout marathon training are the norm for most runners. By the time race day comes, I'd be surprised if $75 \%$ of runners didn't have some injury they were worried about, and the anxiety leading up to the big day tends to magnify anything that might be concerning you.

If you follow the guidelines in this book regarding running form (especially turnover rate) and mileage, and spend a lot of time foam rolling, you'll minimize your susceptibility to these injuries.
But let's be honest - you're training to run 26.2 miles for the first time. It's entirely possible that something will go wrong, and in that case, you need to know what to do when it does.

It's beyond the scope of this book to diagnose injuries based on what you're feeling. If you're into selfdiagnosis, check out a site like the Virtual Sports Injury Clinic. But really, the best advice I can give you is to go to a doctor, preferably one who specializes in sports medicine. I know, going to the doctor sucks, but doing it early might make the difference between being able to run your race and having to shut it down because you let your injury go untreated for too long.

## Donit Tryt Run Trough Pain

If something starts to hurt during your training, running through the pain isn't going to do any good.
The nature of the training for a marathon is that the mileage load increases - in other words, it's only going to become more intense, at least until the final few weeks. So while you might be able to get through this run, or this week, or this month on a busted leg, if you don't address the issue the mileage will eventually become too much to handle. And then you'll risk serious, long-term damage by trying to tough it out. Don't be tough, be smart.
(And by the way, managing the pain with anti-inflammatories or any other drugs isn't a solution. For the most part, they'll only mask the symptoms, which will eventually lead to worsening of the injury your body is feeling pain for a reason, and you should take it as a sign to back off a bit.)

## What toDof IYou Fel Painon a Run

If you notice that something doesn't feel right during a run and it persists, stop when you can. If the pain is sharp, stop immediately, even if it means calling someone to pick you up.

Assuming the pain is dull and it doesn't hurt you just to walk around, take a day off and see if the pain is still there the next time you try to run. Sometimes these things have a way of working themselves out. (If it's a long run or a hard workout that's up next, you might want to think about skipping it and reworking your schedule.)

If it hurts again, it's time to do something about it.

## Take Time Off

This is why I strongly believe that a training program, when you set it up, should be flexible.
Personally, I'd start by taking a week off of running. Even if the injury doesn't require it, the fact that you got hurt is a sign that your body needs a break. If you simply must be active or you'll go nuts, do some cross-training that doesn't cause you any pain. But really, focus on rest above all else. During this week, see a doctor or otherwise figure out what might be going on.

Note: If you've already had to miss significant time due to an injury during this marathon training program, you might start to think about scrapping this race, giving yourself the chance to heal completely and to build a stronger mileage base before choosing another race. While the program is built to be flexible, and it's feasible that you could shuffle it around and not miss too much mileage while you're recovering, persistent injury is a sign that something's not right.

## Ireating Your Iniury

If you take my advice and go to a doctor, ideally one who practices sports medicine, then listen to what she tells you. She'll likely give you some stretches or other exercises you can do, along with some advice about when you should try running again and how intensely. (Stretching, when done as part of a rehabilitation program and not immediately before a workout, can be beneficial and doesn't have the drawback of fatiguing the muscle prior to exercising it.)

In case you still haven't gone to a doctor, here's the general procedure I use to handle minor injuries.

1. Reduce training load for a week. This means adding to the number of complete rest days, where you allow your body to heal your injury, rather than having to use energy for exercise and rebuilding non-injured muscles.
2. During this time, focus on stretching (preferably dynamic), foam rolling, and icing your injury.
3. As you increase your training load again, replace some running with similar cross-training: stationary bike, elliptical machine, etc.
4. When it doesn't hurt to run anymore, resume (modified) training plan with extra stretching, foam rolling, and icing. Pay attention to injury and back off on workouts as needed until injury is completely healed.

## Why You Should Join a Running Group

If you're at all new to running in your area, joining a group will introduce you to new places to run, as well as new people to run with and share running stories with at happy hour. I discovered my local group last year and joined for
something like 20 bucks a year, for the whole family. Chances are there's a similar group near you that puts on a small race every weekend (free for members) and conducts speed workouts, long distance runs, and trail runs, and provides members with special discounts at the local running store. If there is, paying 20 dollars a year for all that is a no-brainer.

Road Runners Clubs of America offers a fantastic tool for finding a running club near you. So take a minute to find one, then get out of your shell and discover that you're not the only running freak in your neighborhood. You won't regret it!

## Running for a Cause

Want to make your whole marathon experience more powerful? Run for a cause.

If you've ever been to a big race or even just hung around a busy running trail on a Saturday, you've no doubt seen people in purple TNT (Team In Training) shirts. TNT is the Leukemia and Lymphoma Society's training team that helps people run marathons, half marathons and more, providing coaching, organized runs, and tons of support from fellow team members. As a condition for being on the team, participants raise funds to help fight cancer. I've never done TNT, but I know several coaches and participants who are very passionate about it.

There are other causes with organized training groups, so if you have a particular charity in mind, it's worth a look to see if they have one. But even if the cause you'd like to run for doesn't have a training group, try approaching them about it to see if they can provide you with any resources. You never know.

Something to beware of if you're going to raise money for a cause: Make sure your fundraising gets done. Sadly, it's not uncommon for people to bail on the race because they haven't reached their fundraising goals, and the last thing you need when training for your first long race is another reason to quit on it.

## Section 2 Additional Resources

Core Performance Endurance by Mark Verstegen - This book changed the way I train, including lowering my volume and helping me become more injury-proof. There's a big focus on strengthening stabilizer muscles to improve form, proper warmup and "prehab," and foam rolling and regeneration.

Core Performance Essentials by Mark Verstegen - A streamlined version of the standard Core Performance program that can be done in half an hour a day. Great as an introduction to resistance training that accompanies your running schedule.

CorePerformance.com - Lots of free content, including stretches and workouts, plus additional paid membership options.

Thrive Fitness by Brendan Brazier - The follow up to Thrive, which focused on vegan nutrition for sports and everyday life, Thrive Fitness focuses more on training, along with fueling before, during, and after workouts. Provides another good plan for incorporating resistance training into an endurance program.

Daniels' Running Formula by Jack Daniels, PhD. - An excellent introduction to "serious" running. Includes in-depth discussions of different types of training and paces, plus training programs for races of many distances up to the marathon. While the training is a bit intense for a first marathon, DRF is a treasure trove of running information for when you're ready to step it up.

Run Less, Run Faster by Bill Pierce, Scott Murr, and Ray Moss - The training program I used (a modified version of) to qualify for Boston and run my fastest marathon to date. The basic aim is to reduce training volume by eliminating slow, recovery runs and replacing them with cross training. I incorporated some easy running into the program I used to BQ, but I found the three main workouts each week to be extremely effective. A good program for those who want to be told exactly what to do for their workouts and pacing, specific down to the second.

Marathon by Jeff Galloway - Incorporates Galloway's famous run/walk method that has helped so many runners complete injury-free marathons.

## Section 3 The Diet

## Why vegetarian?

For some people, the "why" is easy: They choose not to eat meat, or perhaps any animal products, for ethical and environmental reasons. They're going to be vegetarian or vegan no matter what, and everything else will be done in that context, marathon training included.

If this describes you, be proud, and feel free to skip the beginning of this section describing the benefits of a plant-based diet (or keep reading if you just want some ammo for when someone tells you that your diet will adversely affect your training).

But what if compassion isn't the driving force in how you decide what to eat? What if your main concern is health? Or more specifically, what if it's athletic performance and endurance? What does a vegetarian diet have to offer the would-be marathoner?

## Performance Bencefis of a Vegetarian Diet

From talking to several professional endurance athletes who choose a vegetarian diet and in my own experience, it appears there are three main benefits to endurance athletes of eating a vegetarian or vegan diet.

## 1. Weight loss and changein body composition

Make no mistake: This book is not about weight loss, and going vegetarian and running a marathon are not necessarily the best or fastest ways to lose weight. This book is about running your first marathon as a vegetarian, and doing whatever it takes to accomplish that most effectively.

And it's in that context that I'll talk about weight loss: Over the course of 26.2 miles, every ounce counts. Competitive distance runners choose certain shoes because they weigh an ounce or two less than another pair, because when you're taking 40,000 steps to finish a race, you bet every little bit makes a difference.

So if an ounce matters, what about a pound? What about five, ten, or twenty pounds?
The difference is significant. The rule of thumb (which of course will vary depending on a lot of factors) is two seconds per mile per pound. If you're not up for doing math today, you can just think of that as a minute off your marathon for each pound lost.

Just as important, perhaps even more so for our purposes, less weight means less stress on your body with each step, and lower chance of injury.

When you eat vegetarian, you eat in a way that's much closer to the way human beings have evolved to eat than the standard Western diet is. I'm not saying the human body isn't meant to eat meat - that's an entirely different argument that's beyond the scope of this book. What I am saying is that when you stop eating meat, it becomes harder to eat so much that you can't move. It becomes harder to eat 50 grams of fat in a single meal, two or more times a day. And as your diet shifts to one that's very high in raw fruits and vegetables and low in processed and packaged food, your diet gets a lot closer to the diet your body is built to survive on.

The result? When you add to this the fact that you're putting in a lot of miles and moving like you're meant to move, your body composition and size move towards what they're "supposed" to be. (For most people, this means weight loss.) Not overnight, and not as the goal, but as a pretty nifty bonus.

This was one of the biggest factors in my qualifying for Boston six months after I went vegetarian. I thought of myself as a pretty fit, slender guy beforehand, but when I cleaned up my diet, I lost five pounds within a week or two. This worried me at first, but my weight stabilized at this new level.

Over the course of my training program, I lost another five pounds due to the mileage, and on race day, I arrived at the starting line at my lightest-ever racing weight. Since I had actually gained (not lost) strength, the result was my fastest marathon ever and the Boston-qualification I'd been chasing for eight years.

## 2. Recovery

When I talk to pro vegetarian athletes about the benefits this diet offers for sports, there's one they cite every time, without fail: speed of recovery.

Why should plants help you recover faster than meat? The answer lies in the ease of digestion and assimilation of plant foods, especially when they're consumed raw or only lightly cooked.

Brendan Brazier, in his vegan nutrition guide Thrive, coined the term "high net gain" to describe these foods that provide large amounts of nutrients per calorie, and at a low cost of digestion. In other words, when you eat high net gain foods, like fruits and vegetables, nuts, legumes, and seeds, your body gets a lot of nutrition for only a little work. This means it can spend less energy on digestion and more on repairing muscles to get you out on the roads again.

## 3. Variety indiet

I was guilty of it, and I'll bet that at some point in your life, you have been too.
You know how it went: Before you were vegetarian, when you were cooking dinner, you'd center it around the protein, let's say a skinless grilled chicken breast or maybe a lean cut of beef. Then you'd add a starchy, complex carbohydrate, maybe a baked potato, some brown rice, or in a pinch, a whole wheat
roll. And while you knew you should include a vegetable, that third dish was the one that just didn't make it onto the plate. Repeat five times and allow yourself some extra slack on the weekends, and you've got your diet during the week.

To most people, this seems like a pretty healthy diet. And it's better than most people's, for sure. The problem? This diet probably incorporates only about a dozen foods. In the produce section alone of most grocery stores, there are ten times this many interesting and delicious foods, all sources of different vitamins and nutrients.

So many people look at going vegetarian as giving something up. The way to look at it is to focus on all that you'll be adding. When your meals no longer revolve around the big piece of protein in the middle of the plate, you're forced (or should I say freed?) to expand the variety of foods you eat. And with that, you dramatically increase the amount of vitamins, minerals, and nutrients you provide your body from whole food sources.

## How to Go Vegedarian

There are two main schools of thought about how to go about creating change. You can do it gradually, or you can do it cold turkey. (Or in our case, cold tofurkey.)

I'm all for creating massive, instant change. There's tremendous motivational power in throwing out the pack of cigarettes rather than waiting until it's finished to quit, or deciding not that you're going to run a 5 K , but that you're going to run a freaking marathon.

But this is one time where I think slow and steady wins the race. I've seen too many people fail at all-atonce attempts to go from fast-food-lover to raw vegan health nut. Sure it's exciting to think about that big change and to plan it, but it hardly ever lasts.

I have a friend, for example, who saw the impact that going vegetarian had on my running, and decided he was going to go vegan in order to become a better cyclist. Excited that I had inspired a close friend to change his diet, I encouraged him and offered to help any way I could.

After a few days, I called my friend to see how it was going. He reported that he actually had less energy than before. I told him to stick with it, and that he'd feel great pretty soon.

When I checked in with him a few days later, he was off the vegan diet. Even worse, he had been on a McDonald's kick, swinging into the drive-through to get a pair of burgers after work for several days in a row!

What happened? While my friend had been inspired to create a massive change, his body wasn't ready for it. When you're used to eating one way for years and all of a sudden you make a drastic change, it's likely that your body is going to fight you to stay the same.

The way I went vegetarian, and a method that I think maximizes your chances of not just making the change but making it last, involves gradually reducing the number of legs of the animals you eat.

## The "Less Legs" Approach to Going Vegetarian

What do I mean by "less legs"?
It's a three-step process:

1. If you currently eat beef, pork, and other four-legged animals, then that's what you cut out first. Eat chicken instead of steak, choose turkey bacon instead of regular bacon, and replace any other fourlegged meat with poultry, or fish if you're feeling really saucy. But four legs to two legs is the key change here. (I'd recommend at least a week here, and much more if you need it. I spent almost a year at the two-legged stage before I stopped eating chicken.)
2. Once you've stopped eating beef, pork, and anything else that walks around on all fours, then go less than two legs. If you can find a one-legged animal, have a field day, but mainly, all that's left is fish (zero legs). You'll probably find it weird to eat fish at every meal, and I'm sure with mercury issues that wouldn't be healthy anyway. So use the opportunity to introduce lots of vegetarian meals.
3. By this point, having eaten mainly fish and vegetables for several days or weeks, you should be noticing some major improvements in how you feel and the amount of energy you have. (For me, the biggest change was in how I felt after lunch and dinner, when I used to be bloated and tired.) If you're not feeling better, or possibly even worse than before, check to make sure one of the common deficiencies some new vegetarians deal with isn't to blame.

If you were to stop here, you'd have an extremely healthy diet, as long as you were careful about choosing fish without high levels of mercury. As someone who bought an e-book about running a marathon as a vegetarian, though, you probably aren't satisfied with this pescetarian diet.

In that case, start phasing out the fish. One way to do this is simply to stop preparing fish at home, but allowing yourself to eat it when out at restaurants. Go a few weeks or months this way, and you'll have no problem when you're ready to stop eating fish altogether. (In fact, you might not even notice when you do. I don't remember the last piece of fish I ate, because I didn't realize at the time that it was my last - it was just part of phasing it out.)

In making this change, it's helpful to treat it like any other goal, sort of like what we did when we wrote things down about the marathon at the beginning of the book. See a No Meat Athlete post called $\underline{7}$ Steps to Eating Less Meat Now for a few concrete steps you can take.

## Mark Bittman's "Vegan Until 6" Approach

Another method of reducing the amount of meat you consume, made popular by NY Times food columnist and chef Mark Bittman, in his book Food Matters, is eating "vegan until 6"each day.

This simply means that until 6 p.m. each day, you eat a vegan diet, and after that, you eat whatever you want, meat included if you wish. It works well because it's pretty easy for most people to remove the animal products from their breakfasts, lunches, and snacks, but it's a bit harder to take the meat out of that hearty, comforting dinner that so many people are accustomed to.

For example: Make a smoothie for breakfast, eat some fruit and nuts as a snack before lunch, have a massive salad with nuts, hemp seeds, avocado, or some beans or bread to boost the calorie content at lunch, and then just go crazy with whatever you want at dinner.

You'll want to go further with it, eventually skipping the meat at dinner, but "vegan until 6" is a good transition step for lots of soon-to-be vegetarians or vegans.

## Congaratulations, Youre Now a Vegedarian!

Or maybe you're not quite there yet, given that you've just finished reading about how to do it. As I've said before, doing things (not just reading about them) is the only way to actually make something happen. So I'll assume for now on that you're in the process of transitioning to a vegetarian diet, if you're not there already.

If you're like I was, you might find that in the absence of meat, you're relying a lot on cheese, pasta, and other foods that, though technically vegetarian, don't have a big role in an ultra-healthy diet. That's okay.

For now, the important thing is that you've succeeded in breaking a long-standing pattern of building your meals around meat. As you get used to eating this way and start branching out, you'll find plenty of opportunities to try new foods. And as you do, you can decide whether you want to go the no-dairy, low-gluten route that many vegetarian endurance athletes do, the diet that I outline in the next section.

But until you're ready to take it to the next level, enjoy whatever foods make you happy and will keep you on track. You're a vegetarian, and you should be proud.

Karol Gajda, RidiculouslyExtraordinary.com:
The best advice I have for new veg*ns is don't immediately seek out meat substitutes. Besides the fact that you might be disappointed, they're not particularly healthy. A better idea, and something that worked well for me, is to head to the produce aisle
 at your grocery store and try something, anything, you haven't tried before. Do that each time you go shopping and pretty quickly your cooking skills and your taste buds will prosper. Even if you're not a good cook, it's amazing what happens when you don't tell yourself that. I was never a good cook, but now I'm convinced I can make anything, and I can make anything taste good. It's a fun/tasty process. These days my diet consists largely of basic foods. Lots of brown rice, quinoa, beans, broccoli, tomatoes, mushrooms, spinach, peppers, and fruits. Once you stop eating junk (which includes meat substitutes) your taste buds open up and foods you may not have liked before taste different, better.

## Nutritional Guidelines

As you get used to being vegetarian, eat whatever you need to in order to stick with it. I don't recommend going ultra-healthy right away, unless that's the food that you find most appealing anyway.

But once the transition period is over and you're comfortable as a vegetarian or vegan, you'll want to clean up your diet to maximize the nutrients available to fuel your body during training, and to minimize your intake of foods that lead to excess fat storage, digestive inefficiency, and inflammation.

I try to avoid having a bunch of rules to follow for in my diet. Rules and numbers are just so far from the way I think we should approach food that I don't see a place for them (even in a program designed to get you to run so far that people question your sanity).

So what I'll suggest are seven "guidelines" I suggest you adapt during your marathon training period, with occasional bending of the rules for the really important things in your life. (I promise, a huge plate of white pasta at a fancy Italian restaurant on your anniversary with the person you love isn't going to make you drop dead at Mile 19.)

## 1. Make raw fruits and vegetables a large part of your diet.

Why raw? Because raw fruits and vegetables contain nutrients and enzymes that are destroyed under high temperatures.

I'm not saying you need to get a dehydrator and become a raw foodie. If that's your thing, great, but don't get hung up on it if it's not. Just eat foods that are commonly eaten raw (almost all fruits, lettuces and other salad greens, and any other vegetable you'd normally eat on a salad), but eat more of them. When possible, work raw ingredients into your cooked meals to get even more raw nutrition, but it's totally fine if you still want to cook most of your food.

## 2. Takeit tessy on the wheat products.

I realize that you might have no desire to stop eating bread and wheat pasta. And that's fine. But so many food products in our culture are now based on wheat that it's very easy for it to show up in every single meal you eat if you don't pay attention! To me, relying so heavily on a single food just doesn't make much sense, even before you consider the reasons many top athletes now cite for avoiding wheat.

People have varying levels of sensitivity to wheat. For some people, gluten is tremendously difficult and inefficient to digest. For others, the sensitivity isn't so severe that it's recognized as a problem, but wheat nevertheless may be adversely affecting their energy levels. Problems associated with gluten occur even with $100 \%$ whole wheat products, not just refined wheat flour, which most athletes avoid anyway, except at certain key times around workouts.

The good news is that there are now plenty of good alternatives to wheat products, especially when it comes to pasta, the runners' staple. My favorite is spelt pasta, but there are lots of other varieties, made from rice, quinoa, and even chickpea flour.

Many modern elite endurance athletes, non-vegetarians included, are tending toward gluten-free diets and seeing performance benefits as a result of less inflammation in their bodies. Your priorities are probably different from an elite athlete's, since your livelihood doesn't depend on the quality of food that you put in your body - that's nothing to be ashamed of. Let your own preferences determine how closely you follow these guidelines and how often you allow yourself to enjoy the foods you're used to eating.

My suggestion: Don't cut out wheat completely, but limit it to one meal a day instead of three or four, or ideally to just a few meals a week, like most other foods.

## 3. Make sure that the remaining grains you eat are unrefined.

There's an old saying Italian that goes something like, "The whiter your bread, the sooner you'll be dead." Since we're avoiding most wheat, we're going a step beyond that, but we can apply the same logic to other grains.

The main idea here is that we have evolved over millions of years, before technology became as advanced as it now is, to eat foods in their unrefined state. (Paleo-dieters use a similar argument to justify the avoidance of all grains.)

When we strip away the fibrous outside of grains (which includes much of the nutrient content) and leave behind only the "white" part, it becomes very easy to eat a large amount of a food that is devoid of anything useful. By instead eating only minimally processed, "brown" rice and other grains, we ensure that what we are eating is both nutritious and fibrous, so that it makes us feel full and provides nutrients that our bodies can use.
(Note that the phrase "multigrain" doesn't mean much when applied to bread or pasta, since all that means is that more than one grain was used, and often these grains are refined. Check the label to ensure that whole grains are used.)

## 4. Include one good source of protein at each meal or snack. Get most of your protein from seeds, nuts, and legumes.

Lots of people make a big deal about protein for vegetarians, and it's certainly something to pay attention to. But I've found that the easiest, least stressful way to make sure you're getting enough is simply to include one decent protein source in nearly every meal or snack you eat. Some will provide a lot of protein, others just a little, but including at least something protein-rich at each meal ensures your meals don't all turn into carbohydrate bombs.

Nuts provide healthy fats along with their protein, while legumes provide complex carbohydrates in addition to their protein content. These are where I get most of my protein, along with hemp protein powder and very occasional soy products like tofu and tempeh.

## 5. Cet the bencifis of fealthy fats from cold-pressed ois and nuus.

The idea that all fat is bad is leftover from the 80 's and early 90 's, when fat was wrongly blamed for America's growing waistlines. While people still argue over whether saturated fat is inherently bad (I don't believe that it is), most will agree that unsaturated fats are beneficial.

Fats, of course, contain more calories per gram than protein or carbohydrate (fat has 9 calories per gram; protein and carbohydrate have 4), and that's one reason why fats still are not a big part of many weight-loss diets, logical or not. But when you're running the amount that is required for marathon training, calories are your friend, and fat is a prime source of fuel for many elite endurance athletes.

Oils that are not heated during processing are best. When cooking with oils and heating them to high temperatures, choose those with high smoke points, such as coconut and grapeseed oil. Save your extravirgin olive oil for salads or low-to-medium temperature cooking. Flaxseed oil and hempseed oil, both of which are great ways to add extra quality fats and omega-3's to your smoothies, should never be heated and should be stored in the refrigerator; heat causes these oils to break down and destroys their beneficial properties.

## 6. Avoid highly processed foods, except possibly during or immediately after exercise.

I'm not breaking any new ground with the advice not to eat processed foods. Here I'm referring to the highly synthetic foods you'll find lining most of the shelves of the grocery store.

The rationale is similar to that given for avoiding refined grains, which are a form of processed, even if not quite synthetic, food. Our bodies have evolved for millions of years to thrive on the foods that are found in nature. When we use technology to construct "food" out of a bunch of stuff that might have come from food but really doesn't resemble food anymore (corn syrup, for example), we're creating something that our bodies aren't built to handle.

For example, the fibrous kernel of corn serves to fill you up, as a signal that you've eaten the amount that is beneficial. When, instead, we extract the syrup from many ears of corn and produce a few teaspoons of corn syrup and use it as part of a new "food," we're messing with the balance that has developed over millions of years between our bodies and our environment.

The exception, for athletes, is in the post-exercise recovery window. During these crucial few minutes immediately following intense exercise, your muscles are primed to replenish their glycogen stores and kickstart the recovery process. This appears to be one time when processed food, or anything that's densely packed with readily available nutrients (primarily carbohydrate) is beneficial. It's helpful to think of this is "earning" that big hunk of white bread, bowl of white rice, or sugary recovery drink by completing a hard workout.

## 7. Eat as much as you feel like eating, as long as you're eating within these guidelines.

The training period for your first marathon is not the time to restrict calories. Marathon training is enough of an endeavor by itself, without the secondary goal of weight loss. You may experience weight loss as a consequence of your training volume, but it shouldn't be the goal. (Nor is marathon training necessarily the ideal way to lose weight.)

When you're eating high-quality, high-energy food that hasn't been overly processed, it's hard to overeat. You become satiated quickly, because your body turns off the hunger signal once it recognizes that you've given it exactly what it needs.

So as you train for your first marathon, let yourself have seconds when you want them. You might find that you lose weight anyway, due to all the running, or due to the vegetarian diet (if you've been a meateater up to this point). Still, it's possible you'll find that your weight stays the same or even increases by a few pounds. If that happens, don't worry about it - it's very likely that's it just a response to the stress of marathon training. Trust that as you eat well and exercise, your body will eventually move toward its optimal weight. (And of course, there's also a chance the added pounds are muscle or even water weight.)

## Staple Foods

The list below represents some common foods that will help you meet the caloric and nutrient requirements of marathon training. Certainly there are many more foods one could include; the idea here is to list those that can be found in common grocery stores and whose tastes aren't too foreign.

This list should also give you some guidance in searching for recipes besides those that are included in this book. There are countless websites that offer free vegetarian and vegan recipes; simply scan the ingredients of a recipe and make sure that the bulk of the calories come from foods on this list. If a few don't, no problem! Enjoying your food is a huge part of sticking with a healthy diet and making it a lifestyle.

You'll see that all of the preferred foods are vegan. Dairy and eggs can be included for convenience in a non-vegan diet but are by no means necessary for recovery or performance.

## Preferred Foods

$\downarrow$ All vegetables, cooked and raw, especially leafy greens

- All fruits, usually raw
$\downarrow$ Beans and legumes: My favorites are lentils (red, brown, green), chickpeas, black beans, pinto beans, adzuki beans, and white beans
$\downarrow$ Starchy vegetables like potatoes and sweet potatoes
$\downarrow$ Brown rice
$\downarrow$ Whole-grain bread, pasta, pitas, and bagels (wheat limited; try alternatives made with other grains or sprouted wheat)
$\downarrow$ Other grains and seeds: bulgur, spelt, buckwheat, farro, millet, quinoa, flaxseed, hempseed, chia seeds, pumpkin seeds
$\downarrow$ Nuts, nut milks, nut butters: almonds, cashews, walnuts, almond milk, hazelnut milk, peanut butter, almond butter, sunflower seed butter
$\uparrow$ Coconut milk
- Oils: grapeseed, olive, coconut, peanut, flaxseed (unheated), hemp (unheated)
$\downarrow$ Protein powder (hemp protein is a minimally-processed type that I prefer, though it's relatively low in protein compared to other powders)
$\downarrow$ Herbal tea


## Other Foods, Limited

- Whole wheat products
$\downarrow$ Soy products: tofu, tempeh
$\rightarrow$ Seitan
$\downarrow$ Tea and coffee
- Agave nectar (as workout fuel, not an all-purpose sweetener)
$\uparrow$ Honey (non-vegan)
$\downarrow$ Cheese (non-vegan)
$\downarrow$ Eggs (non-vegan)


## A Sample Grocery List

One of the most popular parts of the free e-course I offer on my website is "The Vegetarian Athlete's Grocery List." I've included that list here for your use:
$\downarrow$ Fruit: Apples, Oranges, Bananas, Pineapples, Mixed Frozen Berries (for smoothies), Lemons, Limes, Tomatoes, Avocados

- Vegetables: Romaine Lettuce, Spinach, Broccoli, Kale, Celery, Cucumbers, Bell Peppers, Jalapeno Peppers, Onions, Carrots, Garlic, Basil, Parsley, Cilantro
$\downarrow$ Starchy Vegetables: Potatoes, Sweet Potatoes
$\downarrow$ Legumes: Lentils, Chickpeas, Black Beans, White Beans, Pinto Beans
$\downarrow$ Non-Wheat Grains: Brown Rice, Quinoa (not technically a grain), Granola, Spelt Pasta
* Wheat Products (limited): Whole Wheat Bread, Pasta, Pitas, Bagels, and Wraps
- Breakfast Cereals: Post Grape Nuts (packed with carbohydrates), Kashi
- Nuts and Seeds: Almonds, Cashews, Walnuts, Flaxseeds
$\star$ Spreads and Pastes: Hummus, Nut Butters (almond is great, but expensive), Tahini (sesame seed paste), Baba Ganoush
$\downarrow$ Oils: Olive Oil, Grapeseed Oil, Toasted Sesame Oil, Flaxseed Oil, Coconut Oil (solid at room temperature, often in the health food aisle)
- Vinegars: Apple Cider Vinegar, Balsamic Vinegar
$\star$ Protein powder: Hemp, Rice (found in health store)
- Soy Products (limited): Tofu, Tempeh, Soy Sauce or Bragg's Amino Acids


## $\downarrow$ Tea and Coffee (limited)

$\downarrow$ Other Snacks (limited): Tortilla Chips, Salsa, Popcorn

- Miscellaneous: Almond Milk, Coconut Milk, Agave Nectar (as workout fuel, not an all-purpose sweetener), Honey (not technically vegan)

And if you're non-vegan, you can add:
$\uparrow$ Eggs (limited)

- Milk, Yogurt, Cheese (limited)


## Cadoric Breakdown

I don't recommend counting calories (or even carbohydrate-protein-fat ratios) when you eat, unless you deal with some health issue that makes it necessary. This is partly because so many different philosophies have been shown to work for endurance training. If you aim to eat a variety of whole foods (and always focus on expanding that variety!), then most likely you'll get everything you need without ever having to think about numbers.

Some people, however, will find a "numbers" approach useful, and in that case I suggest shooting for a rough caloric breakdown of:

- 65\% carbohydrate
$\downarrow 13 \%$ protein
- $22 \%$ fat

These numbers are typical for an endurance training diet, but as mentioned above, many types of diets, including the Paleo diet and Fruitarianism (also called 80/10/10), appear to work well for endurance sports. The fact that we're approaching endurance nutrition from a vegetarian angle doesn't need to change whatever mix of nutrients you believe is optimal; it simply adds a constraint to the options you have available in trying to get that mix.

Keep in mind that even if it is your goal to achieve this breakdown, you shouldn't stress yourself out by trying to hit these exact numbers every day. One day you might get more than this much protein; another day you might get less. I'd suggest keeping a food log for a week, totaling up your end-of-week percentages, and making adjustments the next week if necessary. The surest way to fail on a diet is to feel like you have to eat certain things at certain times - trust me, I've tried, and it never lasts.

If you decide to do any calculations for your own diet, keep in mind that these percentages reflect proportions of total calories, not grams. Protein and carbohydrate contain 4 calories per gram; fat contains 9 , so take this into account.

## Where Do You Gee Your Protein?

If you've been vegetarian for any amount of time, you've no doubt had to answer this question a few times by now, especially as an athlete. If not, get ready for it.

The fact is that protein is not as big a deal as non-vegetarians make it out to be. But you still need to be aware of it, mainly because without a big piece of meat on your plate twice a day, it's pretty easy as a vegetarian to slip into a rut where you're filling up on carbohydrates and little else.

As I mentioned in the nutrition guidelines, the strategy that has worked well for me is making sure to include some decent source of protein at almost every meal and snack.

So what's a "decent" source of protein? Mainly I'm thinking of beans, grains, nuts, and protein powder, but here's a longer list of top vegan protein sources. (If you're not vegan, then milk, eggs, and whey protein powder make getting enough protein almost a non-issue.)
$\uparrow$ Tempeh ( 30 g in one cup)
$\downarrow$ Tofu ( 16 g in one-half pound)
$\uparrow$ Lentils ( 18 g in one cup, cooked)
$\downarrow$ Soybeans (29g in one cup, cooked)
$\downarrow$ Other beans, like chickpeas, black beans, kidney beans (12-16g in one cup, cooked)
$\downarrow$ Quinoa, spelt, and other seeds and grains (Protein content varies, usually around 5 g in one cup, cooked)
$\downarrow$ Seitan (31g in 3 ounces)
$\uparrow$ Nuts ( $5-8 \mathrm{~g}$ per quarter cup)
$\downarrow$ Nut butters (5-7g in two tablespoons)
$\downarrow$ Hemp protein powder ( 15 g in four tablespoons)
$\downarrow$ Rice protein powder (12g in one heaping tablespoon)
$\uparrow$ Spinach (5g in one cup, cooked)
$\downarrow$ Broccoli (4g in one cup, cooked)
See the Vegetarian Resource Group's list of vegan protein foods for more.

## Quick Tips for Saving Time in the Kitchen

- Make a double serving of each meal you cook so that you can have leftovers the next day. Lunch is a time when many vegetarians opt for snack food or junk that, while vegetarian, contributes little or nothing of value, so leftovers eliminate this problem. The sample meal plan assumes you will do this.
$\uparrow$ Learn the quickest ways to chop vegetables - if you've never thought about it, you're probably not doing it as fast as you could be.
- Keep a garbage bowl nearby to eliminate trips to the trashcan
- Prep certain ingredients while others cook, if you can.
$\uparrow$ Prepare foods during the weekend that you can quickly grab during the week. For example, chop lots of salad ingredients (this is also much cheaper than buying pre-made salads) and then mix them to create different salads throughout the week. You can do the same with rice or other grains - make a large batch on the weekends that you can use in several dinners during the week.


## Smoothie and Salad: The Anchors of Your Day

Make a habit of having a smoothie and a big salad every day. Both act as "anchors" in your daily routine, one in the morning and one in the afternoon, that ensure you get high-quality nutrition from mostly-raw ingredients at two different times during the day. Both are also useful as vehicles for superfoods and healthy ingredients like oils, nuts, greens, and any supplements you take that might otherwise be hard to work into meals.

Honestly, if you were to eat both a smoothie and a huge salad every single day, and then whatever you wanted the rest of the time, I think you'd have a tough time being unhealthy. Sure, I suppose you could eat potato chips all day long between your salad and smoothie, but the catch here is that I don't think you'd feel like eating potato chips after starting your day with a smoothie and then following it up with a loaded salad in the early afternoon.

## The Only Smoothie Recipe Youll Ever Need

## "Give a man a smoothie recipe and he'll be healthy for a day; teach a man the Perfect Smoothie Formula and he'll be healthy for a lifetime."

Since nearly everyone has a blender, I suspect that the reason most people don't make smoothies consistently is that it's overwhelming. There are too many possible ingredients, and too many variables to tweak to get the proportions just right. And if someone should stumble upon a good recipe, they end up making it so often that they get sick of it and never drink it again.

Over the past few years, I've had a smoothie almost every single day. I've constantly tweaked it, experimented with new ingredients, and kept track of what worked and what didn't.

What follows is my version of the smoothie genome project. It's a formula you can follow to create nearly endless variations. And the best part is that the uncertainty has been taken out of it for you. You'll need to experiment with different flavor combinations, of course, but the guesswork about proportions has largely been removed.

The recipe below specifies general amounts and types of ingredients (like " 2 tablespoons binder") and then below, you are given a menu of several recommended ingredients of each type from which to choose to make your smoothie.

## The Perfect Smoothie Formula

(makes 2 smoothies)

- 1 soft fruit
$\downarrow 2$ small handfuls frozen or fresh fruit
- 2-4 tablespoons protein powder
- 2 tablespoons binder
- 1.5 tablespoons oil
$\uparrow 1.5$ cups liquid (adjust amount as needed to change consistency)
$\downarrow 1$ tablespoon sweetener (optional, less or more as needed)
- optional superfoods, greens, and other ingredients
- 6 ice cubes (omit if soft fruit is frozen)

Select one or more ingredients of each type below and add to blender in specified proportions. Blend until smooth.

## Recommended Soft Fruits

- Banana
- Avocado
(If you have a high-speed blender that can puree, say, a whole apple or carrot without leaving any chunks behind, then the puree of almost any fruit or vegetable can act as your soft fruit.)


## Recommended Frozen or Fresh Fruits

$\star$ Strawberries (you can leave the greens on if you have a powerful blender)

- Blueberries
$\downarrow$ Blackberries
- Raspberries
$\downarrow$ Peaches
$\downarrow$ Mango
$\downarrow$ Pineapple


## Recommended Protein Powders

$\rightarrow$ Hemp
$\uparrow$ Sprouted brown rice (tastes chalkier than hemp, but packs more protein per dollar)
$\downarrow$ Pea
(Soy and whey are higher-protein, generally cheaper options, but for a variety of reasons I don't recommend either for long-term use.)

## Recommended Binders

$\uparrow$ Ground flaxseed
$\downarrow$ Almond butter or any nut butter
$\star$ Soaked raw almonds (soak for several hours and rinse before using)
$\uparrow$ Rolled oats, whole or ground
$\downarrow$ Udo's Wholesome Fast Food

## Recommended Oils

- Flaxseed oil
$\uparrow$ Udo's Blend or other EFA blend
$\downarrow$ Hemp oil
- Coconut oil
$\downarrow$ Almond, macadamia, or other nut oil


## Recommended Liquids (unsweetened)

- Water (my favorite)
$\downarrow$ Almond milk or other nut milk
- Hemp milk
$\downarrow$ Brewed tea


## Recommended Sweeteners

- Honey (non-vegan)
- Agave nectar (high in fructose, so choose this only before workouts)
- Stevia (sugar-free natural sweetener, the amount needed will vary by brand)


## Optional Superfoods, Greens and Other Ingredients

- Cacao nibs (1-2 tablespoons)
$\downarrow$ Carob chips (1-2 tablespoons)
$\downarrow$ Ground organic cinnamon (1-2 teaspoons)
$\downarrow$ Chia seeds, whole or ground (1-2 tablespoons)
$\downarrow$ Greens powder (1-2 teaspoons)
- Whole spinach leaves (1-2 handfuls)
$\downarrow$ Jalapeno pepper, seeds and stem removed (one small pepper)
$\uparrow$ Ground cayenne pepper (small pinch)
- Sea salt (pinch)
$\downarrow$ Lemon or lime juice (1 tablespoon)
There's plenty here to get you started. But you certainly don't have to stay within these guidelines if you determine that you want more or less of a certain ingredient, or more than one ingredient from each category. (For example, almond butter and ground flaxseed are both in the "binder" category, but I sometimes include both in my smoothie.)

Also, note that which ingredients you use from one category often dictate how much you need from another. So for example, if you're using avocado instead of banana as your soft fruit, you'll need more sweetener than you would with the banana, and you'll probably want to go light on other fatty ingredients, since avocado provides plenty of good fats.

So be creative, and don't worry if at first you like more of the sweet ingredients and not so much of the healthier ones. Over time as you eat less and less processed and sugary foods, your tastes will change and you'll actually crave the healthy stuff.

## Salads

If the smoothie serves to anchor your morning and get your day started with loads of quality ingredients, then the salad serves that same purpose in the afternoon.

The key to eating salad consistently is to change up the ingredients often and to make sure that it's convenient (see the above tip about chopping all the ingredients on the weekend).

A few suggestions for ingredients, to keep your salad "fresh":

- Romaine lettuce
$\star$ Spinach (large spinach leaves are often much cheaper than baby spinach)
- Arugula
$\star$ Bell pepper
$\uparrow$ Celery
- Cucumber
$\downarrow$ Shredded Carrot
- Avocado (a ripe avocado should slightly dent when you press it with your thumb)
- Tomato
$\downarrow$ Sprouts
$\downarrow$ Hemp seeds
- Walnuts
- Toasted or raw pumpkin seeds
$\downarrow$ Sliced almonds
- Sunflower seeds
$\downarrow$ Soy nuts
$\downarrow$ Dulse powder or flakes (a type of seaweed)
- Nutritional yeast (usually fortified with Vitamin B12)
$\downarrow$ Dried berries
$\downarrow$ Fresh fruit

For the dressing, try to get used to a simple combination of oil and vinegar, or ideally, oil and lemon juice. I like extra virgin olive oil, but if you can tolerate flaxseed oil, hemp oil, or Omega 3-6-9 blends on your salad, by all means choose those instead. Other oils, such as nut oils, provide some nice variety of flavor, as well as different essential fatty acid profiles.

As for the acid, lemon or lime juice are ideal. Try it for a few days; I'd be willing to bet the fresh flavor will grow on you. If you prefer vinegar, then balsamic and apple cider vinegar are the best vinegars in terms of minimizing acidity in the body.

I finish my salads with a large pinch of mineral-rich sea salt - much better to choose salt in its natural state than manufactured with a very high sodium chloride percentage and under high temperatures, like most of the table salt people consume.

Give the oil-acid-salt dressing a try; you might find that it grows on you and you gain a new appreciation for salad as a result. If you really must use a store-bought dressing, look for one with few ingredients, a healthy oil as the fat source, and low sugar content.

## Two-Week Sample Meal Plan.

A two week sample meal plan and recipes are included with this guide in a separate file. I recommend following the plan for two weeks, and then adapting it to include other recipes and to adjust portion sizes as required for your particular body and where you are in your training.

Tips for Semi-Raw Lifestyle Success from Gena Hamshaw, ChoosingRaw.com:
When I began exploring the "raw" (sometimes labeled RAW) lifestyle a few years ago, I didn't have many models of an approach to eating raw that were moderate. It seemed to me that all raw guidebooks and cookbooks suggested ways to ultimately transition from cooked to raw. Even if they advocated a slow transition, the ultimate goal was still to end up "high" raw, which is typically defined as 70\% or higher.


As time went on, I realized that what works best for me - and what has allowed me to maintain a very high level of raw eating for three years now - was not to strap myself into a strict percentage, but rather to think of my life as "semi-raw." In truth, I often eat 70\% or more raw each day, and by most mainstream definitions, I'm a high-raw foodist. But I also enjoy very generous amounts of cooked food, and I feel no sense of compromise or guilt when I do. Thinking of
my diet as semi-raw seems more apt to me than "high" raw, which suggests (I think) an imperative to eat more raw than cooked. Instead, my goal is to always eat a lot of raw food, and to experiment with raw recipes, but not to preference raw food over cooked. I am a vegan no matter what; I enjoy raw foods because I love the way they make me feel. But I don't believe, as some raw foods lovers do, that eating cooked food is necessarily less nourishing than eating raw.

This flexible and open-minded approach is at the heart of why raw foods have endured for me, and why they remain such a positive and fun part of my diet. The other key to my success as a raw foods lover - if we deign to use such a loaded word as "success" - is the fact that I use my kitchen time practically. The biggest pitfall I see new raw converts facing is the temptation to follow only the most complex of raw recipes. They spend hours upon hours dehydrating, soaking, and sprouting, and then they wonder why the raw lifestyle is too "highmaintenance" for them to sustain.

My advice as a raw foods coach is always this: make your simple food raw, and your complex food cooked. The foods you'll want to always eat raw are your veggie side dishes, your salads, your simple soups, and your dressings, dips, and spreads. The foods you shouldn't bother dehydrating or eating raw are the complex ones: bean dishes (because sprouting is a pain), breads, pizzas, and so on. Not only will these dishes set you back in terms of time, but they may also contribute to weight gain; many of them are heavier and more caloric in raw form than in cooked (compare, for instance, a heavy, nut-based bread to a simple, sprouted grain bread that has been gently cooked).

Generally, I tend to eat the following raw or mostly raw:

## - Salads

- Soups
- Dressings
- Dips


## - Spreads

And the following cooked:

- Grains
- Legumes
$\rightarrow$ Breads
- Pizzas
$\checkmark$ Stews

I also make it a point not to use my dehydrator often, and when I do, it's for the simple stuff: fruit leathers, nut burgers (a complex raw entree that I nevertheless enjoy), warm veggies.

And for the record, I think that lightly steaming vegetables is as healthy as dehydrating them.

I hope that these simple directives give you some insight into how a love of raw eating can be manageable, and fit into the context of a busy life. Loving raw food is not a choice that demands overhauling your kitchen or lifestyle: you simply need to find ways to eat raw that fit into the existing patterns of your tastes and habits. Good luck, and bon appetit!

Caitlin Boyle, author of Operation Beautiful, marathoner, blogger at HealthyTippingPoint.com:
I love being a No Meat Athlete! I ran both of my marathons (Disneyland Spinx Fest) as a vegetarian and think that a plant-based diet gave me the energy to finish feeling strong. I stuck to the usual peanut butter sandwich before long runs, but I got really creative with post-run meals. One of my favorite things to do was make a big casserole in advance and gnaw on leftovers when I got home. Here is my favorite vegetarian casserole!


Ingredients:

- 1/2 cup red onion, chopped
- 1 tablespoon garlic
- 1/2 tablespoon EVOO
$\uparrow$ Pinch of salt
- 1/2 tablespoon chili powder
- 1/2 tablespoon pepper
$\uparrow$ 1/2 can red beans, rinsed and drained
$\rightarrow 1 / 2$ can kidney beans, rinsed and drained
- 3/4 cup milk (or vegan milk alternative)
$\uparrow 1$ and $1 / 2$ cup brown rice, cooked
- 2 eggs, beaten (or vegan egg replacer)
$\uparrow 1$ and 1/2 cup cheddar cheese, shredded (or vegan cheddar)
- 1/2 large green pepper, chopped


## Preparation:

$\downarrow$ Heat oven to 350 degrees and spray a casserole dish with EVOO spray.
$\uparrow$ In a skillet, cook the onion, garlic, and EVOO on Medium High until tender. Add the salt and chili powder.
$\uparrow$ In a large mixing bowl, mix together the pepper, milk, beans, COOKED brown rice, eggs, cheddar cheese, and green pepper.
$\downarrow$ Pour mixture into casserole dish and sprinkle with extra pepper.
-Bake casserole for 25 minutes or until center is firm.
$\downarrow$ Let cool 5 minutes and serve.

- Enjoy!


## Nutrition Concerns for Vegetarians

Most people I talk to who have recently stopped eating meat excitedly tell me how amazing they feel. They have more energy, they're more resistant to injury, and all sorts of other great things occur, from their skin clearing up to their mental clarity improving. In the cases where people go back to eating meat, it's rarely related to how they feel and more often due simply to food preference.

But every once in a while, someone emails me to ask why they're feeling so weak and sluggish, or even why their hair is falling out ever since they stopped eating meat. (This might sound horrifying, but it's actually a not-uncommon symptom of two primary deficiencies new vegetarians should be aware of.)

If something doesn't feel right when you change your diet, the best thing to do is talk to your doctor. He or she can help you, with blood tests if needed, to figure out what's going on and what you need to do to be healthy.

But for general reference, I've included here a little bit of information about the most common deficiencies that occur in vegetarians and vegans.

Please note that these are not the only possible deficiencies of a vegetarian or vegan diet. If you don't feel right, talk to your doctor about it.

## Protein Deficiency

Most omnivores make a bigger deal about protein when they argue with vegetarians than it really merits. In fact, I've been successful with endurance training on a vegetarian diet without ever monitoring protein intake, and instead simply making sure to include one good source of protein at every meal.

But none of this is to say you should completely blow off the protein issue and not even think about it. Figure out, one time, an exact amount to shoot for (10-15 percent of your daily calories in protein seems right for most people) and just get a picture in your head of what amount of nuts, beans, and other protein sources it takes for you to meet that requirement.

At the very least, be aware of the symptoms of protein deficiency, so that you can recognize them in yourself. You might try increasing your protein intake if:
$\uparrow$ You're really sleepy when you shouldn't be.

- You're weak when you try to run, lift, or do other strenuous exercise.
- You've lost a significant amount of muscle mass. This is because your body takes protein from muscles if there's not enough available. (Keep in mind that some muscle loss may just be the result of more running without a corresponding increase in caloric intake.)
$\star$ You don't recover from workouts quickly or you get injured frequently. Vegan endurance athletes very often report faster recovery as a primary advantage, so if you're experiencing the opposite, it's likely that something's missing.
$\downarrow$ Your hair is falling out or your nails are brittle.


## Iron Deficiency

The symptoms of iron deficiency are similar to those of protein deficiency, and many people who suspect they're not getting enough protein actually need more iron. WebMD.com lists fatigue and weakness, as well as headache, dizziness, difficulty concentrating, and shortness of breath as possible symptoms of iron deficiency. (It also points out that mild iron deficiency may exhibit no symptoms at all.)

Vegan Registered Dietitian Matt Ruscigno, in his interview that accompanies this guide, mentions an interesting fact regarding iron deficiency: Vegetarians are actually more likely than vegans to become deficient in iron. Why? Because while iron is found in most every plant to some extent, dairy products are relatively low in iron. And since some vegetarians consume a large amount of dairy, all else held equal they consume fewer fruits and vegetables than vegans do, hence getting less iron.

If you suspect iron deficiency and you're not getting enough from whole-food sources like iron-rich grains, beans, and greens, Ruscigno recommends consuming foods that are fortified with iron.

Men in particular should be aware that it is possible to have too much iron in your blood, so the general recommendation for men who want to take a multivitamin is to choose one without iron. Women are at lower risk of having too much iron.

Some good vegetarian sources of iron include:
$\downarrow$ Beans (soybeans and lentils, especially)
$\downarrow$ Pumpkin seeds

- Blackstrap molasses
- Spinach


## B12 Deficiercy

Vitamin B12 is found almost exclusively in animal products, so vegans are at risk for Vitamin B12 deficiency. (Vegetarians who consume dairy generally get enough B12 that way.) For new vegans, B12 deficiency may take months or years to develop, since the body can store enough B12 to last for long periods of time.

According to livestrong.com, symptoms of Vitamin B12 deficiency include numbness and tingling and digestive upset.

Vegans should get Vitamin B12 from a multivitamin or fortified foods to avoid becoming deficient.

## Eating for Your Workouts

Of all the meals you'll eat during your training, those surrounding your workouts are by far the most crucial to your success, particularly as they affect your ability to recover in time for the next workout. Fortunately, the precepts of optimal workout nutrition are completely consistent with vegetarian nutrition. In fact, one of the arguments for vegetarianism as an ideal diet for endurance sports is that during a workout, almost everyone is vegetarian anyway!

The following guidelines governing pre-, during-, and post-exercise nutrition are based on a series of posts from my website, which I wrote after much research, culling information from several sports nutrition books including Chris Carmichael's Food for Fitness, Thrive, Core Performance Endurance, and The Paleo Diet for Athletes.

The information here has been updated to reflect what I've learned since writing those posts and to focus on what's most relevant to you, the first-time marathoner-in-training.

## Pre-Wortoon Nurtition

## 1. Consume carbohydrates and protein in a 3-to-1 ratio, and include healthy fat (but just a little).

There are few arguments about this point. The 3:1 ratio is almost universally advocated for optimal absorption of nutrients. For a big workout, or if you have some time to let your stomach settle, 30 grams of carbs and 10 grams of protein is great. Otherwise, halve the amounts. Mark Verstegen of Athletes Performance Institute recommends a scoop of protein powder in a half-glass of Gatorade or watereddown orange juice.

As for the fat, a teaspoon or so of healthy oil, such as flaxseed or Udo's blend, is all you need to help deliver nutrients where they need to go. Coconut oil is even better for workouts, as the liver treats it similarly to glucose, a carbohydrate.

## 2. Include quick-working, high-glycemic carbs for energy now, sustained release (but not starchy) carbs for energy later.

I first learned about this one by watching Brendan Brazier's promo video for Vega Sport. In many of his recipes for pre-workout drinks, Brendan uses dates (glucose) as the high-GI, instant-energy sugar, and agave nectar (fructose) for slower energy release.

Why no starchy bagels or bread? To convert starch into usable sugar requires your body to work, and during a workout you'd like to use your available energy for movement, not digestion. If you're going to consume something starchy, a sprouted version is best.

## 3. You need lots of electrolytes.

Lack of electrolytes can do more than just bring on a nasty bonk; in fact, it's downright dangerous. Hyponatremia is the condition of having too much water and not enough sodium (an electrolyte) in your system, and it has proved fatal for endurance athletes who load up on water but don't replace electrolytes that are lost during physical activity.

Lots of electrolytes are lost through sweat, and you should take in salt and other electrolytes during your workout to replace them. Coconut water contains electrolytes as do most sports drinks and gels, so you'll get electrolytes during your workout if you're consuming any of those things. But you can get a head start on electrolyte replacement simply by adding salt or dulse powder to your pre-workout drink.

## 4. Add optional superfoods to go the extra mile.

While the above guidelines should be enough to give your workout a boost, you can always make your pre-workout drinks even better with the addition of a few superfoods. Chia seeds are a popular one these days, and your body will absorb them in either whole or ground form (be prepared for them to gel in liquid though). Others include acai, goji, chlorella, greens powder, ground flaxseed, hemp... the list goes on.

## Nutrition During Your Run

## 1. Get off the commercial drinks and gels.

Or at least, check them out to make sure they don't contain artificial colors and sweeteners. While some sports drinks are truly designed for athletes, many of the more popular ones must also cater to the masses of non-athletes who buy them as soda alternatives. Much better to make your own natural sports drink and raw energy gel, both courtesy of pro vegan triathlete Brendan Brazier, in his book Thrive.

Important note: Your race will likely offer a single brand and type of sports drink and gel on the course. The race website will usually tell you which one they're offering, so it's a good idea to train with that exact brand at least a few times, to make sure your system handles it well. Alternatively, you can carry your own drink and/or gels during the race, or have your spectators hand them to you.

## 2. Consume mostly liquid or easily-digesting food like gel.

Solid food takes more energy and blood to digest than liquid, leaving you with less for running. And it's more likely to cause intestinal distress, which can ruin a workout or race.

## 3. For all workouts, take in $\mathbf{4}$ to $\mathbf{6}$ ounces of water every $\mathbf{1 0}$ to $\mathbf{2 0}$ minutes.

Your goal is to replace most of what you lose in weight, so if you want to get precise, you can figure out what you lose during a standard workout and drink the exact amount you need to replace it. Or just chill out and follow a rule of thumb like this one.

## 4. Get 500 milligrams of sodium with every 16 ounces you drink.

As mentioned above, when you sweat you lose electrolytes, and that puts you at risk for hyponatremia if you hydrate without replacing them. For those of you making your own drinks and gels, 500 milligrams is about the amount in a quarter teaspoon of salt (dependent on the type of salt you use).

## 5. For workouts and races lasting over an hour, you need 30-60 grams of carbohydrate per hour.

30-60 grams is a commonly cited figure, but it's a big range. More useful might be to divide your body weight in pounds by 4 to get a minimum hourly carbohydrate requirement, in grams. Accomplish this with a sports drink or a combination of energy gel and water. Some claim that a little bit of protein, in a 4:1 carb-to-protein ratio, helps minimize muscle damage.

## Post-Wortout Natrition

## 1. Respect the fuel window.

In the 15-45 minutes immediately following a workout, your muscles are primed to receive fuel to start the repair process. Eat (or drink) your recovery meal right away, within the first half hour after the workout is complete.

## 2. Make it easy to digest.

Your muscles need blood to deliver nutrients to them. The more of that blood that's tied up in digesting a hot dog - sorry, any solid food - the less that gets to your muscles. Ideally, you should get your immediate post-workout fix in liquid form. Here's the first strike against chocolate milk, which has recently gotten a reputation in the mainstream fitness media as the perfect post-workout food - dairy is hard to digest and is acid-forming in the body.

## 3. Consume . 75 grams of carbohydrate per pound of bodyweight, and include protein in a 4:1 or 5:1 carb-to-protein ratio.

I'm not usually one for specific numbers around my food, but these are so common that I had to list them. Your carbohydrates should include high-glycemic index carbs, like glucose (dates are a good way to get it), and some slower-release, even fibrous, carbohydrates as well. And don't forget the fat include about half as many grams of healthy fat as you do protein. Flaxseed and hemp oils are my favorites in a smoothie.

## 4. Get out of the acid state with greens or other vegetables and fruits.

Intense exercise creates an acidic environment in your body. If you don't neutralize the acid with what you eat, your body will use the calcium from your bones and nitrogen from your muscle tissue to neutralize it. Greens, sprouted vegetables, and certain fruits like lemons and limes have a neutralizing effect on your body. (I know it's weird, but lemons and limes are considered alkaline, not acidic, in the body.) Strike 2 for chocolate milk, as animal protein is acid-forming. So are heavily-processed protein powders; I use minimally-processed hemp protein powder in most of my smoothies.

## 5. Drink 2 cups of water per pound of body weight lost during exercise.

Do I really expect you to weigh yourself after each workout and drink a corresponding amount of water to make up for it? Of course not. If you have access to an accurate scale, you can weigh yourself after a typical workout to get an idea of how much water you need. Easier, I think, is just to drink a few cups of water immediately after the workout, and more throughout the day until your urine is nearly clear.

## 6. Replace lost electrolytes.

Hopefully you've done this before and during your workout, but you'll want to take in electrolytes once more to help with recovery. Some good sources of electrolytes are fruit, coconut water, dulse flakes, a few pinches of sea salt, and Nuun tablets.

And remember: Recovery doesn't stop with your post-workout meal; you'll want to eat again an hour or two later, this time focusing more on quality protein. After you long runs, you'll probably find that you get hungry frequently throughout the day. Indulge that hunger, and don't forget the foam rolling and ice baths!

You should construct your own pre-, during-, and post-workout drinks using the above guidelines, starting with water or coconut water as the base and adding lemon and lime juice, coconut oil, agave nectar, and salt in the desired quantities. If you don't feel like creating your own recipes, you'll find links to several workout drinks on the Running Fuel page on No Meat Athlete.

Alternatively, you can buy premade drinks and mixes that meet most of these guidelines. You'll have much more success finding what you need online or at a running store or Vitamin Shoppe than at 7Eleven. My favorite brand of natural sports nutrition products is Brendan Brazier's Vega line; see the Resources section of this chapter for the specific products I recommend.

## Section 3 Additional Resources

Thrive by Brendan Brazier - This vegan sports nutrition manual written by a professional vegan Ironman triathlete is considered by many, myself included, to be the best available book on vegan nutrition for endurance sports. Tons of information about energy, stress, and recovery, and of course, plenty of recipes for eating throughout the day and around training. (See the interview with Brendan Brazier that came with this guide.)

Vegan Bodybuilding and Fitness by Robert Cheeke - I've included Robert's book in this section, rather than in the training section, because the information about vegan nutrition and supplements makes the book useful to more than just those interested bodybuilding. Sample meal plans and the focus on protein that bodybuilders need makes you realize that as endurance athletes, we have it easy! The best part of the book, though, in my opinion, is Robert's enthusiasm and passion for his lifestyle and sport that you can't help but have rub off on you.

Clean Food by Terry Walters - Simple, seasonal, recipes that are mostly quick and always delicious. The amazing thing is that this book was marketed as a healthy, whole-food cookbook, without any mention of the fact that the recipes are vegan and, for the most part, gluten-free. If there's a perfect cookbook for vegan endurance athletes who happen to be gourmands, this is it.

Clean Start by Terry Walters - The follow up to Clean Food, with 100 more vegan, seasonal, whole-food recipes.

Jai Seed by Julie Piatt and Rich Roll - Rich Roll is a vegan athlete who has placed highly in several Ultraman World Championships. (Ultraman is essentially a double Ironman triathlon, spread over three days.) Jai Seed is Rich's e-cookbook; it focuses on whole foods, many of them raw or nearly raw. Most of the recipes are very quick and family-friendly, relying on a high-powered blender (or at least a food processor) to do most of the prep work.

Appetite for Reduction by Isa Chandra Moscowitz, with Matt Ruscigno - Most every vegetarian or vegan knows about Veganomicon, the cookbook from the Post Punk Kitchen that rocked the vegetarian world with plant-based versions of dishes most of us thought we'd never eat again. Appetite for Reduction is Isa's next effort, with quick, stripped down recipes designed for nutrition with Matt Ruscigno, the vegan Registered Dietitian whose interview accompanies this guide.

The Paleo Diet for Athletes by Loren Cordain and Joe Friel - If "Paleo" seems to contradict "vegetarian," well, it does. The only way for vegetarians to follow the Paleo diet is with some serious modifications. The reason I include this book here isn't the diet itself, but rather the sections concerning pre-, during-, and post-workout nutrition, which comprise some of the most complete and best information I've read on the topic. (And this part, at least, doesn't depend on eating animal products.)

Chris Carmichael's Food for Fitness: Eat Right to Train Right - Chris Carmichael was Lance Armstrong's coach for many of Lance's Tour de France victories, so you could say he knows a thing or two about nutrition for endurance sports. While this book isn't specifically for vegetarians, there's no reason a vegetarian or vegan diet couldn't fit within the guidelines Carmichael lays out. This book is a good introduction to serious training, and for many will be the first they've learned about the concept of periodization.

1000 Vegan Recipes by Robin Robertson - Exactly what it sounds like. Most of the recipes are extremely simple and quick, and the salad section alone is worth the price of the entire book.

Fuel Your Run the Tarahumara Way - An e-cookbook that I wrote with my sister, a vegan baker who knows how to make healthy stuff taste good. Our cookbook comprises 15 recipes based on pinole and chia, two staple foods eaten by the Tarahumara, the Mexican tribe of incredible ultrarunners featured in Born to Run.

No Meat Athlete Recipes page - The recipe index on my website. It's continually updated with new vegetarian and vegan recipes I post on the blog, many from just-released cookbooks that publishers allow me to share.

No Meat Athlete Running Fuel page - Links to recipes for natural sports drinks, energy bars, and other food for before, during, and after your workouts.

Vega Products - Brendan Brazier's line of vegan natural sports nutrition products that are, in my opinion, the best out there. I personally use Vega Sport Performance Optimizer as my standard sports drink, and Vega Sport Performance Protein and Vega Whole Food Health Optimizer for protein and meal-replacement shakes.

How to Sprout Beans and Seeds - A primer on sprouting, a simple way to enhance the nutrition of legumes, seeds, and grains.

## Section 4 The Race

## Race Day

There's a strange thing about race day. You know, going in, that you're going to run farther than you've ever run in your life. You're going to get to a point where it hurts - where you'll have to dig deeper than you've ever had to before, and even when all you want to do is sit down, you'll have to keep going if you want the day to be anything other than a big old failure.

And yet this is the day you'll look forward to more than any other. You'll be sort of terrified, thinking about every possible thing that could go wrong and worried about every tiny nick on your body that somehow flares up during the last few weeks of your training. But the anticipation will be so great you'll hardly be able to stand it.

Non-runners have a hard time grasping this idea. (Which, come to think of it, might be why they're non-runners.) My mom once said to me, a week or two before the Baltimore Marathon, "It must feel like there's this big, dark thing on the horizon that you know will eventually be here and that you can't avoid."

Nothing could have been further from the way I felt - I couldn't wait for the race to be here. For marathoners-in-training, the race is what it's all about.

## Getting Ready for Race Day

It's almost unfair how easy it is to screw up at this point. After you've put in hours of sweat, possibly some tears, maybe even a little blood during your six months of training, it's a real bummer when your race is a total bust because your stomach doesn't approve of what you put in it the night before. Or when you forget Band Aids for your nipples. Or when you spend the day prior walking around the entire San Diego Zoo...

The next few pages are here to help make sure you don't make any of those mistakes. We'll cover what to pack, how to eat, and a bunch more things you need to be aware of in the days leading up to the race.

## What to Pack in Your Suitcase

If your race is close to home and you'll be waking up in your own bed that morning, you don't need to worry about packing your suitcase. You'll be able to enjoy all the comfort of your own home as you prepare for and recover from the race. In that case you can probably skip this section, but be sure to read "What to Bring to the Race."

If, on the other hand, you're traveling to your marathon, you've got to pay attention when you pack your suitcase. Forget to pack your running shoes, for example, and you'll be dropping some bills and
running in a stiff new pair of shoes, assuming you even notice this before it's 4 a.m. and the race is in three hours.

So here's a checklist of items to consider packing along on your trip, in addition to whatever you'd normally pack:
$\star$ Running shoes

- Race outfit (shirt(s), shorts/pants, socks, sports bra)
$\uparrow$ Throwaway shirt (if it'll be cold when the race starts, but you don't expect to need extra layers the whole time)
$\downarrow$ Disposable poncho
$\downarrow$ A jacket, sweatpants, and anything else to keep warm before the start that you can hand off to someone (a garbage bag works and has the added advantage of being a portable privacy stall if you need to pee and the line is too long, which it will be)
$\downarrow$ Hat or headband
- Gloves
- Any compression gear, braces, or straps that you wear
- Watch
$\downarrow i \operatorname{iPod}$ (check the race rules to make sure it's allowed)
- Sunglasses
$\uparrow$ Sunscreen
- Chapstick
$\downarrow$ Band-Aids if you use them
$\downarrow$ Plastic baggies to store different foods, tablets, etc.
- Anti-chafing lubricant
- Anti-blister powder
$\uparrow$ Fuel Belt or other bottles/pouches
$\downarrow$ Race packet (unless you'll pick it up at the expo)
$\downarrow$ Whatever food you plan to eat before, during, or after that you might not be able to find at the expo or a grocery store (specific types of gels, sports drink, electrolyte tablets, for example)
$\downarrow$ Salt tablets if you use them
$\downarrow$ Extra running clothes (if you plan to do any light running in the days before the race)
$\uparrow$ Headlamp (probably not needed for most road races)
$\downarrow$ Tissues or toilet paper, for emergencies
$\downarrow$ Maps, race information, and anything else that needs to be printed if you won't have access to a printer


## $\uparrow$ Acetaminophen

$\downarrow$ Marker or tape (if you want to write your name on your body or clothes so spectators can yell it)
$\downarrow$ GPS device if your spectators will need it (many roads may be closed, so it can come in handy)
$\uparrow$ Camera
$\downarrow$ Marker and/or tape (if you want to write your name on your shirt, bib, or skin so that spectators can yell it)

## Elucating Your Seectaors

Having friends and family on the course to support you is incredibly helpful, far more than you can probably understand until you've actually felt the burst of energy that comes from seeing a familiar face when you need it most.

In addition to providing moral support and a way to break up the race ("Only 4 more miles of this misery until I see [insert coolest friend's name]!"), your spectators can also help you out by taking clothes you no longer want or giving you food and other aid that you don't feel like carrying. Getting aid beyond what's supplied by the race is against the rules of a competitive race, so if you're looking to win an award, you might think twice about it, but everyone else does it.

Help your spectators get organized, and give them some guidance by letting them know where you think you'll need them most and what they should have ready to give you.

A few tips for helping you and your spectators get the most out of the experience:
$\downarrow$ Especially if your race is a big one, the finish line and the ". 2 " at the end of the race will be very crowded with spectators. If your friends and family want to see you at the end (which is a pretty cool time to see you), make sure they leave plenty of time to get a good spot where they can see you, especially if you'll be finishing anywhere near the crowded 4-hour mark.
$\downarrow$ If your spectators will be in a single group, seeing them three or four times during a race is about the most you should expect. On most courses, it's just too hard for them to get to more spots than this in time to see you.
$\downarrow$ Give your spectators your expected per-mile pace so that they can estimate what time you'll arrive at different spots. Sometimes you can get a pace card or bracelet at the expo that will list the times you should hit each mile marker at your pace.
$\downarrow$ In my experience, particularly trying times in a marathon are around miles 16, 20, and 23. Knowing you'll see someone you know here really helps you get through this no-man's-land period where you're not quite almost done.
$\downarrow$ In my first marathon, I was surprised at how much I was craving something salty, like pretzels, during the second half of the race. If your training has gone well, then you probably know what you crave at the late miles, so give that stuff to your spectators to have for you.
$\downarrow$ Depending on the size of your race, many roads may be closed and access to the course by car will be limited. And of course, your spectators probably won't be able to cross the course at any point where runners are, except possibly by foot. Check out the road closure information, usually on the race website or in your packet.

- Make plans for meeting each other after the race, especially if you're not going to carry a cell phone. Some races have designated spots to help with this, but it's not always clear beforehand how hard it will be. So pick a big landmark not too far from the finish area where you'll plan to meet. Keep in mind, also, that most races have a restricted area around the finish line that only runners can access.
$\uparrow$ Have them check out this guide for spectathletes posted on my website.
Finally, make absolutely sure that your spectators know how much you appreciate their help. Trying to see you several times during a race and worrying about when you'll arrive is almost as stressful as running the race! Take a second to give them a big, sweaty hug when you pass, or at least let them know at the end how much their support means to you.


## Eating Duringthe Werk Bodore Your Marathon

Depending on your travel plans, you're likely to spend some of the week before the race at home, with one or two days in the race city before the race. I'd recommend arriving at least a full day ahead of time if jet leg will be an issue or if you'll be sitting in a car, plane, or train for many hours.

Use the time you have at home to eat well. Depending on the city your race is in, you might have trouble finding vegetarian options to provide the quality of food you need and food that's similar to what you normally eat and won't cause any stomach issues or weakness.

The week before the race is the time to "top off the tank" and rest. So live it up a little, eating larger portions (but keeping it healthy), sleeping a little more, and relaxing as much as possible.

What kind of food should you be eating? According to Chris Carmichael, Lance Armstrong's coach, carbohydrates are most important, followed by protein, followed by fat, which is of little use before a race.

Carbohydrates - There's some truth to the "pasta party" idea, just not the night before the big day. Starting a race with full stores of carbs, in the form of muscle glycogen, has been shown to improve performance and endurance. So fill up on those grains, starchy vegetables, and fruits the week before the race.

Protein - Since you'll be eating more food during this time, your protein levels should increase naturally as you increase portion sizes. No need to focus on additional protein.

Fat - The nutrient you need least in the week prior to the race is fat. It just doesn't do much to help you on race day, so it's not worth filling up on fat calories. True, one of the goals of training is to get your body to burn fat stores before it has to burn carbohydrates, but you have plenty of fat for this in your body, regardless of how skinny you are.

## The Expo

The expo is one of my favorite marathon rituals. The bigger your race, the bigger an event the expo will be, often with discussion panels with famous runners or the chance to meet cool people in the running community. But even more than this, expos are known for one thing - free stuff!

At most races, you'll pick up your packet with race number and timing chip at the expo, along with the race shirt and a bunch of other goodies. As you walk around and visit the vendors, you'll have the chance to try samples, get discounts on shoes, socks, and other running gear, and even get things like massages or a gait analysis. All sorts of fun stuff.

The expo is when you'll start to get really excited about your race, and when it all becomes very real. So let yourself enjoy it. But remember that you have a race to run - so don't try anything that's too unfamiliar or that you think could mess with your stomach.

Also, keep in mind that you don't want to spend all day on your feet walking around. It's pretty easy to spend several hours at the expo, most of it on your feet, so keep this in mind and don't plan much more walking for that day.

## Don't Try Anything New!

With all the goodies you'll get at the expo, you might find yourself tempted to use some of them during your race. My advice: Resist the urge to try anything new.

Once you've run a few marathons and you have a good idea of what to expect and how your body deals with race day jitters, there's a little less risk in not doing things exactly as you did during your training. But for your first one, I implore you to lay off anything new.

Case in point: At the Disney Marathon in 2009, a sample pack of caffeine pills was included in the race goodie bag. Caffeine has been shown to increase endurance, but it's something I hadn't had much experience with. Figuring it might give me the boost I needed to qualify for Boston for the first time, I took them before the race without a second thought.

Two miles into the race, having started off at a very slow pace because of the dense crowds, I found myself unable to relax and broke out in a weird, cold sweat like I had never experienced while running. I didn't feel like myself until about the halfway point, and by then any hopes of qualifying were long gone. I have no doubt that the caffeine pills were the cause of the strange symptoms, and I'll never mess with anything like that again unless it's been a part of my training.

## Eating the Day Beforthe Race

Unless your marathon is very close to where you live, chances are you'll be eating away from home on the day before the race. For this reason, it might be wise to scope out the area ahead of time and find a vegetarian restaurant, or at least a place with some substantial vegetarian options. This is not the day you want to settle for salad when there's nothing else on the menu you can eat.

The pre-race pasta party, fun as it sounds, really won't do much for you. It's better to eat a big lunch and give your body time to digest the big meal so that you can sleep well at night, and wake up feeling light and energetic.

The day before a race, I make breakfast my last "normal" meal. I try to eat the same thing I usually eat for breakfast, a smoothie with fruit, hemp protein powder, flaxseed oil, and some greens. If this isn't possible where you are, eat something else that's similar to what you usually eat, and therefore low-risk for stomach upset. A bagel or some hash browns would work well and provide some good carbohydrates. If you eat eggs, egg whites would be good now. Even pancakes are alright, just make sure they're not loaded with fat.

Lunch is the time to load up your plate. Go high-carb, moderate protein, and lower fat. I like to eat white pasta with marinara sauce for lunch the day before a race, or perhaps a bean-and-rice burrito from Chipotle without much sauce or anything too spicy. When you're going to be running for several hours the next day, bland is good.

And if you're going to have a beer or glass of wine on the day before the race, I'd recommend having it at lunch or in the mid-afternoon rather than at dinner, mainly to avoid any effects it might have on sleep.

For dinner, choose something light and without a lot of fat or anything else that might upset your stomach (remember, at this point the race is probably only about 12 hours away). Assuming you filled up at lunch and throughout the afternoon, you might get by with something as light as a salad with some nuts and a few breadsticks, or perhaps a small bowl of pasta. Don't stuff yourself now; eat so that you'll be comfortable when it's time to go to bed.

## Sleeping the Night Before the Race

If you're anything like me, you'll toss and turn the night before your race, the anxiety and excitement reminding you of Christmas Eve, except one where you have to run for several hours to get your presents. This sleeplessness leads to stress about not getting enough sleep, which leads to more sleeplessness, which leads to your staring at your alarm clock as it reads " $1: 47$," while you beg yourself to just fall asleep so you can get three good hours in.

Well, here's one less thing to stress about: It has been shown that how much sleep you get two nights before the race has a much bigger impact on how you perform than how much you get the night before the race. Most people have no trouble sleeping two nights before, since it's either in your own bed or after a long day of travel. So don't stress about struggling to fall asleep the night before your race.

Still, try to get to bed early to at least give yourself a chance to fall asleep. Seven or eight hours before you have to get up is ideal, but if it turns out this just isn't possible, don't sweat it.

## The Day of the Marathon

Finally, you've made it. All the miles, the early mornings, those weekends when everyone else was enjoying a lazy morning and you were out running for two or three hours, and all the energy you've put into just thinking about a marathon...it all comes down to this day.

If you've prepared well, then today should be a lot of fun. You'll be nervous, but hopefully in a good way. And yes, parts of it will hurt, maybe so bad that you think about quitting. But when all is said and done, once the streets are empty once again and the medals are all handed out, you're going to go to bed a marathoner. Maybe a tired, sore marathoner, but a marathoner nonetheless.

Let's get to what you need to know to make your marathon as special as it has the potential to be. (Hint: That's pretty damn special.)

## What Time Should You Wake Up?

As a general rule, you want to arrive at your race about an hour before it starts so that you can do whatever you need to do (eating, warming up, standing in line for the Porta Pot). Take into account whether there's a long walk from the parking lot to the start line, which there sometimes is, road closures, and whether there might be a lot of traffic driving into the race. As a rule, public transportation is a far less stressful option than driving, if your race is in an area that offers it.

I recommend waking up about three hours before your race starts. If the race isn't super-early, get up even further in advance. This gives you time to relax a little bit and, most importantly, to start eating so that you can spread your food intake out and avoid feeling bloated, a common problem. Set two alarms to be safe.

## WhatobringtotheRace

You'll want to dedicate a bag or two for things that you'll bring with you to the race. Some you'll carry with you while you run; others you'll leave with your spectators or put in the bag drop that most every race has. (If you're going to do the bag-drop option, make sure you bring whatever sticker or identifying tag you need from your race packet.)

Here's a list of things to pack in your race bag (or wear), if you plan on needing them (this list is included on a separate sheet to make it easy to print off and use before the race):
$\downarrow$ Race number and safety pins (I'd recommend pinning it on before you get to the race. Don't forget to write your emergency contact information on it.)
$\star$ Timing chip
$\downarrow$ Extra clothing to keep warm before the race
$\downarrow$ A garbage bag (for warmth, rain protection, and an emergency bathroom stall if the lines are long)
$\downarrow$ Gloves and hat or headband
$\downarrow$ Compression gear and any straps or braces you wear
$\star$ Something warm to wear after the race (could be the same as what you wore before the race)
$\downarrow$ A throwaway shirt to wear if it's cold for the first few miles of the race
$\downarrow$ Food or drinks you need before the race
$\downarrow$ Any food you plan on eating during the race that won't be provided by aid stations. This includes:

- Gels or gummies (most races provide them at at least one aid station)
- Sports drink (with bottles) if you don't like what the race offers
- Electrolyte tablets
- A few dollars for buying food/beer/soda/whatever after the race (a lot of times you need cash)
$\downarrow$ A sandwich or something else substantial to eat after the race (it might be hard to buy what you need afterward as a vegetarian or vegan)
- Anti-blister powder
- Anti-chafe lubricant
- Acetaminophen*
$\uparrow$ Race packet (just in case there's something in there that you didn't realized you'd need)
$\downarrow$ Course map (for your spectators)
- Camera (you probably won't want to carry it, so give it to your spectators)
$\downarrow$ Cell phone (I wouldn't recommend carrying it unless it really doesn't bother you)
- Watch
$\star \mathrm{iPod}$ (check the race rules to make sure it's allowed)
- Sunglasses
- Sunscreen
- Chapstick
$\downarrow$ Band-Aids, if you use them
- Headlamp
$\downarrow$ Tissues or toilet paper
*According to the Rock 'n' Roll series website, acetaminophen is the only anti-inflammatory medicine that is thought to be safe before, during, and in the six hours after running. Still, I've heard enough horror stories that I now try to avoid any pain-relief medicines while running. You should do your own research about this and any other medicines you wish to take before, during, or after your race.


## Eating in the Hours Before the Race

So you've made it to race day. If you've followed my advice, you've woken up three hours before your race, and the first thing you want to do is start eating. Eat slowly, and if ever it feels like you're forcing it, stop. Having a little extra glycogen in your system isn't worth the risk of your stomach revolting the whole day and ruining your race.

The principles to follow during the remaining hours before the start of the race:

- In the two to four hours before your race, eat a meal with some protein and simple carbohydrates, and drink lots of water or sports drink. The more time until the race, the larger this meal should be. Avoid fiber and fats, since they can cause digestion issues. (So if you're going to eat something like a bagel or toast, this is one time when you should go with white over wheat.) Most importantly, don't try anything new on race day!
- Some good pre-race foods: bread, bagel, cereal, fruit, smoothie, peanut or almond butter (not too much though). The more liquid and easier-to-digest these foods are, the better.
$\downarrow$ In the hour before the race, don't eat very much. Most experts recommend only water, sports drink, or energy gels at this point. I personally don't drink much at this stage, to avoid having to use the bathroom during the race. Standing in the start corral already having to pee is no good, as this causes unnecessary stress and Porta Pots at the early aid stations will be jammed.


## Eating During the Race

During your race, aim for 30-60 grams of carbs per hour, and about a cup of water every fifteen minutes. If aid stations are placed about every mile or two, a cup of fluid at each should be sufficient. I find it easiest just to drink sports drink, to accomplish both hydration and carbohydrate replenishment, but some people prefer to get their carbohydrates from fruit or gels and drink only water at the aid stations.

However, if you find that you're not thirsty this often, you shouldn't drink this often, to avoid risking dangerous overhydration (hyponatremia). Hyponatremia occurs when the sodium in your body becomes diluted in too much water. In addition to drinking only when you're thirsty, you should make sure you're getting enough electrolytes. Active.com suggests 250 to 500 mg of electrolytes per hour, assuming proper hydration. You need more electrolytes than just sodium, including potassium, magnesium, and others. Sports drinks contain them in the right proportions. This is another reason I prefer sports drinks over water. It's also possible to get electrolytes through capsules, such as Endurolytes, or tablets that dissolve in water, like Nuun, but the latter could be inconvenient if you don't carry your own water.

Hyponatremia is very dangerous and can be fatal. Part of what makes hyponatremia so dangerous is
that its symptoms are very similar to those of dehydration, leading people to take the wrong actions to remedy it. One sign of hyponatremia that I look for is bloating, noticeable as swelling around rings, watches, socks, etc.

## The Marathon: Start to Finish

As you're hanging around the runner's village before the start of the race, you might hear announcements telling you to make your way to your starting corral when it's time. But if not, head over there 10 or 15 minutes before the race is scheduled to begin, to avoid any unnecessary stress. You may have an assigned corral, usually based on your expected finish time.

After a few announcements and some ceremonial send-offs, the starting gun will fire and you'll be off! Only...you might not be moving. It takes a while to get thousands of bodies in motion, so if you're anywhere but at the very front of the pack, you probably won't be able to manage anything faster than a walk until you get up to the starting line. In a big race, it might be 20 to 30 minutes after the race starts by the time those in the back of the pack reach the line!

Don't worry - this isn't counting against your time. Only when you cross the start line will your chip start timing you, and when the race is done, you'll have two times: The gun time, which is displayed on all the big race clocks but doesn't really mean anything to you, and your chip time, which is the one that matters and will become your official time.

In all the excitement, don't forget to start your watch as you cross the start line. This is the only way you'll know your chip time during the race, and you'll want to know it for gauging your pace.

## What pace should you run?

It's extremely important to have a pace in mind when you go into the race, to prevent yourself from going too fast or running erratic speeds that will cost you energy and time.

If you've done all or most of your long runs, then you should have a good idea of what pace you can handle for the marathon. As long as the course is similar in difficulty to where you've done your long runs, it's a pretty safe bet that you can maintain your 20-mile long-run pace for 26.2 miles. (Remember, your long run pace should have been 1 to 2 minutes slower per mile than you were capable of running the given distance.) Shoot to hold that same pace for 20 miles in the actual race, or slower if you want to be extra conservative, and then determine your pace for the final 6.2 miles based on how you feel when you get to that point.

The "able to carry on a conversation" rule is a pretty good one to apply during most of the marathon. If your breathing is labored early on, you're headed for trouble - slow down.

And of course, if you have a time goal, then that determines your pace. You should be sure from your faster-paced long runs and shorter-distance time trials that your race-day goal is reasonable - trying to do something heroic during the race that you were unable to do in training is asking for disaster.

When in doubt, err on the side of running the race a tad slower than you think you can, at least until you get to Mile 20. If you're still feeling good by that point, then give yourself the opportunity to push it a little bit - most of the risk of overdoing it is gone by then.

## The First Quartero ftheMarathor: Mies 1-6

Once you're off and running, the fun begins. To this day, when I hit the first mile marker in a marathon, there's still that butterfly feeling of "Holy crap I have 25 more of these things today!" But that's why we do it, and if not for that feeling, it probably wouldn't be any fun, would it?

The biggest key to the start of the race: Don't let your adrenaline get the best of you and get sucked out too fast with the rest of the overly-excited runners. It's so easy to think, "Well, I didn't train at this pace, but today is race day and I feel great, so I'm just going to go for it." You start dreaming of a finish time 15 minutes faster than even your best-case scenario, and your mind tricks you into believing you can do it just because "today is special."

Don't let this happen. From the very start, tell yourself that you're going to hold your planned pace (or slower, if need be) through Mile 20. If you still feel good after that, go nuts. Sprint the last few miles, for all I care. (If you feel good enough to sprint after 20 -some miles of a marathon, you'll be one of a very select few, and you'll be glad you saved your energy.)

## Same Times, Different Experiences

Imagine, for a minute, two different runners.

Runner A runs the first half of his race too fast, realizes that he can't possibly keep it up, and dramatically slows during the second half, even walking a good part of the rest of the race and generally feeling terrible. The whole time, all he can think about is how he went out too fast and how miserable he is now, hardly believing he still has so much of the race left before he can sit down, and cursing
every hill and gust of wind that creates even more work for him. When he's finally done, sore and beat up, his marathon feels like a giant failure.

Runner B runs the first half of her race too slow. She plays it a little too safe, and if she could somehow have known what she was capable of, she could have safely run just a little bit faster. She continues at this slow pace, and as she nears the end (let's say Mile 20), she realizes she's been holding back too much. She speeds up significantly, passing dozens, maybe a hundred runners during the final miles of the race. As she nears the finish line, her adrenaline is pumping and she finally learns what this so-called "runner's high" is all about.

Here's the kicker: Both runners finish at the same time, 15 minutes slower than they each could have if they'd run the proper pace the whole time. But how different were their races?

Runner A might never sign up for another marathon. He's so frustrated that all his training went to waste, and his memory of his first race is an extremely painful one, something he doesn't even like to think about.

Runner B realizes she was capable of running faster, if only she had run a better pace. But she feels great, and even entertains the idea of signing up for another race that's a month away. She can't wait to get back out there and do it all again.

Neither runner had an ideal first race, at least as far as time is concerned. And they both had the same finishing time. But ask yourself: Which runner would you rather be?

The second key to the first quarter of the race is to relax. I learned the hard way that it's a game of mental endurance as much as physical. Do whatever you can to settle your mind down and enter a "zone" where you're enjoying the weather, the crowd, and the surroundings, and let the miles come to you. Now is not the time to be counting off each mile or focusing on how much you have left, or even worrying about your pace (as long as you're not running too fast).

Do everything you can to be comfortable. You have a lot of running ahead of you, and anything you can do to ease stress on your body or mind is a good move.

A few things you can do to help relax:

- If you have to go to the bathroom, do it. Even waiting in a short line (or going in the bushes, if you're not averse to that) is better than carrying it around and worrying about it. If you have to go, you won't be able to get in the zone.
- Get rid of extra clothing that you started the race with as soon as your body temperature has increased. The reason I suggest a throwaway shirt and gloves, rather than fancy ones, is that you can just toss them in a trashcan, or preferably a donation bin at an aid station, and not have to wait until you see someone you know to hand them off to. Carrying stuff around or being too hot is annoying, and anything annoying at this point is bad.
$\downarrow$ Do your best not to let your mind get carried away with excitement. It's really easy to feel deeply moved by the magnitude of what you're doing and by all the support of the crowd, and while that's a great thing, it can actually tire you out. Save those feelings until the second half when you'll really need them to keep you going. For now, focus on your breathing, your form, or something else to calm your mind.

Terry Walters, author of Clean Food and Clean Start, runner, blogger at TerryWalters.net
I've been accused of making "KALE" my mantra, and it's true that I eat a lot of dark leafy greens - kale and collards especially. I find these alkalizing greens particularly helpful in countering acidity from training hard and adrenaline, and for supporting nearly every bodily system. They are my powerhouse food - whether I'm eating them sautéed or juicing them with other veggies like beets, cucumber, carrots and apples (a personal favorite combination). But in
 truth, as much as I do love kale, I have a different mantra that somehow seems to get me through. "Cool, calm and easy." "Cool" helps me stay that way in my mind, even when the mercury is rising. "Calm" keeps me relaxed and levelheaded throughout the race. And "easy" keeps my whole body relaxed so I can keep on running on!

## The Sceond Quarere oftheMarthor:Miles 7-13

If you've trained properly and done all (okay, let's be honest, most) of your long runs, then the second quarter of the race should still be the honeymoon period. The miles still pass pretty quickly, but this is where you start to realize, "Hey, I actually do have some serious running to do today, and I'm not even close to the end yet."

Now that the excitement of the beginning of the race has passed along with the miles of road underneath your feet, take inventory. Listen closely to your body, taking stock of any existing or new injuries you're dealing with. Now that you're warm, is there anything you need to stop and stretch out?

How are you eating? Have you been able to take in food and fluids as you had planned? Is there anything you should tell your spectators you need next time you see them?

Most importantly, this is the point in the race to really focus on your pace. If the pace you're shooting for is reasonable, keeping it up should be no problem yet. Make sure that's the case, and that you can easily carry on a conversation while you run. If you can't, slow down. You'll thank yourself later.

Just as in the beginning, it's very easy to let yourself slip into a faster pace, clocking a few miles at maybe 30 seconds faster than you planned. With the confidence of a few miles under your belt, you might be thinking "This is no big deal!" But this is the time to be disciplined. Remember, every minute too fast that you run the first half of the race will cost you two minutes in the second half.

If you can't wait until even later in the race, at least tell yourself you won't exceed your planned pace until you hit the halfway point.

## The Third Quarterof of TheMarathor: Miles 1420

For a few minutes after you cross the halfway point, everything feels great. Until a few minutes later, when you hit the next mile marker and realize you've officially entered no-man's land.

In the interview with pro Ironman triathlete Brendan Brazier included with this guide, he says that this third quarter is the toughest part of the race. We're in agreement there, and after you've done it, you'll see what Brendan means.

The problem, here, is that you're starting to feel it. Your body knows you've gone a long way already, and your head knows you've still got a very long way to go. Sure, the final few miles of the race are going to physically hurt more, but by that point, you know you're almost done. You can tough it out.

But here, you're not really "almost" done. You're halfway, and that means you've got half of the race left. The adrenaline has worn off, and you're no longer fresh. When people quit, this is usually why.

Your main focus here has got to be on getting your head in the right place. While the biggest physical challenge will come in the final part of the race, this stage is mentally the toughest. If you have spectators supporting you and, as I've suggested, you've made plans to see them once or twice during this period, that can be a big help. Focus on getting to the next time you'll see them, and then on the 20-mile mark. By breaking this stage of the race into chunks and focusing only on getting to the next "checkpoint," you prevent the formidable task at hand from becoming overwhelming.

This is also the time to pay attention to your nutrition and your body. By the end of this stage, you'll have gone as far as you've ever run, so if your nutrition has been insufficient or out of balance, you'll be feeling it now. Watch for signs of dehydration or hyponatremia, as they frequently arise at this stage. If your pace has been conservative, then bonking shouldn't be an issue, but if you do notice that characteristic "crash" feeling of running very low on sugar, slow down and spend some serious time at the next aid station replenishing your carbohydrate stores and hydrating. It's possible to recover from a bonk and finish a race, but safety should be your first priority, so talk to the medical staff before continuing after a serious bonk.

## The Fouth Quarterof of TheMarthor: Miles 21-26.2

It's been said that there are two parts to the marathon, the first 20 miles and the last 6.2. These final miles of the race are uncharted territory in most training programs, including this one, so now it comes down to willpower and doing whatever it takes to get yourself across the finish line.

At this point in your marathon, you'll almost certainly feel some pain, whether in your joints or (preferably) your muscles. Even if you've paced yourself well, the simple fact that you've now run farther than ever before in your life (and you've still got more to do before you can lie down) leads to some discomfort. And that's fine; it should.

Don't let the thought of quitting enter your mind, barring an injury or other health risk, of course. Tell yourself that if you have to, you'll walk, but you will finish this race. And if you've trained properly and paced yourself well, you'll find that you pass many more runners than are passing you at this point.

As the miles get into the 20's, you'll notice a few surges of adrenaline, usually when you pass big crowds cheering or see someone you know, that will make your job of finishing easier. My advice is to notice these bursts of energy and enjoy them, but to hold back just a bit. Several times during a marathon, I've felt that surge at mile 23 or so and figured, "This is it; I can ride this to the end," only to feel a major letdown a half mile later, as a result of running too fast in my excitement at the thought of being finished.

Give your body whatever it's asking for in terms of nutrition. If all of a sudden you want water instead of sports drink, or if perhaps you're craving salty food or junk food like candy and soda, there's probably some good reason for the craving. At this point in the race, I usually throw out the rule book and do whatever makes me most comfortable, short of sitting down on the side of the course and having a beer. But if you're even a little bit suspicious of dehydration, hyponatremia, or carbohydrate depletion, make sure you do what you need to do to remedy that.

If you keep going, the miles will pass, even if it feels like it takes an eternity to get from one marker to the next. But inevitably, you'll catch that first glimpse of the finish line, then hit the 26 -mile marker and have only that beautiful, crowd-lined ". 2 " remaining. Feel the energy and use the noise and sight of the
crowd to run fast here, but savor everything about this final, glorious minute: You'll want to remember this feeling for the rest of your life.

This is where you know you've done it. Your 18-plus weeks of tireless training have taken you all the way to this point, where all that's left is a few more steps before you're officially a marathoner. So soak it all in, and don't forget to smile and raise your arms for the photo as you cross the finish line. In what will seem like blur in the seconds after you cross, you'll get your medal and probably a Mylar blanket to keep warm, and there's no better feeling. You did it!

## After Your Race

Once the race is done, you'll probably have a not-so-strange urge to collapse on the ground. After you've walked around for a few minutes to let your body cool down, go ahead and do it. You've earned it!

Indulge whatever weird cravings you now have, as the half hour or so after activity is the time to get your recovery started. Ideally, get carbohydrates and protein in your body in a 2:1 or 3:1 ratio of carbs to protein. Given the circumstances, though, I'll forgive you if you can't resist a few slices of pizza and some potato chips. Just eat something.

If you drink alcohol, you might want to celebrate with a beer, and many races will even provide you with a free one in celebration of your kicking the marathon in the teeth. Just make sure that you drink plenty of water before you do this (my ultrarunner friends have instituted a "must pee once" rule before allowing themselves to drink any alcohol, after a bad experience one of us had drinking alcohol too soon after a race). Also, note that since your blood volume is lower than usual, you could be more affected by alcohol than you expect, so just be careful.

Throughout the day, continue to get high-carb, moderate-protein nutrition, drinking lots of water or sports drink to replenish fluids. An ice bath will go a long way to making you mobile tomorrow, if you can stand it. If not, at least do some minimal stretching or foam rolling to avoid stiffness.

## 21 Tips for Your FirstMarathon

What follows is from a post I wrote a while back that a lot of first-time marathoners have told me helped them out. You've seen most of it discussed in far greater detail throughout this book, so if anything, I hope it serves as a fun reminder of some of the most important points.

1. Don't plan on running with a partner. It's tempting to want to run with your training buddy, but it's asking for trouble. You won't both need water and Porta Pot stops at the same time. And what's going to happen when one of you is going strong and the other starts to lag? Awkward!
2. BYOTP. That's "Bring Your Own Toilet Paper." Thousands of runners + race-day jitters = bad news for the TP supply. Stash some in your bag or your shorts.
3. Wear technical apparel. Shirt, shorts, socks, bra. Cotton is rotten! RaceReady makes shorts with lots of pockets for holding gels, keys, salt tablets, etc. Consider lubricants for chafing and blister powder for your feet as well.
4. Don't try out any new goodies. Especially if your marathon is a big one, you'll get all kinds of free samples at the expo. Just don't use them on race day; stick with the same gels, bars, and gummies that you've used throughout your training. I once tried some caffeine pills that I got at the Disney Marathon and broke out in a weird sweat, before the race even started.
5. Count your safety pins. When you pick up your number, make sure they give you four safety pins for securing it to your shirt. Scrambling to find a safety pin on the morning of your race is the last thing you need to be doing.
6. Get yourself a new pair of kicks. Good running shoes last 300-500 miles, but they lose $50 \%$ of their cushioning much sooner than that. Get some new ones and break them in during your tapering period. I ignored this in one marathon and got a nice stress fracture in my foot to remember it by.
7. Skip the pasta party. Have a big meal at lunch the day before the race, but take it easy with dinner. This gives your body time to assimilate the nutrients, and having a huge meal so close to the race is risky if you're at all worried about stomach issues.
8. Don't do much the day before. The San Diego Zoo was a terrible idea before my first marathon. Take it easy on your legs and mind, and give your body a chance to relax before the big day.
9. Don't stress over sleep. Try to get a good night's sleep before the race, but chances are you won't. But take heart, oh sleepless one: the amount of sleep you get before a race has little to do with how you'll perform. As long as you've been sleeping well during the previous week, your body will have plenty of energy to draw from. Bonus: not stressing over this might even help you stop tossing and turning.
10.Bring a garbage bag. A garbage bag with a few arm and leg holes is the marathoner's Swiss army knife. Good for keeping dry if it's raining, keeping warm before you start, and for a little privacy if the Porta Pot lines are too long.
11.Pack a throwaway shirt and gloves if it's cold. Lots of races start at the crack of dawn, when it's chilly. Once you start running and the sun comes up, your body temperature will rise considerably. To accommodate this, wear a long-sleeve shirt, and maybe even gloves, that you don't mind ditching a few miles into the race. Lots of races have charity bins where you can toss extra clothing, but don't feel too bad about just throwing it to the side of the road if you don't see them.
12.Show up early. Traffic is always bad and there are always lines for the Porta Pots, so leave yourself extra time before the race to stretch, fuel up, and relax. And give yourself plenty of time
to get from the runners' village to the start line, sometimes they're far apart.
13.Arrange a meeting spot for after the race. The finish line will be crowded, so even if your friends and family do get a good spot to watch you finish, they won't be able to get to you very quickly once you're done. And you probably won't want to carry a cell phone. Choose a spot ahead of time where you'll meet, and stagger over there before you collapse in glory.
14.Put your support team to work. Know roughly where your friends will be on the course; having that to look forward to can make all the difference. And load them up with all kinds of snacks. Bananas, oranges, salty snacks like pretzels, whatever you think there's a chance you might crave when you're 20 miles in and those last six are seeming like Mount Everest. Chances are you won't eat most of it, but getting that one thing you want most will make it worth it.
15.Take it easy on the fluids in the hour before the race. There's a delicate balance between hydrating yourself properly and standing in the starting corral already having to go to the bathroom. For me, this has only been a problem at the beginning of the race, since once I'm running my body tends to use up whatever fluid I can take in.
16.Don't have a time goal. If you can, don't make your goal for your first marathon any more than just to finish the race and enjoy the fact that you're doing something incredible. Leave the extra stress of a time goal for your next one.
17.Don't let your adrenaline get the best of you. At the expo of my first marathon, a famous runner gave us this piece of advice. Of course, we didn't listen. We tore out of the gate and ran our first mile in under seven minutes, and with adrenaline pumping, figured we might qualify for Boston that day. Wrong, by almost two hours. They say that every minute too fast that you run the first 13.1 miles, you'll lose two minutes in the second 13.1. Don't let your excitement get the best of you on race day.
10. Watch out for hyponatremia. Everyone knows about the dangers of dehydration, but overhydration is a concern too. Hyponatremia occurs when you drink so much water that you dilute the sodium levels in your blood, and it can be life-threatening. Symptoms are very similar to those of dehydration, part of the reason it's so dangerous. I try to pay attention to my ankles and fingers to make sure they aren't swelling around my socks or ring. To avoid hyponatremia, be sure to take in adequate sodium with your fluids, in the form of sports drinks, gels, salty snacks, or even salt tablets.
19.Consider an ice bath afterward. Especially if you haven't done a lot of 20-plus mile runs in your training, you might be in for a fun surprise when you get out of bed the day after your race. To help mitigate muscle soreness, consider taking an ice bath once you've finished the race. Yes, you read that correctly. 15-20 pounds of ice, some water, a bathtub, and 20 minutes of pure misery. But it works for me.
20.Don't make plans for after the race! After my first marathon, my friends and I went back to our hotel room at about noon, stretched out on the beds, and slept soundly through the entire day and night. If you follow the tips in this book, you'll be much better off than we were. But still, you have no idea what you'll be up for after you've run 26.2 miles. So keep the plans to a minimum, and play it by ear. I've run three Rock 'n' Roll races, and never once have I made it to the post-race concert.
21.Enjoy every minute of it. This will be easy for most of the race. But trust me, those last few miles will hurt, and you'll have to dig deeper than you ever have before. But you didn't choose to do this because you thought it would feel good. Whatever your reason, it goes far deeper than the physical. You're doing something incredible; revel in that fact and enjoy the moment.

## Now Go Make Yourself a Marathoner

If you've made it this far - and if you haven't just read this stuff but actually done it - then you're ready. Trust me, there's more in a few pages of this guide than most runners know going into their first marathon. And even if you haven't done everything to the letter (really, nobody can do everything) you're probably more prepared than you realize.

Months and months ago, when you took that first action of signing up for a race or whatever it was that you did to commit yourself, you did the hardest part. Sure, training was rough at times; maybe there were even days you wanted to quit. But for the most part, all of that followed from your decision, when you said I am going to run a marathon.

Before you run your race, go back and read what you wrote down when you made that decision. Think about who you were back then and who you are now, and how much you've pushed through to get here. You might even find it useful to print it out, if that inspires you.

And then all that's left is to trust your training and go do it. I wish you the best of luck. Be smart and go kick ass.

And when you're done, please send me an email to tell me all about it (matt@nomeatathlete.com). And just as importantly, start thinking about what's next. One thing I tell everyone after their first marathon is to sign up for the next before the thrill wears off. It's just too easy to let a few weeks of rest turn into a few months, and eventually you'll be right back where you started.

If you've enjoyed this guide or have any questions or suggestions, please don't hesitate to get in touch and let me know. And don't forget: Keep in touch by subscribing to No Meat Athlete blog post updates and the email newsletter, because it'll help keep you on track!

Thanks so much for reading what I have to share and for being a shining example of what's possible on a plant-based diet.

