No Meat Athlete

5K Roadmap

The Plant-Based Guide to Getting Fit, Becoming a Runner, and Love It

Matt Frazier

No Meat Athlete

5K Roadmap:

The Plant-Based Guide to Getting Fit, Becoming a Runner, and Loving It

Matt Frazier

NoMeatAthlete.com

No Meat Athlete 5K Roadmap: The Plant-Based Guide to Becoming a Runner and Loving It

Disclaimer: The information in this e-book is true and complete to the best of our knowledge, and is meant to supplement, not replace, proper nutrition and athletic training. The authors advise readers to take full responsibility for their safety and know their limits. The authors are not medical or dietary professionals, and the information in this e-book is not intended to diagnose, treat, cure, or prevent any disease. In no way is this book intended to replace, countermand, or conflict with the advice given to you by your own physician. Consult him or her before making changes to your diet or starting any exercise program, and ask him or her about whether your level of fitness is suitable to train for a 5K. Information in this e-book is general and is offered with no guarantees on the part of the author.

Contents

Introduction 11

Learning to Love Running 13

The Quickest Way to Enjoy Running More 14

- Make It Real by Putting It in Writing 15
- Getting Started with Running (and How to Have Fun Doing It) 17
- If You've Tried Before and Failed 19
- Simple Ways to Enjoy Running More 21

Equipment Basics 23

- The Most Important Rule of Running Clothes 23

Running Safety 27

Running FAQ 28

Training for Your First 5K 43

How to Choose Your Race 44
Time Frame 44
Weather Conditions 44
Terrain 45
Size 45
About the Training Plans 46
The 4 Plans in this Program 47
The Roadmap: How to Get from Here to There 48
Aim for "Peaks and Valleys" of Intensity During Workouts 49
Tapering 50
Demystifying the Long Run 51
Where to Do Your Long Run 51
How to Plan a Long Run on Roads 54
Tools for Planning Your Run 54
Other Things to Think About 55

The Long Run Mindset 55
Running Form 56
Upper Body Form 56
The Lower Body 57
The Old School 57
A Brief Lesson in Evolution 57
The New School 58
So you probably think I'm going to tell you to run barefoot... 59
A Simple Technique for Injury-Proofing Your Stride 60
How to Increase Your Turnover Rate 60
What to Do When You're Not Running 62
Recommended Types of Cross-Training 63
Non-Recommended Types of Cross-Training 64
Foam Rolling 65
Foam Roll Exercises 66

Don't Try to Run Through Pain 73
What to Do If You Feel Pain on a Run 74
Take Time Off 74
Treating Your Injury 74
Section 2 Additional Resources 76
The Diet 77
Why Plant-Based? 78
Performance Benefits of a Plant-Based Diet 78
1. Weight loss and change in body composition 78
2. Recovery 80
3. Variety in diet 80
How to Go Plant-Based 81
The "Less Legs" Approach to Going Plant-Based 82
Congratulations, You're On Your Way to Eating Plant-Based! 86
Nutritional Guidelines 87

Preferred Foods 92
A Sample Grocery List 94
Caloric Breakdown 95
"But Where Do You Get Your Protein?" 96
Smoothie and Salad: The Anchors of Your Day 97
The Only Smoothie Recipe You'll Ever Need 98
The Perfect Smoothie Formula 99
Salads 102
Two-Week Sample Meal Plan 103
Nutrition Concerns and Plant-Based Diets 106
Protein Deficiency 107
Iron Deficiency 108
B12 Deficiency 108
Eating for Your Workouts 109
Pre-Workout Nutrition 109

Post-Workout Nutrition 113

Race Day 116

Getting Ready for Race Day 116

Eating During the Week Before Your Race 116

Packet Pick-Up 117

Eating the Day Before the Race 118

Sleeping the Night Before the Race 119

The Day of the Race 120

What Time Should You Wake Up? 120

What to Bring to the Race 121

Eating in the Hours Before the Race 122

The Race: Start to Finish 123

Arriving at the Race 123

Should You Warm Up? 123

Lining Up at the Start 124

After Your Race.....127
Now Go Make Yourself a 5K Runner.....128

Introduction

This book is different from the others in the No Meat Athlete Roadmap series, for one particular reason.

With the Half Marathon Roadmap and the Marathon Roadmap, the assumption is that anyone reading them is already a runner. Being able to run a 5K is the prerequisite for getting started with either of those programs, so it's assumed that the reader actually enjoys running already.

Here, that assumption is out the window. Why? Because a first 5K isn't always about running. Some people run a 5K just to prove to themselves (or someone else) that they can do it. Others do it to start getting in shape.

While most people running half marathons and marathons are crazy runners who want to run more, a 5K starting corral represents a much larger cross-section of the population.

So here the focus won't just be on running a 5K. In fact, here we have three aims:

1. **Train you to run a 5K.** Without walking, unless you want to walk.

2. **Get you to love running.** I'll settle for "enjoy" running, if love seems like a stretch.

3. **Improve your overall health and fitness through a plant-based diet and exercise.**

But here's the thing. The last two aren't required for the first. That is, you can run a 5K without really being a runner (in the sense that running is a part of you, that you enjoy it) and without really being healthy. And you can probably do it in just a few months from now.

The other two are processes. They take longer to get the ball rolling, but if you're committed, you'll still see growth in both areas a year from now, or even two or five years from now. They're slower because they're far, far bigger than just running a 5K. Bigger results take more time.

What I'm saying is, if you want to, you can "quick start" this bad boy. Read the basic running advice (on form, equipment, pace, etc.), use the goal-setting workshop to set your sights on a 5K, and then follow the training plan. You'll get the result of finishing a 5K.

But that's not the way to get the most from this program. I've included a lot of advice here that will set you up to increase to longer distances later on. That advice will help you for the 5K, too … but you don't necessarily need it for a 5K.

If you want this program to change your life -- to be the first of a thousand steps in a running, health, and fitness journey -- then do it all. Dive in and put the advice into practice. You'll still do your 5K, and you can still get started right away – but along the way, have the mindset of making this a lifestyle, not just a one-and-done 5K.

Which path you choose is up to you.

Ready? Here we go!

P.S. If you're not already subscribed, don't forget to sign up for the free No Meat Athlete Beginners Guide, because you'll get all sorts of information there that will help you as you train for your first 5K.

A note about the terminology: This book is intended to serve as a guide for vegans, non-vegan vegetarians, and those who are neither but just want to eat less meat. Throughout this book, I use the term "plant-based" most of the time, and you can interpret it to mean whatever best applies to you.

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
Learning to Love Running

The Quickest Way to Enjoy Running More

For most of my life, I've hated running. It wasn't until college that I started willfully doing it (as opposed to only doing it when I had to, like on sports teams, or for the dreaded mile run in gym class).

There's a good chance you're in the same boat, and I'm here as proof that you can learn to like running -- or at least to tolerate it as a pretty great way to stay in shape.

What changed everything? For me, it was setting a goal. A big, scary, mega-inspiring goal. For me, a college kid who didn't know any better, that goal was a marathon.

Once I had a goal, everything was different. Running was exciting. It was no longer pointless. Before, when I had suffered through a one- or two-mile run, the benefit was invisible: a small amount of fat burned, a tiny bit of fitness gained. But once I had a training plan, a plan that I knew -- if I would only follow it -- would get me a desired result (in this case, crossing the finish line of a marathon), now the impact of each run was visible.

If my 18-week marathon plan had four runs per week on it, that's 72 runs total. When I finished the first of those runs, I had 71 left. One step closer. And so it went. Each run now had meaning. I could see, right there in front of me, that I had made progress. That's the feeling I got addicted to, and why I'm still running 12 years later, with bigger goals now than I ever imagined back then.

You're reading a book called the 5K Roadmap, so it's a safe bet you've already got yourself a goal. But we're going to juice it up a little bit, and make sure you're good and committed to it.

Just as importantly, we want to make sure that your goal is big enough.

For some people, a 5K is a huge goal -- something that's going to take a lot of work, maybe more work than you've ever put into a personal goal, but work that's worth it. Just imagining the look on your spouse's/friend's/family member's face when you cross that finish line is enough to give you chills and make you want to get out the door to do your next run.

But for other people, the 5K won't be that. It's inspiring and first step to getting in shape, but you don't doubt you can do it. It's a stretch, but not much of one. If this sounds like you, you'll need something bigger. So answer the question, What would energize you the way I described in the paragraph above? A half marathon? An ultramarathon? A triathlon? To look a certain way, weigh a certain amount? What is it?

For the purposes of this book, it doesn't matter which camp you fall into, and what your specific goal is. What matter is that you have one, and that the 5K plays a part: either it's the be-all, end-all goal, or it's a stepping stone to much bigger things to come.

Let's get clear on that now.

Make It Real by Putting It in Writing

As 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 5K, 10K, or whatever your goal is, on a plant-based diet. There's immense power in that alone, so I want you to actually do this. (Hint: 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.

Note: If you've got a longer-term goal than a 5K that really motivates you (say, your 5K represents the first step toward a half marathon a year from now), then focus on that longer-term goal for this process, and you'll use the 5K as an early stepping stone in the process.

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

1. You decide 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, say, six months or a near from you, if you were an everyday runner who ate a plant-based diet? If it motivates you, what would other people think about you? What might happen if you DON'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. Write your statement in the present tense. An example: "By [date], I complete a 5K race without stopping to walk, and I eat a plant-based diet for my entire 10 weeks of training."

   _____

   __

_____

_____

_____

3. You take some sort of action that commits you.

By picking up this program, 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, since it defines a deadline and costs a little bit of your hard-earned money. 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, it'd be embarrassing, even painful if you didn't follow through – and that's exactly the point.

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 plant-based with you, more power to you). Check out fundraising opportunities, where you can raise money for a worthy cause, and get support along the way. If you don't have a regular running route, 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 to create some accountability and build some momentum, then do it.

_____

_____

_____

Getting Started with Running (and How to Have Fun Doing It)

With a compelling goal that you're borderline obsessed over, running gets a lot more fun. At least, the idea of it does.

But what about while you're actually running? Your goal can still help you dig a little deeper -- but what about that other, minor detail? You know, that "running hurts and is hard and I still hate it" thing?

If you're like me and you've always found running hard and not even close to fun, here's the antidote: stop running like it's gym class.

In that gym class mile run, we were told to pace ourselves, but to finish as fast as we could. Which meant (if you did what you were told) that by lap three, you were tired. But you kept pushing it, and by the last lap you were breathing so hard you tasted blood (or was that just me?). You kept going though, sprinting to the finish line. And when you finished, doubled over, you were glad you didn't have to go through those 8 or 10 or 12 minutes of pure hell again until next year.

Oh yeah, and if you were really slow, the other kids made fun of you.

If this is what running means to us as adults, is it any wonder so many of us say we hate it?

So what do you do instead? Easy: slow down. Way, way down. In fact, when you're getting started with running or trying to learn enjoy it, I want you to forget that time even exists (except when you've had a few drinks and you're arguing with friends about space-time continuum stuff, when you might as well accept it).

But seriously: just stop trying to run fast. Imagine you're the first human being ever to try running, and that just by having both feet off the ground at once (i.e. no longer walking), you're breaking land speed records. I want you to run so slowly that you can carry on an entire conversation while you run, without really struggling to get the words out in between breaths. Very, very easy.

Comfortable. Maybe even a little bit fun? Be like a kid, who runs and skips and jumps because all of these are more exciting than walking. It feels good to move.

This conversational pace still counts as running. Once your gym class days are over, there's no rule that says running has to be fast. Sure, if your neighbors see you, they'll probably chuckle and think, "I can run faster than that slowpoke." Except they're not doing it, and you are, so who cares.

This is how I want you to do most of your training. How fast your conversational pace is depends on your fitness level. Some people will be able to cruise along at 8-minute miles, others will barely exceed walking pace. With training, your conversational pace will get faster. (If you want to get more sophisticated, you can buy a

faster. (If you want to get more sophisticated, you can buy a heart monitor and notice where your heart rate is when you're running along at conversational pace. Then you can continue to train about the same heart rate, and over time you'll find that you're covering more and more distance in the same amount of time, even without increasing your heart rate.)

For runners who have never run slow, it'll feel like cheating. It isn't; it's real running. Granted, there's a place in a training program for harder workouts, but even serious marathoners and ultrarunners are still doing most of their mileage at a conversational pace. It's simply not possible to train day in and day out at a high intensity. If you finish more than a few runs per week feeling like you did at the end of that gym class mile run, it won't be long before you're injured.

Run slow. It'll change everything. You'll start to come back from your runs with more energy than when you left. Your thoughts during the run will shift away from "When can I stop I can't keep this up I hate running" and towards a free, creative, relaxed clarity. That's because you won't be triggering the fight-or-flight response, where your mind is naturally stressed and active and worried.

This won't necessarily happen right away. If you're new to running and exercise in general, your body still will go through an adjustment period, where it's none too happy with you for doing anything faster than a walk. But in time -- a few weeks for most -- you'll start to experience what I'm describing here (and what some call the runner's high). From the very beginning, running slowly -- and being perfectly okay with that -- will help you avoid quitting and get to the other side.

If You've Tried Before and Failed ...

… then you need to think about what will make this time different. Because, as we all know but sometimes fail to actually take into account, simply doing what you've done before will give you the same results you've gotten before.

If you've failed at creating an exercise habit before -- running, weight lifting, yoga, whatever -- then here's what I want you to do: take smaller steps.

Not literally. (Although when you're running, small, quick steps are definitely better than long, slow ones. More on this in the Running Form section.) Instead, I mean in terms of how much you're taking on at once.

Maybe you tried exercising for 30 minutes a day, and you failed. Maybe you joined a gym, and did a few intense, full-body weight training sessions that left you utterly exhausted. If you've tried dieting, you've likely taken a "cold turkey" approach, where one day you're eating the old way, then the next you're eating ultra-clean, no exceptions allowed.

These approaches are appealing because we imagine ourselves having more willpower than we do. We get motivated and excited to make a change, so we jump in. It feels like this will never wear off, like you're a "new you," ready to take on the world. And for a week or a month, it works. But it almost never lasts, for the simple reason that your willpower runs out before the habit has had enough time to take hold.

I know this is hard to actually do. We want to go big, to make the major change and never look back. I still struggle with this urge when I try to create new habits or change old ones. So here's what I recommend: let yourself try the all-in approach once. Ride the willpower wave for as long as you can, and who knows, maybe you'll succeed. But when it doesn't work, don't consider that a failure. Consider that the end of Phase 1, and now try an approach that starts with smaller steps.

So if your 30-minutes-a-day plan didn't work, start with five minutes. Really. And if you procrastinate and miss that even one day during the first week, go even smaller. Make it two minutes.

Once you've strung together a week of success, then increase it a little. Then increase it again the next week, slowly and gradually. In this way, your mind gets used to the new habit, while your willpower to keep at it is barely being used at all (since it's so easy

it is barely being used at all (since it's so easy to experience a "win").

You can figure out how to apply this approach elsewhere. If you're trying to change your diet, give the cold turkey approach a shot. But once it fails, if it does, then start over and try just one day per week of your ideal diet. Or one meal a week, if that's what it takes. Then as you experience success (anyone can succeed for one meal a week!), expand it slowly throughout the rest of your diet.

It's hard to be this patient. That's why I'm happy to have you try an all-in approach first. But if that doesn't work and you're ready to give the small steps approach a shot, do this exercise to help you have patience.

Imagine you're a year in the future, looking back at the changes you've made over the past 12 months. Sure, the results during the first month of such slow change weren't dramatic, maybe not even noticeable. But once the habit was built that first month, then the changes really started to happen. And this time, they were here to stay, because they have a rock-solid foundation under them. When you put yourself a year or more out in the future and look back, it's easy to see how silly it is to obsess over immediate, short-term results. In the big picture of the years and decades of your life, the cost of starting slow (in return for the huge benefit of results that last) is miniscule.

You'll see this approach reflected in the 5K training plans in this guide and the general advice about getting started with running. So why did I have you read all that? So that you understand the approach, and don't skip ahead in the plan in search of quick (but ultimately vanishing) results. You can also apply this advice to any other habits in your life you'd like create, destroy, or change, even those that have nothing to do with running. And you may just find that's more valuable than any 5K finisher's t-shirt will ever be.

Simple Ways to Enjoy Running More

As someone for whom running has never come easy (but whose goals sometimes require running 3 or 10 or even 28 hours straight!), I've written at length on my blog about different

blog about different approaches to keep running fresh, fun, and not so boring.

Having a compelling, obsession-worthy goal is still my favorite. And along with the "run easy" mindset for most of your mileage (70 to 100 percent of your miles should be slow and easy, depending on your goals), you've got a pretty powerful duo for changing the experience of running to one that's rewarding -- and sometimes, really, actually fun.

But what if you've got a goal that inspires you and you're running at a comfortable pace most of the time, but after a while to start to feel stuck in the same old routine?

Then it's time to change it up. Here are a few of my favorite ways to inject some fun into your running routine:

- Load up your iPod with a new playlist or podcast episode.
- Meditate, by simply paying attention to your breath, counting if you wish (keeping enough of your focus on the road or trail to stay safe, of course).
- Read Born to Run. Instant motivation.
- Learn to breathe through your nose while you run. It's not necessarily better than mouth-breathing, depending on who you ask, but it certainly promotes a more relaxed, mindful run if you need a change of pace.
- Join a running social network, like Daily Mile.
- Watch a great running movie, like Spirit of the Marathon.

See the FAQ at the end of this section for more ideas and details. And check out 63 Ways to Shake Up Your Running Routine, a blog post I wrote about this very topic.

Equipment Basics

"How to Buy Running Junk: What You Need and What You Don't" could be a book in itself. I'll cover the basics here, but for more details, head to your local running store and talk to someone in person.

The Most Important Rule of Running Clothes

… is this one:

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.

For a 5K, you might find that you can get by with gym shorts, a t-shirt, and cotton socks, since you won't deal with nearly the chafing issues that half marathoners and marathoners do. But if you decide to stick with running, it's worth it to gradually add nice pieces to your running wardrobe, if only because being more comfortable will make you run more.

*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*

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 – For most people 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. (See the running form tips in Section 2 of this book.)

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 you want to do everything possible to avoid injury

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 a 5K, having shoes with fresh cushioning isn't a huge concern, but if you graduate to longer distances, you'll want a fairly new pair of shoes for race day.

(For much more about what kind of shoes to buy, see the FAQ later in this section.)

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.

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 running shorts is the liner. You 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.

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

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.

Handheld bottle – Handheld bottles usually have a velcro or other type of strap that makes them easy to carry. They're 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. For 5K training, you usually won't need to drink while you're running, but as your runs get longer you may find one worthwhile, even if mostly for the pockets that are handy for carrying a small amount of food or a car key.

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 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 (and every smartphone). For runners who don't mind paying for it, it's a great way to get accurate distance and pace data, and most GPS apps have a social component that can help keep you motivated as you upload data about your recent run to a social network. 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. I'm not a smartphone user, but I hear lots of good things about the RunKeeper and Strava apps for tracking your runs.

GPS is not at all required, but it can certainly make things more convenient.

Running Safety

I know, safety is boring. But it's likely that in training for your 5K 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

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. If you're going to be doing any trail running, it doesn't hurt to have an emergency gel on you just in case you're out on the roads or trails for hours longer than you planned.

Running FAQ

1. **How should you breathe when you run?**

With something so fundamental to running and performance as, well, air ... you'd think there would be a lot of advice out there

a lot of advice out there about how to breathe while you run.

And you'd be wrong. I've looked all over the place and talked to several running coach friends, and the simple answer is that you don't need to think about breathing while you run.

That doesn't mean you can't think about it -- just that the vast majority of runners (elites includes) and coaches don't. And those who do, don't usually agree on what's best.

Some coaches say "breathe in for two steps, breathe out for two steps." Others prefer three in, three out. Still others (and I like this better) say to breathe in for two, out for three -- because we tend to land a little bit harder on the "one" count. By making the total number of steps in each breathing cycle an odd number, we prevent this hard landing from always being on the same foot.

Some say breathe in through your nose, out through your mouth. Some say to breathe entirely through your nose (this is a fantastic, meditative exercise, though it takes some getting used to and is very difficult at faster paces -- see the great book Body, Mind, and Sport for more about this approach). And if you don't think about it, you'll probably find yourself shifting from mostly nose to mostly mouth as your pace intensifies.

So the short but unsatisfying answer is "it doesn't matter." Or maybe better: it does matter, but your body knows exactly how it should breathe when you run, so forcing something unnatural will only slow you down.

For me, breathing is a fun variable to mess around with, particularly complete nasal breathing, but not something to mess with too much.

2. **I'm so much slower when it's hot out! How should I train in the heat?**

It's not just in your head, and it's not just that you're dehydrated -- running is harder in the heat. On average, you can expect a 1.5% drop off in efficiency for every 10 degrees above 50 (fahrenheit)

for every 10 degrees above 50 (fahrenheit) that you're running in.

So what to do? Other than drink a lot of water -- plus electrolytes, if you'll be running for more than two hours or so -- just accept that it's hard and demand less of yourself.

Think about it this way: if suddenly you found out that your planned workout (let's say 1 mile, at 9 minute pace) had to be done on steep uphill, you'd adjust. You'd slow down, knowing that an 11-minute mile on the hill might be about as tough as the 9-minute flat mile. In this way, you adjust so that the intensity you feel is about the same as it would have been. (You could also run at the 9-minute pace but for a much shorter distance on the hill ... but this would be increasing the intensity and thus making the workout very different than what you had planned, so I recommend slowing down instead.)

So think of the heat the same way. Slow down, and be okay with that. If you need to, take an extra walk break now and then. Do what it takes not to be so discouraged that you give up instead of getting some kind of run in, even if not exactly what you had planned.

The silver lining: distance runners tend to run their fastest times in the fall, after they've trained all summer in the heat before racing in friendlier temperatures.

3. **I've never thought about which running shoes to buy -- what kind should I get?**

Your very best bet: go to a specialty running store (i.e. not Dick's or Target) and let them fit you in shoes. Most will have you get on a treadmill or run outside and take a look at your stride, and their years of experience are worth far more than the few dollars extra you'll pay over Zappos or Amazon. Plus you'll probably be back for something in the future, and the store might be able to plug you in with other runners, so it's good to get to know them.

A lot of new runners these days want to do the minimalist thing, though the craze has started to die down (probably a good thing, as

down (probably a good thing, as much as I like the minimalist philosophy). My advice is to let the running store people know that you're interested in minimalist shoes, but if they highly advise against it after watching you run, listen to them.

At the other extreme, too many new runners are told that they need stability shoes (the ones with the posting on the instep that prevent your foot from rolling excessively inward, also known as overpronating) when they might be better off in a neutral shoe that allows more movement, and hence, allows the small muscles in your feet and lower legs to develop more naturally. In most cases, I think restricting natural movement is a bad idea, but there are exceptions (people who are very heavy).

For most runners, a neutral shoe will be best. If you're into the minimalist thing, you can get one with a small or zero offset from heel to toe (meaning the heel is not built up much higher than the toe, if at all), and then you've basically got a minimalist shoe with some cushioning. (For what it's worth, I wear a shoe like this for my long runs, and one with slightly less cushioning for most of my shorter runs.)

And don't forget one hugely important factor: comfort! If it doesn't feel good, don't buy it. This doesn't mean you need to leave the store in the softest, most cushy, comfy shoe in the store, but make sure you like how the shoe feels. You're going to be putting a lot of miles on it, and if it's not comfortable, you'll unconsciously change your form to something unnatural.

Check out Runner's World's shoe buyer's guide for more help in choosing a shoe if you don't have access to a running store.

4. **Should I stretch before or after my runs? What about warming up and cooling down?**

Despite what lots of old school running coaches profess what lots of runners in short shorts still do, the scientific evidence is pretty clear: static stretching before a workout is a bad idea!

"Static" just means without movement; it's the kind we all used to do before gym class. Lots of studies have shown that static

shown that static stretching before a workout not only fatigues the muscles prematurely, it significantly increases the risk of an injury.

So don't warm up by doing that hamstring stretch you see every other runner doing. What should you do instead?

Well, to warm up, you can just run, but at an extremely slow pace. And once you're comfortable with running several miles at a time, this is how you should always warm up -- say, before a five mile speed workout, you might do a mile that starts out at very slow pace and gradually increases in intensity so that it blends right into your first speed interval. You almost never want to jump right into a workout or race, unless that workout or race is itself going to be run at a slow pace. (You don't see many people warming up before an ultramarathon, for example, because the first few miles of an ultramarathon serve as the warmup themselves.)

The exception is if you're a brand new runner, and running one or two miles is tough without tacking on an extra mile to warm up. In this case, walk briskly for a few minutes before you start, or better, do a few dynamic stretches.

Not static, but dynamic. With these you'll do some movement, likely one that's similar to a movement you'll do when you run, that both raises your heart rate and lets your muscles fire and loosen up a bit.

At this stage, the precise movements you choose don't really matter. And for some of your workouts, you may don't need a warmup at all, if they involve a significant amount of walking and don't involve anything but conversational-pace running.

For your more intense workouts, and especially before your race or anything of similar effort, do a few dynamic stretches before you start, like those suggested in this Runners World routine.

When you're finished your workout, cool down gradually, unless your workout is structured so that there's some walking at the end of it already, in which case that is a perfectly good cool down already.

Right after a workout is a good time to do a light core strength workout if you're serious about improving as a runner. But as a new runner, you'll probably see big gains without, and in keeping with the small steps approach, I think it's best not to try to do too much. If, however, you really do want to start a core strength routine, check out coach Jason Fitzgerald's post-run core workout at his blog, Strength Running.

5. **If I'm running to lose weight, should I adapt any of my workouts or diet?**

Assuming that you're not so overweight that the workouts are impossible or overly difficult, then no, I wouldn't change the workouts.

Here's where we reach a fork in the road. And I will be upfront: the 5K program in this book is not designed for weight loss, per se. It's designed to get you to run a 5K, and to become a runner in the process.

Is it possible, likely even, that training for and running a 5K will result in some lost weight? Sure! But again, that's not the primary goal of the program. Running one 5K makes it pretty likely you'll want to do another (or a 10K, or a half marathon, or a marathon one day?), and for most people that would represent a change in lifestyle, which over the long haul means your body moving toward its ideal weight.

But once again: "rapid weight loss" is not a goal of the program. If that's what you're seeking (and it's more important to you than a 5K), then you should find a trusted program for rapid weight loss. Once you've done it, then come back and train for your 5K.

So no, I don't think you should change the workouts in this program in order to lose weight faster. And even if you wanted to, there wouldn't be a clear way to change them: as soon as one expert recommends high-intensity interval training for fat loss, another recommends long, slow distance. And the reason for such confusion and disagreement, I believe, is that exercise has way less to do with weight loss than does diet. (And this is backed by recent research that shows, surprisingly, that we as a society don't actually move all that much less than even our hunter-gatherer ancestors did.)

As for diet, even though I believe it's the first place to turn if your goal is to lose weight, my sentiments for adapting this program are similar. The diet I recommend here -- one based on whole, plant-based foods -- will move you toward your ideal weight over time. My hope is that it is a diet that, along with fitness, can become a lifestyle, and that's when you'll realize the major changes.

That said, there are two adjustments I'd make if weight loss is your goal: first, eliminate the oil from the recipes I provide. Use water to saute, or some other cooking method entirely. You can still eat until you're full, but you'll fill up with fewer calories than you would if you were eating oil. Second, eat a big salad before each lunch and dinner, and use a homemade, nut-based dressing instead of one based on oil. Just like eliminating oil, eating more leafy greens and raw vegetables (both nutrient-dense and calorie-poor) will help you fill up before the food that's easier to overeat arrives.

For more on adapting your diet for weight loss, I highly recommend Dr. Joel Fuhrman's Eat to Live program. It's not an easy regimen to follow, but it's so effective (and nutritionally sound) that even if you're not perfect, you'll likely succeed in healthily losing weight.

8. **Is it true you can safely increase your mileage by 10 percent each week?**

For those not familiar with the famous "10 percent rule," it's a guideline says you should never increase your running mileage by more than 10 percent each week.

The 10 percent rule is useful in that it's a simple rule of thumb that's easy to remember. But its use is extremely limited.

When you're running weekly mileage that's neither very easy nor very difficult for you to maintain, that's when the 10 percent rule is most appropriate -- 10 percent represents a reasonable weekly increase in mileage then.

Sometimes you can increase by more than 10 percent per week: if, say you're coming back from a one- or two-month break from running after a race, you'll want to start out at low mileage, but you

want to start out at low mileage, but you can quickly increase over the next few weeks until you reach the "baseline" mileage that you were running comfortably and consistently before the race.

On the other hand, when you're running anything close to your peak mileage, a 10 percent increase is probably too big. The more you're running each week, the larger that 10 percent figure is. It quickly compounds at high mileages: 50 becomes 55 becomes 60.5 becomes almost 67 ... you can see how the rule soon becomes ridiculous, and anything but safe.

So use the 10 percent rule as a guideline, not a hard-and-fast rule or an absolute safeguard against injury. And if you examine the training plans with this program, you'll see that we generally follow the 10 percent rule, but there are exceptions, and they're deliberate.

9. **How do you keep from getting bored when you run?**

When you first start out running, the difficulty is physical -- it's hard to run for 20 or 30 minutes without stopping, the first few times you do it. But after that, when running at a conversational pace becomes easy and you can do it seemingly indefinitely, another challenge comes along. And this one is mental.

Some runners never encounter boredom. Running lights them up, or zones them out, or otherwise entertains them. But not all runners are gifted this way, and I'm certainly one of them. To do even a 2- or 3-hour long run isn't so hard physically -- you find your pace and settle in -- but the mental tedium can be enormous.

I've tried a lot of things to occupy my mind while I run. To describe them all here would take many pages, but fortunately I've written about most of them in blog posts. Here's a bullet list of ideas for engaging your mind while you run or otherwise keeping things fresh -- many of them linked to a blog post that expands on the idea, should you want to read more about it.

- Listen to music (sometimes a playlist full of brand new songs or a new album can be your reason for getting out the door). For longer runs, I really like listening to podcasts (check out the No Meat Athlete podcast) and audiobooks: in general, my rule is music when I want to get pumped up (usually on short, fast workouts), speech when I want to relax and pass the time. If you are going to wear headphones though, do so responsibly and keep the volume low enough that you can hear traffic (on roads) or other runners, animals, and potential dangers like falling branches (on trails).

- Try meditating. This can be as simple as paying attention to your breath, counting each one until you get to 10, then repeating. Or you can line your breath up with your footsteps (usually nasal breathing), and try to gently and gradually increase the number of steps you take per breath. Or just be present -- soak in the present moment with all of your senses, and simply observe your thoughts as they come in and gently each go in favor of the experience of this moment.

- Think about something specific, a problem you need to work through. Running (and activity in general, but especially running because of the rhythmic nature) seems to enhance most people's creativity after 20 or 30 minutes. You won't be running much longer than this during 5K training, but should you tackle another distance next, you'll have time to get into this pleasant, inspired zone (which is about as close as I get to the mythical "runner's high.") Ask yourself a question at the outset of your run, then let your mind ruminate on solutions and ideas.

- Try trail running. The change of scenery and varied nature of the surface and surroundings can keep your mind engaged and occupied, without any effort on your part. I suspect this is the primary reason so many trail runners never go back to roads.

- Run with a friend or a group. Of all the techniques listed here, this is the one that has worked best for me. Having

for me. Having someone to talk to (or listen to) makes running feel easier and more interesting. It takes more effort than running alone -- you've got to show up on time and sometimes adjust your pace, but for a long run, it's usually worth it. Plus, having to meet someone adds accountability and makes it much harder for you to procrastinate or skip your run entirely.

For more ways to keep your running interesting, check out my post 63 Ways to Shake Up Your Running Routine.

10. **What side of the road should I run on?**

As a general rule, run against traffic (that's the left side of the road in the United States). This way, you'll be able to see the cars that are most likely to affect you or require action on your part to get out of the way.

But there are exceptions. If there's a blind turn ahead with shoulder, especially one that goes left (in the U.S.), I tend to cross to the other side long before entering the turn. This way, I can check to make sure that there are no cars coming behind me when I enter the turn (as opposed to staying on the left and not knowing what lies beyond the turn). Then, when I'm through the blind turn and all is clear, I cross back to the left side.

You can help cars see you by wearing reflective clothing (reflective vests are forgiven for their dorkiness because of how safe they are) or even lights that clip onto your clothing. Ask your local running store; they should have something for you.

Also, be careful if you listen to headphones while you run. Keep the volume low, and turn it off entirely when you're on any road or turn that requires more awareness of what's around you than you can see.

11. **I have trouble fitting running into my schedule because I work a normal job and have a family to take care of before and after. How do I make time to run?**

If you work a typical, 9-to-5 type of job, then you've got three options: early morning, lunch break, and evening. I'll touch on each here.

But first, remember that for now, your runs don't take much time, and you probably don't have to drive anywhere to do most of them, a big advantage over other types of workouts. (You might find that for your weekend long runs, it's worth a short drive to get to a trail, park, or other good spot to run.) In total you're looking at less than half an hour most days, and that's time that if we really try, we can usually free up just by watching one less TV show or cutting back on Facebook time. Plus if you currently don't exercise, you'll soon find that the half hour you spend exercising pays for itself in terms of the energy it gives you at other times during the day. Finally, don't forget that you can meditate, think, or listen to a book on tape while you're running, so if you currently set aside time for any of those things, you might be able to add running to your routine without needing to find any more time in the day.

If you want to run in the morning:

The big resistance point is the actual waking up early and getting out of a warm, cozy bed to go run (especially in the winter). First, don't get up any earlier than you need to: a lot of new runners think they need to eat before each run, and then allow time to digest before actually getting outside. Eating a little something isn't a bad idea before your longest runs, but in general you can get by with a glass of fruit juice or a banana, a few dates, or some other fresh fruit. Then eat your bigger, normal breakfast (maybe a smoothie?) after you get back from your run.

My favorite trick for removing obstacles that keep you from getting out of bed is to be as ready as possible to run when you go to bed the night before. Put your shoes right by your bed, and if it helps, sleep in your running clothes! Don't forget a headlamp or flashlight and reflective vest if it's dark out. And be safe: run streets that you know and that are well-traveled in the morning, and know that you wouldn't be the first to bring pepper spray with you on a run.

Running in the morning isn't the easiest routine to start, but the feeling of having accomplished something while the rest of the

something while the rest of the world is still asleep is powerful and addictive. Don't be surprised if the positive vibes spread throughout the rest of your day!

If you want to run at lunch:

If your work schedule is such that you can fit in a run, a shower (not always necessary, but sometimes), two changes of clothes, and oh yeah -- lunch -- during your lunch break, that's fantastic. You need to make sure that you still feel some sense of a "break," though. Very often running can feel this way (an active break, but still something that re-energizes you), but if it doesn't, you'll probably have trouble making this routine last.

Assuming it does, there aren't many special considerations about running during lunch time. You'll want to eat after the run, rather than before, but if there's a long stretch between breakfast and your run, then try to eat something light (fruit or fruit juice, perhaps) an hour before your workout.

You'll also be running at one of the hottest parts of the day, so keep in mind that during summer months you won't be able to maintain the intensity you can in cooler temperatures, and that's perfectly normal. Make sure to drink plenty of water and wear sunscreen, and if the heat consistently gives you trouble or makes it hard for you get motivated, don't forget there's always the treadmill, if you have access to one.

If you want to run in the evening:

The evening (and even nighttime) is an often-overlooked, really nice time to run. It gets tricky with dinner -- you won't want to be running on a full stomach, just because it's uncomfortable -- and if it's getting dark out when you run, take the proper safety precautions. Stick to roads you know to be safe, wear a headlamp or bring a flashlight, wear reflective clothing or a reflective vest, and bring some form of protection from dogs or criminals (like pepper spray) if you think you need it.

But just because it's dark out, don't assume you can't run! It takes some extra attention (so that you don't twist an ankle when the

twist an ankle when the sidewalk dips, kind of like trail running) and some general safety precautions, but if it's the only time you've got, you can make it work.

12. **Do I need to buy [trendy new gadget] before I can start?**

No. You don't.

If you want to, if it'll enhance your running and make you do it more, or if it might help you break out of a funk and renew your passion for running, then sure. But whatever it is, you don't need it.

I had the pleasure of hearing Bart Yasso (a guy so beloved he's known as "The Mayor of Running") speak. When asked this same question, he told a story about a marathon runner who went out for a weekend 20-miler, but stopped early. When Bart asked why, the runner replied that her GPS battery died, so she had to stop.

Don't let fancy equipment make you run less.

What you need for running is clothing and shoes. (And some people skip both now and then.)

Anything else is ancillary. Watch, iPod, GPS, heart monitor, phone with biofeedback tracking ... all of them have their place, perhaps, but none is necessary for every run.

And if the only way you ever run is with all that stuff, try going without now and then. You might just discover that you love what used to seem so boring.

13. **Speaking of gadgetry, do you recommend training with a heart monitor?**

Heart monitor training, where you adjust your pace to keep your heart rate in certain zones dependent on the type of workout you're doing, can be really interesting. But if you're a brand new runner, I probably wouldn't recommend it to start out.

Basically, I don't want you to create any needless barriers between yourself and your run. The equipment itself is becoming less a hassle, but even so, you'll probably experience data outages or inaccurate numbers now and then that will add stress and

numbers now and then that will add stress and confusion to your workouts. I'd rather you appreciate running for its simplicity, and make it something that's anything but stressful, confusing, and overly focused on numbers.

But I do think training with a heart monitor can teach you a lot, once you've finished your first 5K, maybe even a 10K, and are ready to jump to longer distances. At that point, I'd recommend training with a heart monitor (if it interests you) for a few months, mostly just noticing where your heart rate is while you train the different ways you've learned to train. Then compare to where it's "supposed to be," and adjust your pace to see what it feels like.

For example, you might think you're running slowly enough on your easy days. But when you put on a heart monitor, you might find that while you're running "easy," your heart rate is higher than the 65 to 70 percent of maximum heart rate that typically defines the "easy" zone. Then you'd slow down until your heart rate actually drops below 70 percent of max, and do that for your next few runs before making an assessment as to whether you truly are running too fast on your easy days, or if there's an error in your calculations or the measurement, or if perhaps the typical formulas and zones just don't fit your body.

A process like this (for all your workouts, not just your easy ones) can really teach you a lot about your body, and make you more in tune to how hard you're working when you run. And if you're a numbers person, having heart rate data to add to your mileage and pace data certainly adds to the fun (even if at times the numbers add to the distraction).

Personally, I think your experience with heart rate training will be better if you wait until you're comfortable with running, so that you have something to compare with what the heart monitor and formulas tell you, rather than blindly staying in the prescribed zones (which themselves vary, depending on whose approach to heart rate training you follow). Get your 5K done, maybe even a 10K, and then give it a try.

14. **Can I run on a treadmill?**

Absolutely. The biggest drawback of the treadmill is that it's boring (they don't call it the "dreadmill" for nothing). Your fitness will improve, but you won't truly experience whatever it is about running that has so many of us doing it every day.

Still, if you've got to make it work, music is your friend. (Some gyms even have TV's for treadmill users to watch, but we're getting farther and farther from the essence of running when we need a TV just to get our run in.)

The treadmill is a softer surface than road or sidewalk, and that's a plus. But because every step is identical on a treadmill (trail running being at the other extreme, with roads somewhere in the middle), there's probably a greater chance of repetitive overuse injuries if you do all your running on the treadmill. There's also no air resistance on the treadmill the way there is when you're actually moving forward, so set the incline on the treadmill to a half a percent (0.5%) to make up for this.

Finally, a treadmill won't work well for interval workouts, where you need to quickly make dramatic adjustments to your pace. All the workouts in the training programs included in this book can be done on a treadmill, but as you advance as a runner and start doing serious speedwork, you'll want to find a way to run outside (or on an indoor track).

Section 2

Training for Your First 5K

How to Choose Your Race

ou may have a race in mind – for most, "run a 5K" means run their hometown 5K. If that's what you want to do, more power to you … it's certainly convenient. But don't rule out the possibility of being Y a little bit more choosy.

Make sure you pick a target that will inspire you – a race that when you get home from work and the last thing you want to do is go run, pushes you out the door when you think of running it. 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, weather conditions, terrain, and size.

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.

If you've never run before, I recommend a training program of at least 10 weeks for a 5K, which is pretty standard. That's how long the plans I've included here are, so choose a race that's at least 10 weeks away.

Weather Conditions

The previous factor, time, also determines 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

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.

Terrain

Another thing to keep in mind is terrain. Most 5Ks you'll find are road races, but trail races 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, 100-person hometown race? Or a huge running festival, sometimes with tens of thousands of runners, where the 5K is just one part of a weekend of running-related activities?

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. But if you can handle that, the adrenaline rush of a screaming crowd is totally worth it.

If that's your idea of a good time, check out 5Ks linked to big city running festivals, which usually include a half marathon or marathon, since they will have big crowds and festivities.

About the Training Plans

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. 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 the training schedules that come with this program (developed with the help of USA Track and Field certified coach Jason Fitzgerald), they're not magic formulas for an injury-free 5K, 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 the programs are 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 6, you notice that shin splints are making it incredibly painful to run, then attempting the scheduled longer run that weekend is absolutely the wrong decision. There's no room for perfectionism in training for a race.

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 4 Plans in this Program

You've probably noticed that you got not one, but four different training plans with the 5K Roadmap. My hope is that after your first 5K (with the Beginner 5K Plan), you'll enjoy running enough to want to do another race (maybe even a 10K!), at which point one of the other plans will come in handy.

A bit about each plan, in the order with which I suggest you progress through the plans if that's your desire.

The Beginner 5K Plan – exactly what it sounds like, a plan to take a brand new runner from struggling to run a few minutes at time to completing a 5K (and running the whole thing, if you want to). There's only one pace of workout here, and that's Easy pace (described in the Training Plans PDF), with walk breaks to make the transition to running painless. The point is to get you moving and build a foundation on which further fitness gains can be made.

The Beginner 10K Plan – this plan picks up where the Beginner 5K plan leaves off, increasing mileage up to slightly beyond the 10K distance. Just as significantly, the 10K plan introduces a new type of faster-paced workout, called a fartlek. Besides that one workout each week, all other mileage is done at Easy pace, so the Beginner 10K plan represents a transition from "just getting started" to more serious running workouts.

The Advanced 5K Plan – for runners with some experience who want to run their fastest 5K. Though not completely necessary, having run a 10K before starting this plan is ideal, because the mileage is significantly more than in the Beginner 5K plan and even advances beyond the 10K distance in the second half of the plan. There are faster workouts as well, including a new technique called strides, all designed to get you to the start line in the best shape possible.

The Advanced 10K Plan – this is the toughest plan included in this program, but it differs from the Advanced 5K plan only in that the mileage is slightly higher. It's quite possible that once you've tasted the thrill of longer distances with your first 10K, you'll want to

thrill of longer distances with your first 10K, you'll want to jump right to the Advanced 10K plan, skipping the Advanced 5K plan, and that's totally fine.

A note on transitioning between plans: After you finish a race at a given distance, I recommend a week of little-to-no running before you start training again. Let your body recover, and give your mind a rest too.

When you're ready to jump into the next plan – and by the way, there's no reason you can't repeat the previous plan if you'd like to – I suggest that you spend two to three weeks running relatively easy miles designed to bridge any distance gap between where your previous plan left off and where the new one starts.

Don't overthink this; just look at the maximum total and long-run mileages from your previous plan and compare them to the first week's total and long-mile mileages in the next plan. Then spend a few weeks, running most at an Easy pace, gradually and comfortably building your mileage. If you follow the order that I suggest above, the gaps between the plans will be small, and you probably don't have to worry about transitioning at all, other than giving yourself a week or rest after your race.

The Roadmap: How to Get from Here to There

You'll find the actual 5K Roadmap training plans included in a separate file. While the other workouts all serve their own unique purpose, none is as important as the longer weekend runs. 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 on to the next scheduled workout when it's time.

If, on the other hand, you miss a long run – for any reason other than injury, 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 Workouts

During scheduled speed workouts (called fartlek workouts, no laughing ... I'll describe what exactly a fartlek is in the training plan PDF), 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.

On a similar, perhaps even more important note: when a plan calls for Easy miles (which is anytime no specific workout is given, only a number of miles), make sure your pace truly is Easy. As in conversational. As in, if you're getting precise, your heart rate stays below about 70 percent of max, depending on whose formula you're using.

The point: keep it easy. In my opinion, the most common cause of frustrating lack of progress among runners is doing the Easy runs too hard. Save the effort for workout days, and when the plan calls for Easy, keep the effort to an absolute minimum while still covering the miles.

Tapering

You'll notice that the mileage drops off during the last week. 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.

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

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 speed workout or hill workout, or running a time trial, you'd certainly want to warm up with a little light jogging or even a few short "strides," which are comfortable almost-sprints covering 50 to 100 meters, focusing on good form, light steps, and a fast leg turnover (more on turnover in the running form section).

Demystifying the Long Run

The long run is the most important part of any training program, 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, the long run will be the most trying workout of the week. So you want to make this test as easy as possible on your body and your mind. Your form and speed have a lot to do with how much your body breaks down during a long run, but so does where you choose to do your run.

For a first 5K, there's no need to venture out onto trails – your long runs will be short enough it's usually most convenient just to run on the roads in your neighborhood or at a local high school track.

But when your runs get longer – say, if you take on the Advanced plan or a 10K plan after you've run your first 5K – or if you're just up for some adventure, trails are a great place to do your long runs. 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.

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 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 speed 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.

Below, 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 d ble to do some resea running store about is non-technical a ers, if there are w trail to

water stops, and where the best place along the trail to start is.

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

But like I said earlier: if running the longer weekend runs from your front door on the road is more appealing, don't stress yourself worrying about finding a trail.

How to Plan a Long Run 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 5K.

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,

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.

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:

- **Hills:** A few are good, especially if your 5K will be hilly, but too many and too big can make your long run unduly stressful on your body.

- **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.

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

Running slower combats injury 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.

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 5K, 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 5K, 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:

- Keep everything relaxed: neck loose, head looking forward, shoulders down, hands very loosely closed

closed

- 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 take quick, light steps
- You want your whole body to lean forward slightly, but don't bend at the waist

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.

The Old 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 out-sprint 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 hundred thousand 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.

The New 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

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 I'm 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 5K runner, 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.

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 Technique for Injury-Proofing Your Stride

As I said before, I dealt with injuries ALL the time when I was a new runner. 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:

- Get on a treadmill.
- Set it to a brisk but comfortable speed (running really slow is actually harder than fast with this).
- 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

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 over broken glass, 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.

What to Do When You're Not Running

In the process of training, 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.

Recommended Types of Cross-Training

There are two resistance-training programs that I've used in the past 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. Both are core-focused workouts, from 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.

There are plenty more good options for cross-training out there. Look for workouts labeled "core" that appear to be more for athletes than the "As Seen on TV" crowd.

Among the other cross-training activities I like and recommend:

- Swimming
- Cycling
- Elliptical machines
- Rowing machines
- Body weight exercises and plyometrics
- Weight training with light weight and high repetitions

Non-Recommended Types of Cross-Training

When I first started running, 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 running 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 running.

Suddenly adding miles of running each week 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 running program. I'm saying it has no place in a training program for a first

training program for a first race (regardless of distance). 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:

- Sports where sprains or other sudden injuries are common
- High-impact exercises or sports

Foam Rolling

For most first time runners, 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 5K.

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.

Below are several foam rolling exercises I recommend. They're very common; I happened to learn about them first in the *Core Performance* book 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.

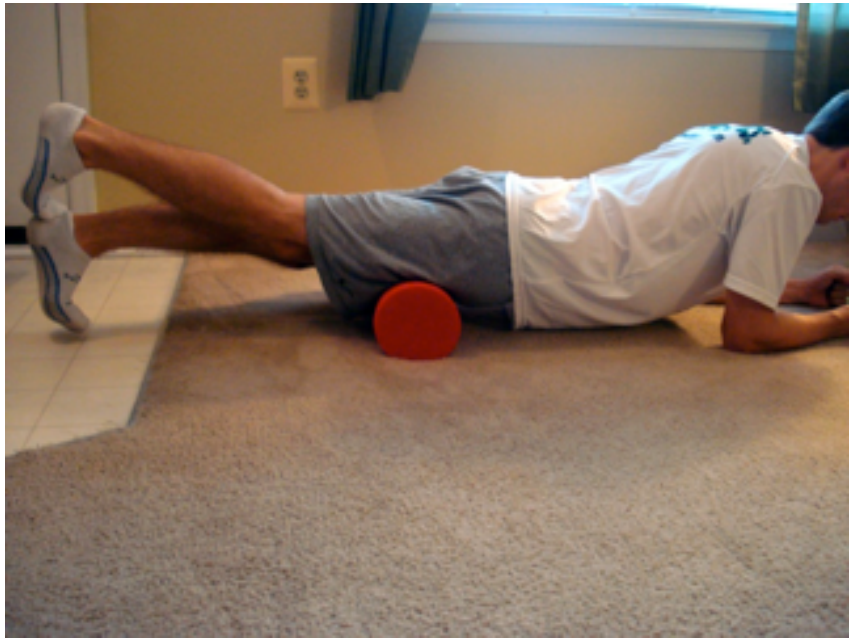
By the way, I use a GoFit foam roll. I got it at Target for around 20 bucks. But it's just compressed foam, so you might be able to find or make one for cheaper. Some running stores carry them as well.

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.

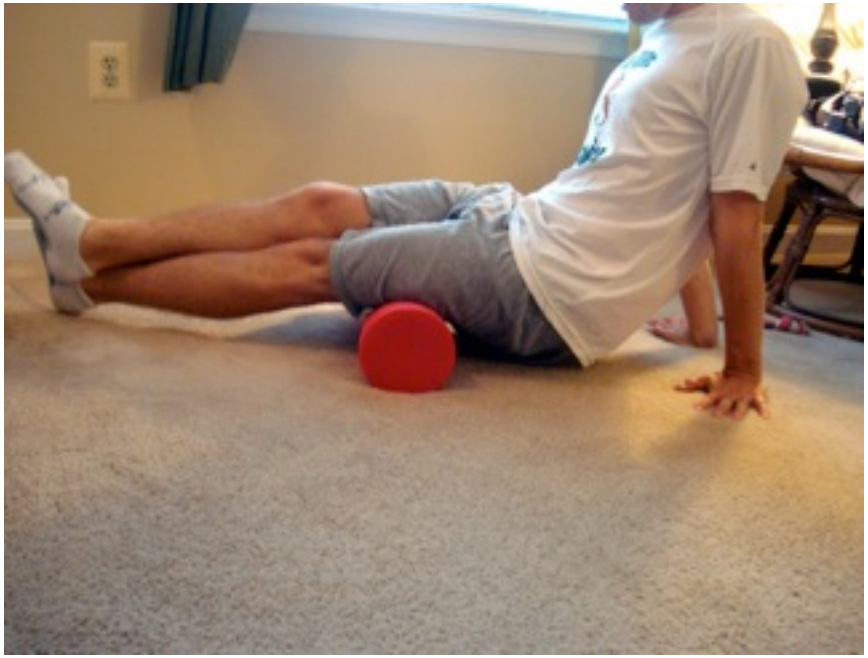
If you find it painful at first, you should ease into it, doing only as much as is reasonably comfortable. It should become much less painful after a few sessions.

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.

After about 30 seconds, move the ball farther down your leg. Switch legs and repeat.

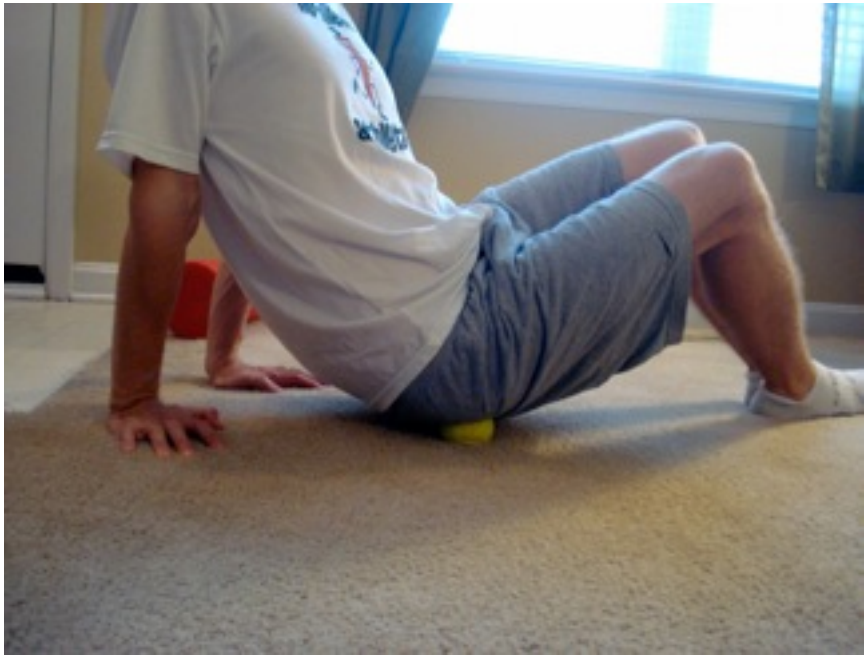


Hamstrings – Cross your legs so that most of the weight is on one leg. After rolling for 30 seconds to a minute one leg, switch to the other and repeat.



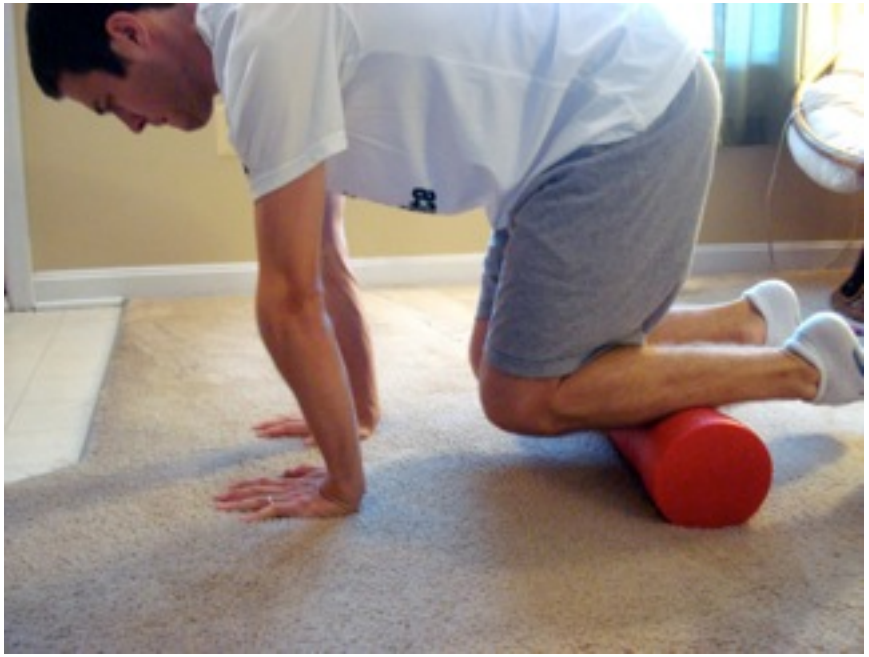
Calves – Cross your legs so that most of the weight is on one leg. After rolling for 30 seconds to a minute on one leg, switch to the other and repeat.

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*!

Dealing with Injury

Nagging aches and pains that accumulate throughout 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 3.1 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 self-diagnosis, 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.

Don't Try to Run Through 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 race 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

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 to Do If You Feel Pain on 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.

Treating Your Injury

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.

- 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.
- During this time, focus on stretching (preferably dynamic), foam rolling, and icing your injury.
- As you increase your training load again, replace some running with similar cross-training: stationary bike, elliptical machine, etc.
- 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!***

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.

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 5K or even a first 10K, DRF is a treasure trove of running information for when you're ready to step it up.

Section 3
The Diet

Why Plant-Based?

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, training for a 5K or 10K 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.

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 plant-based diet have to offer the new or serious runner?

A quick note about the language here: Throughout this section, I use the term "plant-based" instead of vegan or vegetarian, to mean, "a diet that's entirely or almost entirely based on plants." In an ethical context, the "almost" makes a big difference for many people, but in terms of health and specifically performance in our context here, the distinction is not crucial.

Performance Benefits of a Plant-Based Diet

From talking to several professional endurance athletes who choose a plant-based diet and in my own experience, it appears this diet can benefit endurance athletes in three main ways:

1. Weight loss and change in body composition

Make no mistake: This book is not about weight loss, and training for a race is not necessarily the best or fastest way to lose weight (though you may see that as a consequence). This book is about

a consequence). This book is about becoming a runner on a plant-based diet, 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 a run, every ounce counts. Competitive runners choose certain shoes because they weigh an ounce or two less than another pair, because when you're taking nearly 2000 steps per mile during 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 when you're running.

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

When you eat a plant-based diet, 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.

2. Recovery

When I talk to vegetarian pro 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 appears to lie 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 road again.

3. Variety in diet

I was guilty of it, and I'll bet that at some point in your life, you have been too.

You know how it used to go: when you were cooking dinner before you had thought about eating a plant-based diet, 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 moving toward a plant-based diet 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 Plant-Based

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.)

Most of the time, 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, for example.

But I've also come to learn about how we develop habits, and why we fail when we do. Most often, it turns out, failure is the result of taking on too much, too soon. Studies have shown that we have only a finite amount of willpower at any given moment, and when it runs out, we're hopeless against temptation until our willpower has a chance to rebuilt - in just the same way that after lifting a weight enough times in the gym, you can't lift any more until you give yourself some time to recover.

The upshot of this research is that at the beginning, our focus should be more on creating the habit than on making measurable, physical progress towards our ultimate goal.

To take a simple example, if you're starting a new workout routine, your best bet is not to spend an hour in the gym and wear yourself out the first day. It's tempting to do that, I know, especially if you're really motivated to make a change (and trust me, I've done it plenty of times). But if instead you can hold back a bit, teaching your brain the habit of getting in the car and going to the gym to do a short, light workout, so that you actually feel great when you're done and can't wait to do it the next day, you're beginning the

to do it the next day, you're beginning the formation of a real habit - one that sticks.

And that's how I feel about the transition to a plant-based diet, too. This is a time where slow and steady wins the race. I've seen too many people fail at all-at-once 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.

For example, back when I first went vegetarian, I had a friend who saw the impact it 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. (This isn't uncommon when you make a drastic change all at once instead of gradually.) 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 (the second time, when it actually stuck), 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 Plant-Based

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 four-legged meat with poultry, or fish. Four legs to two legs (or fewer) 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, more power to you, but mainly, all that's left is fish (zero legs). You'll probably find it weird to eat fish at every meal, and with mercury issues that probably wouldn't be healthy anyway. So use the opportunity to introduce lots of vegetarian or vegan 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.

Be Careful Not to Drastically Reduce Calories

Very often when someone does not have success when they try a plant-based diet, it's the result of simply not eating enough. When you suddenly remove calorically dense animal products from your plate, you're looking at a big reduction in total calories!

This can be a great thing if you're trying to lose weight. If you're not, though -- especially at a time when you're increasing your activity level -- you'll need to make sure to eat enough. You'll still have trouble taking in as many calories as you used to, and that's okay. One of the great things about a plant-based diet is that since plant foods aren't as calorically dense as animal

as calorically dense as animal products in general, it's hard to overeat before they fill your stomach and give you that full feeling.

Also, since whole plant foods are so rich in nutrients, you'll find that as you make better food choices you don't need quite as many calories as you were getting before. And more nutrients in fewer calories is a recipe for health.

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 ebook about doing a 5K on plant-based diet, 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.

If you want to go completely vegan, you've still got some work to do, and you can phase out dairy and eggs in much the same way. I'd take them out one at a time, spending a week or more without one before you cut out the other.

In making the transition to a plant-based diet, it's helpful to treat it like any other goal, sort of like what we did when we wrote things down about your running goals at the beginning of the book. See a No Meat Athlete post called 7 Steps to Eating Less Meat Now for a few concrete steps you can take to maximize your chances of success.

Mark Bittman's "Vegan Before 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

Bittman, in his book Food Matters, is eating "vegan before 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 before 6" is a good transition step for lots of soon-to-be vegetarians or vegans.

Congratulations, You're On Your Way to Eating Plant-Based!

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 plant-based diet, if you're not there already.

If you're like I was, you might find that once you cut out meat but before you cut out dairy and eggs, 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 plant-based 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 No Meat Athlete, and you should be proud.

Karol Gajda, karol.gajda.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.

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 a plant-based diet, eat whatever you need to in order to stick with it. I don't recommend going ultra-healthy right away, unless that happens to be the food that you find most appealing. The reason, again, is that by making it easy and fun in the beginning, you're increasing the chances of sticking with it past the common, early failure points to make your new diet a habit.

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 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 swim, bike, and run so far that people question your sanity).

So what I'll suggest are seven "guidelines" I recommend you adopt during your 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 as soon as your feet hit the ground after the bike. Don't be fanatical about

ground after the bike. Don't be fanatical about your diet; just make good choices 90 percent of the time.

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. Take it easy 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 any 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 possibly 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 quinoa pasta, but there are lots of other varieties, like those made from rice and even chickpea flour.

Many modern elite athletes, non-vegetarians included, are tending toward gluten-free diets and seeing performance benefits as a result

performance benefits as a result of less inflammation in their bodies. 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. To assess your own level of gluten sensitivity, you might find it helpful to try going a week or ten days without any wheat whatsoever in your diet and noting how you feel towards the end of that period versus how you feel when you reintroduce it.

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

There's an old Italian saying that goes something like, "The whiter your bread, the sooner you'll be dead." (Love those Italians!) 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 largely devoid of anything useful. By instead choosing minimally processed 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 it signifies is that more than one grain was used, and often these grains are refined. Check the label to ensure that only whole grains are used.)

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

Lots of people make a big deal about protein on plant-based diets, 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, along with many micronutrients that you won't find in processed carbohydrate sources. These two foods are where I suggest getting most of your protein, along with hemp protein powder and very occasional, minimally processed soy products like tofu and tempeh. (But even whole grains and some vegetables often pack a surprising amount of protein.)

5. Get the benefits of healthy fats from nuts and occasional cold-pressed oils.

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 some 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.

If you're not trying to lose weight, I believe fats play an important role in an athlete's diet. I'm not quite the fan of oils that I used to be, since when they're extracted, most of the phytonutrients that make plant foods so amazing are left behind. But although I prefer nuts (raw or only lightly toasted) and whole avocados as fat sources, I still consider oils in moderation (no more than a

than a tablespoon or two per day) to be valuable for plant-based athletes.

When cooking with oils and heating them to high temperatures, choose those with high smoke points, such as grapeseed oil. Save your extra-virgin olive oil for salads or low-to-medium temperature cooking. Flaxseed oil and hempseed oil 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 as "earning" that big hunk of white bread, bowl of white rice, or sugary recovery drink by completing a

white rice, or sugary recovery drink by completing a tough workout.

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

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, let yourself have seconds when you want them. You might find that you lose weight anyway, due to all the activity, or due to the plant-based diet if you've been a meat-eater 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 the small weight gain is just a response to the stress of adding more running to your routine. 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, so don't fret.)

Staple Foods

The list below represents some common foods that will help you meet the caloric and nutrient requirements of endurance 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.

Preferred Foods

- All vegetables, cooked and raw, especially leafy greens and

greens and cruciferous vegetables

- All fruits, usually raw
- Beans and legumes: My favorites are lentils (red, brown, green), chickpeas, black beans, pinto beans, adzuki beans, and white beans
- Starchy vegetables like sweet potatoes (save the white ones for immediately before or after workouts)
- Brown rice
- Whole-grain bread, pasta, pitas, and bagels (wheat limited; try alternatives made with other grains or sprouted wheat)
- Other grains and seeds: spelt, buckwheat, farro, millet, quinoa, flaxseed, hempseed, chia seeds, pumpkin seeds
- Nuts, nut milks, nut butters: almonds, cashews, walnuts, almond milk, hazelnut milk, peanut butter, almond butter, sunflower seed butter
- Coconut milk (in small amounts)
- Oils: grapeseed, olive, coconut, flaxseed (unheated), hemp (unheated)
- Protein powder - hemp protein is a minimally-processed type that I prefer; or a hemp, rice, and pea protein blend which offers a complete essential amino acid profile
- Herbal tea

Other Foods, Limited

- Whole wheat products
- Soy products - minimally processed only, like tofu and tempeh
- Seitan (it's high in protein but is made from wheat gluten, so take it easy)
- Tea and coffee
- Agave nectar (as workout fuel, *not* an all-purpose sweetener)

A Sample Grocery List

One of the most popular articles on No Meat Athlete is called "The Vegetarian Athlete's Grocery List." I've included that list here for your use:

- **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
- **Starchy Vegetables:** Potatoes, Sweet Potatoes
- **Legumes:** Lentils, Chickpeas, Black Beans, White Beans, Pinto Beans
- **Non-Wheat Grains:** Brown Rice, Quinoa (not technically a grain), Granola, Spelt Pasta
- **Wheat Products (limited):** Whole Wheat Bread, Pasta, Pitas, Bagels, and Wraps
- **Nuts and Seeds:** Almonds, Cashews, Walnuts, Flaxseeds
- **Spreads and Pastes:** Hummus, Nut Butters (almond is great, but expensive), Tahini (sesame seed paste), Baba Ganoush
- **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
- **Protein powder:** Hemp, Rice-Pea-Hemp blend
- **Soy Products (limited):** Tofu, Tempeh, Tamari or Bragg's Amino Acids
- **Tea and Coffee (limited)**
- **Other Snacks (limited):** Baked Tortilla Chips, Salsa, Popcorn
- **Miscellaneous:** Almond Milk, Coconut Milk, Agave Nectar (as workout fuel, not an all-purpose sweetener)

Caloric 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 and life in general. 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
- 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 plant-based 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.

"But Where Do You Get Your Protein?"

If you've eaten a plant-based diet 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 starchy 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 (in a minimally processed form, not an isolate), but here's a longer list of top vegan protein sources.

- Tempeh (30g in one cup)
- Tofu (16g in one-half pound)
- Lentils (18g in one cup, cooked)
- Soybeans (29g in one cup, cooked)
- Other beans, like chickpeas, black beans, kidney beans (12-16g in one cup, cooked)
- Quinoa, spelt, and other seeds and grains (Protein content varies, usually around 5g in one cup, cooked)
- Seitan (31g in 3 ounces)
- Nuts (5-8g per quarter cup)
- Nut butters (5-7g in two tablespoons)
- Hemp protein powder (15g in four tablespoons)
- Rice-pea-hemp protein powder (12g in one heaping

heaping tablespoon)

- Spinach (5g in one cup, cooked)
- 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 technically plant-based, contributes little or nothing of value - leftovers eliminate this problem. The sample meal plan assumes you will do this.
- 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.
- 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 brown 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

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 You'll 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
- 2 small handfuls frozen or fresh fruit
- 2-4 tablespoons protein powder
- 2 tablespoons binder
- 1.5 tablespoons oil (optional)
- 1.5 cups liquid (adjust amount as needed to change consistency)
- 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

- Strawberries (you can leave the greens on if you have a powerful blender)
- Blueberries
- Blackberries
- Raspberries
- Peaches

- Mango
- Pineapple

Recommended Protein Powders

- Hemp
- Sprouted brown rice (tastes chalkier than hemp, but packs more protein per dollar)
- Pea-rice-hemp blend

Soy is a higher-protein, generally cheaper option, but for a variety of reasons I don't recommend it for everyday use. Mostly, the problem is that it's nearly always in highly processed, isolate form.

Recommended Binders

- Flaxseed, ground
- Almond butter or any nut butter
- Soaked raw almonds (soak for several hours and rinse before using)
- Rolled oats, whole or ground
- Udo's Wholesome Fast Food
- Raw pumpkin seeds, ground
- Chia seeds

Recommended Oils

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

Recommended Liquids (unsweetened)

- Water (my favorite)
- Almond milk or other nut milk
- Hemp milk

- Brewed tea

Recommended Sweeteners

- Agave nectar (high in fructose, so choose this only before workouts)
- Maple syrup
- Lucuma powder

Optional Superfoods, Greens and Other Ingredients

- Cacao nibs (1-2 tablespoons)
- Carob chips (1-2 tablespoons)
- Ground organic cinnamon (1-2 teaspoons)
- Greens powder (1-2 teaspoons)
- Whole spinach leaves (1-2 handfuls)
- Whole kale leaves
- Jalapeno pepper, seeds and stem removed (one small pepper)
- Ground cayenne pepper (small pinch)
- Sea salt (pinch)
- 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, several seeds are included in the "binder" category, but I sometimes include few tablespoons of each of them 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

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" (forgive me, I love hideously bad puns):

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

B12)

- Dried berries
- 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. Or skip the oil entirely if you like, or scour the web for some nut-based dressing recipes to add the healthiest type of fat to your salad.

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 my preferred vinegars from a health standpoint.

Give the oil-and-acid 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 PDF. We recommend following the plan for two weeks (swapping out recipes with others in this book, if you desire) and later adapting the plan to include other recipes and to adjust portion sizes as required for your particular body, lifestyle, and current training phase.

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

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 "high-maintenance" 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*
- *Breads*
- *Pizzas*
- *Stews*

I also make it a point not to use my dehydrator often, and

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!

Nutrition Concerns and Plant-Based Diets

Most people I talk to who have recently stopped eating meat (or all animal products) 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. Most often, it's just withdrawal symptoms that pass after the initial two weeks of the new diet, but every once in a while, issues are longer-lasting or crop up after several months or years of eating a plant-based diet.

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. And even if you are feeling good, it's not a bad idea to get your blood checked every once in a while to make sure all your levels are alright.

Protein Deficiency

Most omnivores make a bigger deal about protein when they argue with vegetarians and vegans 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.

Although protein deficiency is extremely rare (some say it's impossible to be protein-deficient without having a total calorie deficiency), as an athlete you should at least be aware of the symptoms of protein deficiency.

You might try increasing your protein intake if:

- 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.)
- You don't recover from workouts quickly or you get injured frequently. Vegan athletes very often report faster recovery as a primary advantage, so if you're experiencing the opposite, it's likely that something's missing.

- 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 cites 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:

- Beans (soybeans and lentils, especially)
- Pumpkin seeds
- Blackstrap molasses
- Spinach

B12 Deficiency

Vitamin B12 is found almost exclusively in animal products, so vegans are at risk for Vitamin B12 deficiency if they don't supplement. For new vegans, B12 deficiency may take months or

B12 deficiency may take months or years to develop, since the body can store enough B12 to last for long periods of time, but that doesn't mean you can ignore it.

Symptoms of Vitamin B12 deficiency include numbness or tingling, and digestive upset.

Vegans should get Vitamin B12 from a supplement or fortified foods to avoid becoming deficient. Jack Norris, RD, suggests a 10mcg dose of B12 daily, or a 2000mcg dose weekly.

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 plant-based nutrition. In fact, one of the arguments for veganism as an ideal diet for endurance sports is that during a workout, almost everyone is vegan anyway!

The following guidelines governing pre-, during-, and post-exercise nutrition are based on a series of posts on No Meat Athlete, 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 (not for the Paleo guidelines, but for the excellent section about nutrition around workouts, which is compatible with plant-based diets).

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 as a 5K runner.

Pre-Workout Nutrition

For basic 5K training (like the Beginner Plan included with this program), you won't need to worry much about pre-workout nutrition. Your workouts are short enough that you won't deplete the glycogen supply in your bloodstream, so the main concern pre-workout is avoiding foods that might upset your stomach or make you feel overly full.

Honestly, if you're following the Beginner Plan, you'll be fine if all you do pre-workout is avoid eating anything much in the hour before you run. Some fruit juice or a piece of fruit is plenty for a workout that's only going to last a half hour or less.

If after your first 5K you decide to try the Advanced Plan, or even a 10K or half marathon, that's when you'll want to make use of the guidelines below.

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 watered-down 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 it's high in medium-chain triglycerides, which the liver treats similarly to glucose, a quick-assimilating 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 from vegan Ironman triathlete Brendan Brazier. 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 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, so you'll get electrolytes during your workout if you're consuming any of those. But you can get a head start on electrolyte replacement simply by adding salt or dulse powder to your pre-workout drink.

Nutrition During Your Workout

Again, with the 5K Beginner Plan, your workouts are probably short enough that you don't need to be concerned about eating or drinking during them. If you're thirsty (particularly if it's hot out), then it's not a bad idea to sip sports drink or water to stay hydrated and comfortable. If weight loss is a goal of yours, I'd suggest avoiding during-workout calories until you graduate to workouts of longer than 45 minutes to an hour.

Should you decide to train with the 5K Advanced Plan or for a 10K or half marathon, I've included the important guidelines here.

1. Get off the commercial drinks.

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 (what you'll find at the convenience store) cater more to the masses of non-

convenience store) cater more to the masses of non-athletes who buy them as soda alternatives. Much better to make your own natural sports drink, courtesy of pro vegan triathlete Brendan Brazier, in his book *Thrive.* A simple sports drink made from one part water, one part fruit juice, and a pinch of salt per 16 ounces also works great for most types of training.

2. Consume mostly liquid or easily-digesting food.

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 4 to 6 ounces of water every 10 to 20 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. But that much detail is probably unnecessary, and a guideline like the above suffices.

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 (this applies mainly to long workouts and races, like marathons or longer). If you're making your own drinks and gels, 500 milligrams of sodium is about the amount in a quarter teaspoon of salt.

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

Thirty to sixty 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-Workout Nutrition

One more time: for the 5K Beginner Plan, during which the workouts are short and at a relatively low intensity, you don't need (or want) to take in a lot of calories around your run. Eat a little something if you're hungry after you finish, or sip some fruit juice or sports drink, and eat again whenever you'd normally eat.

For longer workouts (the 5K Advanced Plan or either 10K plan), the following principles will become more important:

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.

3. Focus on carbohydrate and 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 during workouts should generally be high-glycemic index carbs, like glucose (dates are a good way to get it). 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. 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

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.

5. 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 workouts, 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 7-Eleven.

Section 4
The Race

Race Day

There's a strange thing about race day. You know, going in, that for the day to feel like a success, you'll need to dig deeper than ever before … and that it's probably going to hurt.

And yet this is the day you'll look forward to more than any other. You'll be a little scared, 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 one of my big races, "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 runners-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 many weeks 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.

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

Eating During the Week Before Your Race

The week leading up to the race is the time to "top off the tank" and rest. So live it up a little, eating larger portions (but keeping it

portions (but keeping it healthy), sleeping a little more, and relaxing as much as possible. The longer your race distance, the more this applies. For a 5K that you're not racing, but rather just running to finish, the best approach is to simply do what you've done in training. If you know it works, don't change anything.

If you are going for speed, or taking on a distance like a 10K or longer, 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.

Packet Pick-Up

For many small, local 5K races, you'll need to pick up your race packet the morning of the race. Pay attention to any emails you get from the race director, because they'll tell you what time to show up and where to pick up your packet, which usually contains a bib and timing chip. If you haven't heard anything about packet pickup and the race is approaching, check the race website for info. Some very small races don't use bibs or timing chips at all – this case, at least wear a watch so you know your actual race time (which won't

necessarily match the clock time if you don't start right up front).

At larger races or running festivals with a half marathon or marathons along with the 5K, there's a good chance that there will be no race-day packet pickup, and you'll need to go the day before to an expo or other location to pick up your packet. Expos can be fun, and a good chance to talk to other runners and check out shoes, clothing, and all sorts of food. Be careful with sampling new foods though; if you have a weak stomach then it's not worth the risk of eating something that might mess up your race.

Regardless of whether it's race day or the day before that you pick up your packet, make sure you've printed out any information you're supposed to bring with you. And when you get your bib, check to make sure you've got all four safety pins … no reason to add stress before the race searching for a pin.

If you have any trouble figuring out how to attach your bib or your chip (some chips are built right into the bib nowadays, by the way), just ask a volunteer or another runner for help.

Eating the Day Before the Race

If you've chosen a race that's far from where you live and you're vegetarian or vegan, make sure you figure out the food situation by scoping out the area ahead of time. For a 5K you don't need to do anything special the day before (carbo-loading is really only important for races that'll take you 90 minutes or longer to run), but still, the day before the race is not the day you want to settle for a salad because you couldn't find anything substantial to eat. Worst case, buy a bunch of fruit from a grocery store and snack on that throughout the day, in between (hopefully) larger meals.

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. And like I said, carbo-loading just isn't

necessary before a 5K – eat as close to normally as possible.

For dinner before your race, 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 roll, 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.

And by the way, 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 your sleep.

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 your brain to just fall asleep so you can get at least a few 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 Race

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, and all the energy you've put into just thinking about this race … 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, you're going to go to bed a 5K finisher. Maybe a tired, sore finisher, but a finisher nonetheless.

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

What Time Should You Wake Up?

A nice thing about the 5K distance is that you don't need to eat much before the race, so you don't need to wake up extra early just to eat (something a lot of marathoners do).

But of course you want to give yourself enough time to get ready, eat something light so that you're comfortable (more on what to eat in a bit), and arrive at the race with plenty time to park, pick up your packet, and warm up, so that there's no needless stress.

Pack your bag with whatever you plan on bringing to the race and lay out your clothes the night before, to save yourself time and stress in the morning.

You'll have to figure out exactly what time to wake up, accounting for how far you have to drive and how busy you expect the race start and the traffic to be. Obviously, err on the side of caution: it's no fun to be stuck in traffic watching the clock tick closer and closer to start time, then having to rush to get there. You've worked

to start time, then having to rush to get there. You've worked too hard not to make this day as pleasant and enjoyable as it can be.

What to Bring to the Race

By race day, you should know what you need to bring with you on a run. But just to make sure you don't forget anything important (and to suggest a few things you mind want to bring out of extra caution), 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.

- 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.)
- Timing chip
- Extra clothing to keep warm before the race
- A garbage bag (for warmth, rain protection, and an emergency bathroom stall if the lines are long)
- Gloves and hat or headband
- Compression gear and any straps or braces you wear
- Something warm to wear after the race (could be the same as what you wore before the race)
- Food or drinks you need before the race
- A few dollars for buying food/beer/soda/whatever after the race (a lot of times you need cash)
- A sandwich or something else substantial to eat after the race (it might be hard to buy what you need a afterward as a vegetarian or vegan)
- Anti-blister powder
- Anti-chafe lubricant
- Race packet (just in case there's something in there that you didn't realized you'd need)

- Course map (for your spectators)
- Camera (you probably won't want to carry it, so give it to your spectators)
- Cell phone (I wouldn't recommend carrying it unless it really doesn't bother you)
- Watch/GPS device
- iPod (check the race rules to make sure it's allowed)
- Sunglasses
- Sunscreen
- Chapstick
- Tissues or toilet paper

Ideally, pack your bag and lay out your clothes the night before the race, so that you it's one less thing to worry about and nothing suddenly disappears an hour before the race starts.

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 with plenty of time to get ready and eat. So what should you eat?

The most important thing to understand, at the 5K distance, is that what you eat isn't as important as what you *don't* eat. There's not a lot you can eat that will significantly boost your performance in a race that takes less than 45 minutes, but there sure is a lot you could do to mess it up!

In short, don't eat anything new (you should know from all your weekend long runs what works for you), and don't eat anything overly fatty or too fibrous. These can cause digestive issues. Same goes for too much caffeine, but if you're used to drinking it each morning before your runs, then today isn't the day to quit.

A few general principles to follow during the hours before the start of the race:

- In the two to four hours before your race (if you're up that early for some reason), eat a small meal with some protein and simple carbohydrates, and drink of water or sports drink. The more time you've got until the race, the larger this meal can be, but don't stuff yourself. 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.
- **In the hour before the race, don't eat very much.** Most experts recommend only water or sports drink. I personally don't even drink much at this stage, to avoid having to use the bathroom during the race. Standing in the start corral already having to go to the bathroom is no good.

The Race: Start to Finish

Arriving at the Race

Usually, I plan to arrive at the race no later than an hour before the start (and I'm one of those people who is never on time for anything). This is probably more time than you need, but it doesn't hurt to be early, especially if it's your first time.

Once you're there, pick up your packet and put your bib on first, to get that out of the way. With the rest of the time until the race, all you've got to do is get warmed up (assuming you're racing, and not just taking it easy) and make your way to the start – ideally with an empty bladder.

Should You Warm Up?

For a 5K that you're racing, yes. If you're trying to run the distance as fast as you can, the intensity will be high enough that a warmup is warranted.

But if you're just jogging the race, perfectly content to finish a 5K regardless of how much time it takes you – and especially if you're worried about running that far, much less adding more with a warmup – then don't worry about it. You can think of your first, leisurely mile as a warmup if you want.

If you are going to do a warmup, shoot for five to ten minutes of easy running, followed by four strides (see the Training Plan pdf for descriptions of Easy pace and strides). This whole routine will take you 10 to 15 minutes, and you want to finish as close to the start time as possible (allowing yourself time to line up, which will vary depending on how big the race is).

Remember, though: no static stretching before a workout, and that goes for a race, too. Even if everybody else is doing it … I don't want to hear it!

Lining Up at the Start

It's not rocket science, but if you've never run an organized race before, it helps to know what to expect.

The fastest runners line up at the front. Depending on how big and competitive your race is, there may be a special area up front that's designated for elites and invited runners, and they'll take off a few seconds before everyone else.

You should line up roughly according to how fast you are. Big races formalize this, assigning you to a starting corral based on projected finish time. When the gun goes off and everyone starts moving, it may be a few seconds, a full minute, or more before you reach the start line. Of course, your chip won't start recording your time until you cross the start line, so your official time will be different from what the race clock says. Start your own watch when you cross the start line so that you can pace yourself correctly.

In a smaller race, there won't be the structured corral system, but you should still try to position yourself around runners who expect to finish in the same amount of time you do. (When all else fails, get around runners who look like you!) You don't want be too far forward and get trampled by faster runners behind you, nor do you want to be dodging (or trampling) slower runners because you

slower runners because you positioned yourself too far back.

The Race Itself

For all the work it took to get here, there's really not that much that's left to do on race day. Basically, it's "trust your training, and go out there and run the best race you can."

How you'll do in the race is mostly determined already, by the training you put in.

Race strategy is like pre-race nutrition, in the sense that there's not a lot you can do to improve on what all your training has built, but you sure can mess it up! And there's one primary way that happens to new runners.

When the gun goes off, there will be an adrenaline rush. Runners who are looking to set personal bests will try to position themselves in front of anyone who might slow them down, and the tendency will be for everyone to speed up. You'll feel the need to keep up, even when it's faster than you planned on running.

Don't.

The most important part of race strategy is sticking to your plan. You should know the pace you're going to run, and stay with it, no matter how much the rush of the crowd makes you want to speed up. When you reach a certain point in the race -- say, the halfway point, or better, the final mile -- only then should you let yourself run any faster than you had planned.

Why is this so important? Because of all the things that can turn a perfectly good few months of training into a race day that feels like a failure, going out too fast is the most likely to occur.

It's race day, and you're excited already. Everyone else is running too fast, and you get the sense you can too -- that you can hang onto just about any pace for 3.1 miles. But you can't, and it'll hit you like a ton of bricks after the first mile and a half, making the rest of the race a slow, painful disappointment.

True, this is a much bigger issue among half marathoners and marathoners, where too fast a start can result in hours of pain and

can result in hours of pain and snail's pace progress instead of minutes. But even in a 5K, your experience will be so much better (and likely something you'll want to do again) if you can speed up during the second half rather than have to slow down.

To repeat: know your goal pace before you get to the start line. Run at that goal pace, but no faster, until you reach a point where you know that even if you misjudge what you've got left in the tank, the penalty for running too fast won't be great. I'd recommend the final mile (or a few minutes after your hit the 3K mark, if that's how your race is marked) as your go-zone, where you're free to speed up if you feel you can maintain that faster pace.

What Pace Should You Run?

If you've been following the Advanced plan, then many of your fartlek workouts have been at goal 5K pace, or goal 5K pace plus a a few seconds per mile. If you've completed these workouts without a problem, then you know the goal pace you've been using is a reasonable one ... so that's your pace.

If you've been following the Beginner plan, then you haven't had any specific paces to hit with your workouts. But you should still know the pace you've run for your two or two-and-a-half mile runs, your conversational, Easy pace. If you use this -- the pace you've used in the running sections of the workouts, not the average pace after accounting for walk breaks -- you'll have a very conservative 5K pace. If you're the conservative type and are happy just to finish, there's nothing wrong with using your Easy pace for your entire 5K.

But if you'd like to run a faster time, go for it. Most experts say that your Easy pace (assuming you've found it, the fastest pace you can handle while still carrying on a conversation without much difficulty) is about 80 percent as fast as you could run a 5K. To calculate your estimated 5K pace this way, take your Easy pace (let's say 10 minutes per mile, for example) and divide by 1.25. In this case, you get 8 minutes per mile as your 5K race pace. No sweat if you're not comfortable racing this much faster than you trained, but keep the number in mind for next time, and try some

number in mind for next time, and try some speed workouts to get a feel for what this pace feels like.

(One warning: if your Easy pace isn't a round number of minutes, it's easiest to first convert to seconds before dividing by 1.25, then converting back to minutes at the end. Otherwise, it's easy to get confused when the calculator says something like 10.50 and means 10.5, or 10 minutes, 30 seconds -- not 10 minutes, 50 seconds.)

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 cheeseless pizza and some potato chips. Just eat something.

If you drink alcohol, you might want to celebrate with a beer, and some races will even provide you with a free one in celebration of your kicking the race 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 them had drinking beer 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. Do some minimal stretching or foam rolling to avoid stiffness.

Now Go Make Yourself a 5K Runner

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 way more in a few pages of this guide than most runners know going into their first 5K. 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 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 5K and become a runner.*

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 race 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 Beginner's Guide, 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.