

# SMART

MARATHON &  
HALF-MARATHON  
TRAINING PLANS

# MARATHON TRAINING

*Run Your Best Without Running Yourself Ragged*



JEFF HOROWITZ

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# Introduction

## **“YOUR BONES WILL TURN TO DUST.”**

I'd been a long-distance runner for about six or seven years when a friend of mine—a *nonrunner*—said that to me.

I'd run my first marathon back in 1987. I didn't feel the need to run it again the following year, but by the next fall I was back at marathoning. Then I ran two marathons in the same year, which conventional wisdom said was the body's 12-month limit. But I felt fine after that second marathon, and I felt very motivated to get back out there again, so I decided to run a third one that same year. I finished the race feeling strong; my legs didn't fall off, and nothing was broken, strained, or swollen. That's when I began to question some of that conventional wisdom.

Over the next few years, I ran four, then five, and, ultimately, eight marathons in a single year, in addition to half-marathons, 10-milers, 10Ks, and 5Ks. Plus training, of course. I had my share of blisters, but nothing worse than that.

It was around that time that my friend made his prediction about what the future had in store for me. Given my racing volume, it wasn't an entirely crazy thing to say, I guess.

Except that I knew that he was wrong. I knew my body better than anyone else: its tendencies, its aches, the things it hated, and the things it loved. And my body loved long-distance road racing. As long as I was motivated, had no injuries, and felt strong, I saw no reason to deprive my body of that pleasure. Eventually, I ran as many as 14 marathons in a single year,

sometimes on consecutive Sundays, week after week after week. I got faster, too, qualifying for the Boston Marathon and usually placing in the top 10 percent of any race I entered.

But I wasn't winning anything. I knew that to hit my peak as a marathoner, I probably had to pare down my racing. I would have to target a single marathon each season for one supreme effort.

I considered doing just that, but I realized that running a single, gloriously fast race wasn't the most important thing to me. I loved the marathon *experience*: the crowds, the journey, the finish lines. Whenever I heard about a race I hadn't run, I was captivated; it sounded like a dessert that I absolutely had to try. I wanted to experience as many of them as I could, and so I chose to enjoy the experience instead of going for the impressive personal record (PR). That was the kind of runner I decided I would be.

Eventually, my running would take me all over the world, to race starting lines in all 50 states and in places as far-flung as China, Antarctica, Africa, Thailand, and the Himalayas. I saw many wonderful places, met some amazing people, and experienced life in a way some people only dream of. I felt like the luckiest man in the world. I still do.

I didn't want to keep this experience all for myself, so I became a certified running coach and personal trainer. Over the following decade, I introduced hundreds of people to the thrill of completing their first half-marathon or marathon or, if they were already experienced, to running their new personal best.

## **DURABILITY: ART OR SCIENCE?**

There are two kinds of long-distance runners: the kind who admit to having been injured and the kind who don't. I didn't bother to deny anything; I ended up with my fair share of injuries. In fact, much of my knowledge of physiology is rooted in having to learn about a part of my body after hurting it. But all of these injuries were transitory. Everything healed sooner or later, especially after I'd analyzed why I'd gotten hurt in the first place and made the necessary adjustments to keep it from happening again.

And now, with over a quarter century of road racing behind me, including 150 marathons and ultramarathons, my bones are as solid and strong as

ever. These days, no one predicts that my body will fall apart. I've been doing this for too long for anyone to dispute that it can safely be done.

Instead of predicting doom, people wanted to know, how did I manage to stay healthy and whole while doing all this running?

I wondered that myself.

The numbers seem daunting: Every marathon involves something on the order of 40,000 steps to complete, and every step puts up to four times my body weight of 155 pounds on each foot. The totals are frightening: My 150 marathons alone—not counting all of my training runs and other races—have required me to take about *6 million steps*, inflicting a total of *3.72 trillion pounds* of pressure on my feet, knees, hips, and back.

How could my body possibly take all of that pounding?

People insisted that I was superhuman. I liked to think so, but my wife would have disagreed, and she'd have been right. But I will grant myself this: I'm fairly unusual. You won't meet too many people who have run as many long-distance races as I have, for as many years as I have. I've managed to do it all without having any great gifts as a runner. Even if I'd focused my training on getting as fast as possible, I never would have become an elite racer; I just never showed that spark of quickness that could have been fanned into great speed. And my consistency as a runner—my strongest characteristic as an athlete—isn't record-setting, either. I'm not even among the top 10 most prolific marathoners alive today, and the world record for the most lifetime marathons run is more than 10 times what I've achieved.

But I have raced a lot, more than most of the serious runners out there and far more than any doctor would say should be humanly possible. Every orthopedist I've ever spoken to has warned me about how bad my running routine is for me and about how my body must surely be on the verge of collapse.

Once, for example, I went to see an orthopedist shortly after running several marathons and a 50-mile ultramarathon within a few weeks. I was experiencing hip pain, and even though common sense told me that I was probably just sore and tired, it was a new ache, and I thought it wouldn't be a bad idea to get the ache checked out.

After the appointment, I wasn't so sure of that.

The orthopedist examined me and pronounced my hip shot. "Your marathoning days are over," he said. I explained that the problem felt more

muscular than skeletal, but he insisted. Who was I to tell a doctor that he was wrong?

Here I was again: *Your bones will turn to dust*. After listening to this orthopedist long enough, I began to wonder how I'd actually managed to run a marathon at all because he made it seem so utterly impossible. But I had to keep in mind that the only runners most orthopedists meet are the ones who come to their clinics with battered bodies; the healthy ones never stop by to say hi. If an orthopedist sees only hurt runners, maybe he comes to believe that all running hurts.

I also considered how happy the doctors all seemed when they reviewed my overall health profile. They were quick to point out how all my numbers were in the normal range or better, sometimes much better. How did they think this came about? Magic and wishful thinking? If running were so bad for me, how had it managed to make me so healthy?

I decided to prove the doctor—and all doctors like him—wrong. My hip didn't feel like it was about to collapse, and I wasn't about to give up running without a fight. Yes, there are times when injuries and other limitations cannot be overcome by sheer determination. But as a rule of thumb, I'd rather assume that I *can* do something and be proved wrong than to not even try. If I accepted conventional wisdom about my limitations, I'd never have found out what I was truly capable of. So after resting up and then getting back into my fitness routine, I returned to marathoning and ran several more ultras as well.

## TRAINING SMART, RUNNING HEALTHY

My marathoning days were hardly over. How then could I explain my durability? The relevant literature didn't seem to have answers. I had no problem finding studies about the physiological changes that occur during a single training cycle: how the body adapts to additional mileage by increasing its blood volume, its energy-producing mitochondria, and its ability to make better use of abundant fat stores for fuel. But I couldn't find anything that would explain why my body was holding up so well over so many years.

Then I had a realization. Most runners who got injured didn't hurt themselves in a *race*; they hurt themselves in *training*. Ask any injured runner about

the origin of his or her problem, and the reply usually goes something like this: “Well, it was about a month before my race when I began to feel a twinge in my (hamstring, calf, knee, hip, foot), and it only got worse by race day.”

How often I *raced* wasn't the real issue, then. The secret to my ability to stay healthy had to do with what was happening *between* my races.

I began to think more about what I was doing. Or, as the case turned out, *not* doing. I wasn't beating myself up while training. I got myself in marathon shape, and then I did only what I needed to do to stay there and to be as fit as possible *and no more than that*. This might sound like a sensible, even obvious approach, but for most runners it's neither reasonable nor obvious. We're a stubborn breed by nature; we wouldn't be able to run for hours if we weren't.

Long-distance running is based at least partly on an ability to endure discomfort. Because of that, it tends to attract people who, like me, are stubborn. Before too long, we begin to define ourselves by how much pain we can take and how grueling our workouts are. “Pain is nothing,” the popular mantra goes. “It's just weakness leaving the body.”

Perhaps. Or maybe it's really the sign of a muscle or ligament about to tear.

The gravitational pull of doing bigger and longer workouts is hard to resist, however. There is a feeling among runners that if a little bit is good, a lot more must be a lot better. Once, years ago, I read about elite runners who typically run more than 100 miles a week. I thought, *they must know what they're doing*, so when I decided to use my next marathon to qualify for the Boston Marathon and a possible personal record, I tried running high mileage, too. I ran twice a day, as I'd read all the elite runners do, and I got my mileage up to 80 and then 90 miles per week.

I felt proud of what I was achieving—I was training like an elite runner, wasn't I? But I knew that this wasn't the best of my running. I was dragging my body through two workouts a day, and I was slow, tired, and unmotivated. Still, I kept up with my plan, sure that I was doing the right thing. I just had to get through this, I thought, and then it will all feel better.

What I didn't consider was that elite runners get hurt all the time. I was probably lucky that in trying to copy them, I didn't hurt myself, too.

When race day came, I felt confident that I would do well. And I did. I didn't set a new PR, but I did qualify for Boston. I was pleased, but I had to



admit that I hadn't really done any better than when I had trained on half that total mileage.

Meanwhile, I was struggling with a problem I was having as a coach for a charity running team. Most of my runners hit their targets, whether it was finishing their first marathon or achieving a personal best. But invariably some of my athletes got injured. Not very many, statistically speaking—just one or two a season—but that was enough to concern me.

For all the benefits of running—or of any kind of training, for that matter—there's always a risk of getting hurt. That just comes with pushing your body beyond its comfort zone. I knew that, and so did all of my clients and team members.

But still, it was hard for me to see any of my runners get injured, especially when they were relying on me to keep them healthy and strong. I knew that I'd written and implemented a training program based on reasonable, widely accepted training principles, and I had not exposed my runners to any unreasonable risk, but I still couldn't help but feel responsible. I kept asking myself, *could I have done anything differently?*

I thought about the running magazines I subscribed to. The cover of almost every one of them offered advice on how to deal with hurt knees, Achilles tendons, iliotibial (IT) bands, and hip flexors. I realized that most runners were either in the process of recovering from an injury or on their way to getting sidelined by an injury.

There had to be a better way.

There was. I had to flip the notion that “more is better” on its head and instead commit myself and my runners to setting a mileage limit and making the most that we could out of the miles we ran. We would aim to achieve everything we wanted from our running by doing less. Why would we do more than that?

I devised a plan that includes three runs a week, totaling no more than 35 miles, consisting of speed and hill work, a tempo run, and a long endurance run; core strengthening, strength training, running drills, and balance work two to three times per week; and aggressive crosstraining, recommended as cycling, at least twice per week.

I presented this plan to my clients and found that they not only were able to avoid injury, but they also were able to run stronger. I then shared this

plan at talks I gave at race expos and wrote about elements of it in articles. Now I want to share it with you.

This plan is intended to bring common sense back to running. You may not want to race as many marathons as I have—or run a marathon at all—but you should be able to run the races you choose pain-free.

## WILLS AND WON'TS

Before we begin talking about what this book will do for you, let's start by talking about what it won't do:

- It *won't* guarantee that anyone can stay injury-free. No one can guarantee that.
- It *won't* guarantee you a PR. There are too many variables to make that promise.
- It *won't* get you to a race finish line without your doing any hard work. There's no way to fake a marathon. Indeed, that's actually something that many of us love about it.

But here's what this book *will* do for you:

- It *will* help you run as pain-free as possible, given your body's mechanics, genetic inheritance, and health issues.
- It *will* help you get to your next starting line feeling good and strong, which is 90 percent of the battle.
- It *will* help you minimize the risk of injury and give you a plan for dealing with injuries that do arise, turning them into speed bumps in your training and racing plan instead of insurmountable roadblocks.
- It *will* help you get the most from the running that you do and put you in a position to go for a PR if the conditions are right.
- Most importantly, it *will*, I hope, bring more joy to your running.

There's nothing fun about running below your potential or struggling with injuries. When things go bad with running, frustration sets in, and the happiness we discovered when we first began running gets obscured or lost.

Getting our health and speed back is the best way I know to rediscover that happiness.

This book is about becoming a smart runner, about *consciously* and *purposefully* making reasoned choices in how you train and race.

As with any good training plan, it is a tool for you to use. Like any training plan, however, it involves commitment to a philosophy. I don't ask for blind obedience, but if you do want results, you're going to have to commit to fully trying this plan and judging the results after a season is over. And you're going to have to work hard.

That shouldn't be too much to ask. I've never met a distance runner who was afraid of a little hard work.

## HOW TO BEGIN

The first step is to evaluate yourself as a runner. The programs presented here can apply to anyone training for a half-marathon or marathon, whether it's the 1st or the 40th, but the common denominator is that the reader is already a dedicated runner. This book is not for absolute beginners. Before you attempt a higher-intensity training program, you need to build up a solid base of endurance, muscle strength, bone density, and strong ligaments and tendons. That comes from consistent running over a period of months to years. So if you're brand new to running, focus initially on building up your mileage slowly and steadily before using the training plans in the Smart Marathon Training program.

Do you need to have already run a distance race in order to use this book effectively? No. Plenty of elite runners aim to race competitively in their debut half-marathon or marathon. I myself ran a marathon as my very first race, mostly because I felt that I needed a big scary goal to really focus my training. So even though it would be ideal for you to have run some long-distance races already, don't worry if you don't have that on your athletic resume yet. As long as you've developed the appropriate training base through months or years of running, you're on solid ground. Read on.

You may have already run one or more distance races and want very much to improve while staying healthy. You may have had a few injuries. Or

maybe the training program you were using didn't seem able to help you get to the next level. For all these reasons, this program is for you.

As to how to approach this book and your training, there are several steps I recommend.

**Target your race.** Decide as early as possible what specific marathons or half-marathons you'll aim to run during the coming year. Many runners train hard but without a clear goal in mind. Often, they sign up for races on a whim or out of a desire to run with their friends or training buddies. There's nothing particularly wrong with this approach, but if you are aiming to run a really good race, or even PR, that method is not much better than just throwing a pair of dice. If you want to have your best marathon or half-marathon, take out your calendar, circle some dates, and then train *specifically for those races*. This will make racing less of a game of chance and more a matter of calculating how to achieve your peak for race day.

Hitting your goals is what this book is about. It aims to help all long-distance runners, specifically targeting those athletes tackling the marathon and half-marathon. You already know how I feel about the marathon, but I have a great deal of sympathy for the half. It's a fantastic distance, short enough to allow for a hard sustained effort but long enough to require careful pacing and energy management. It requires runners to balance power against endurance in a way that no other distance does.

Whatever race distance you decide on, circle a date on a calendar, set a goal time, and register for the race. This will be explored in greater depth in Chapter 6.

**Read this book.** Your serious training begins with reading this book. Spend time reading and absorbing the information and training plans that are in here. Do not skip a section; each is an integral part of the plan.

**Design your training plan.** Use the sample training plans included here to set up your own training schedule. It might be necessary for you to tweak the program to fit your needs. That's ok. In Chapter 6 we'll talk about how to make changes that accord with the program rather than undermine it.

**Plan for recovery.** After running your race, you're not done as a runner. Take good care of the body that has just served you so well by following a good post-race recovery plan. For too many runners, this means simply

waiting for any soreness to fade and then starting up again. As with your race preparation, you can get better results from your recovery if you act proactively and purposefully. This book will show you how.

Part of your post-race plan should include taking the time to appreciate what you've accomplished. If you keep pushing yourself to improve without stopping to reflect on how far you've come, you can end up forever dissatisfied and risk burnout. You've worked hard and raced smartly, and you've earned the right to be happy about what you've done.

But then it's time to get back to work. Too much patting yourself on the back can lead to complacency, and part of the reason you're reading this book, after all, is probably because you want to see how much better you can be as a runner. So when you're done giving yourself your props, start thinking about your next goal. Perhaps you want to further improve your times and see what your true potential in the full or half-marathon might be. Or maybe you're ready to take on a new kind of race. As the owner of a strong, healthy body, you've got options.

So let's get to work.

# The Key Running Workouts

**I ARGUED IN CHAPTER 1 OF THIS BOOK** that the key to effective, injury-free training is to target the essential workouts in a training program and to avoid inflicting the unnecessary wear and tear on the body that result from running lots of miles that don't produce higher fitness. In this chapter, we'll review *what* those key workouts are, *why* we do them, and *how* to do them.

The four workouts you will be reading about here—the hill workout, the speed workout, the long run, and the tempo run (see Table 2.1)—will build strength, speed, and stamina, all without your getting bored and stale. In Chapter 3, we'll talk about crosstraining, which will round out your program.

Together, these are your Big Five—the workouts that form the foundation and structure of this program. Each serves a unique purpose in your workout plan. Together, they will help bring out the best in you. But you have to commit to doing them all. If you leave one of them out, you create a hole in your program. You might get away with that for a while, but in the end this omission will compromise the program and your results. So make up your mind right now and agree to take on the whole crew.

Before you begin the program, I highly recommend that you have your gait analyzed. See the sidebar on p.17 for an explanation as to why this preventive measure can potentially save you time and injury farther down the line in your training.

TABLE 2.1

**RUN WORKOUTS**

<b>WORKOUT</b>	<b>PURPOSE</b>	<b>EFFORT LEVEL</b> Rate of Perceived Exertion (RPE)*
<b>HILL WORKOUT</b>	Builds strength and speed; improves form	<b>8–9</b>
<b>SPEED WORKOUT</b>	Improves form; teaches pacing	<b>8–9</b>
<b>LONG RUN</b>	Builds an endurance base and running economy	<b>6–7</b>
<b>TEMPO RUN</b>	Trains the body to acclimate to a sustained intense effort; prepares the body for race day	<b>8</b>

\*See Appendix B for RPE chart.

## THE HILL WORKOUT

### Why We Do It

Nothing builds strength and explosive speed like running *up*. Climbing up works the glutes, the hamstrings, and the calves—all the major muscle groups that are responsible for propelling you forward.

But what does hill running do that running on flat ground doesn't? Plenty. It builds power and explosive strength. Running up is really a series of short, one-legged squats. In a way, it's more akin to weight lifting and strength training than to running.

When you run up, you plant your foot and lift your body. That creates an adaptation stimulus that triggers the body to build denser muscle fibers, just like heavy lifting does, though at a lower intensity level. Because the huge loads of heavy squats and leg presses aren't involved in hill running, you are unlikely to add great muscle mass by running up. Nevertheless, the same type of explosive power can be generated.

Here's why: When you run up, you recruit muscle cells called fast-twitch fibers. You might have already heard about the difference between slow-twitch and fast-twitch muscle fibers. Slow-twitch fibers are the bread-and-butter of endurance athletes. These are the fibers that have the greatest density of mitochondria, which, as our high school biology teachers once

# Building a Runner's Body, Part 1

## FUNCTIONAL EXERCISES AND CORE STRENGTH PROGRAM

**BY NOW YOU KNOW THAT THE CENTRAL PHILOSOPHY** of this book is that in order to become the best runner you can be, you need to do more than just run. In the preceding chapters, we talked about the essential running workouts that make up the aerobic portion of this program. We're now going to talk about anaerobic exercises that you need to do to support your running and make you a healthier, more complete athlete.

In this chapter, you'll find a large number of exercises divided into two main groups: running-specific, or functional, exercises and core exercises. The functional exercises will strengthen the muscles that are directly involved in running, often in the same way that they are used in running. Core work strengthens the powerful muscles of the midsection, which help stabilize the body during *all* movement, not just running. Think of core work as building a solid, general foundation that suits many purposes, whereas running-specific exercises build a specialized tower that rises above it.

To some extent, many of the exercises here overlap, as some traditional core exercises may be especially useful to runners and many running-specific exercises engage the core. No need to split hairs on names; taken together, these exercises will make you a better runner.

Also, don't feel overwhelmed by the number of exercises; you won't have to do all of them in every workout. In fact, your strength workouts will be

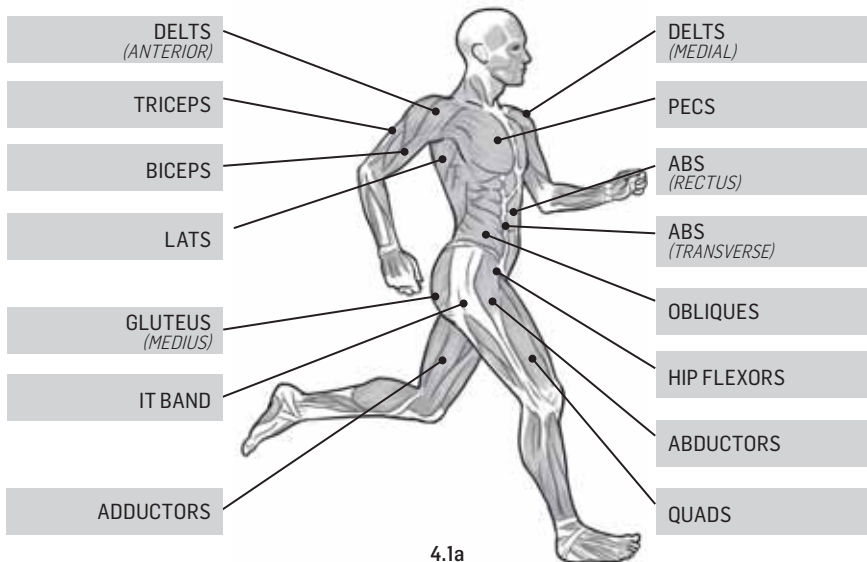


quick and short, as you pick from the options that we'll be reviewing here. In this way, no two workouts have to be the same back-to-back, which will help keep both you and your body from getting bored. We'll review exactly how this will work at the end of this chapter.

But for now, we're going to impose order on these exercises by squeezing them into different categories. After reviewing the key muscles groups, we'll discuss the running-specific exercises, including floor exercises, standing exercises, balancing and lunging, and jumps—or plyometrics, as these are sometimes called. Following these exercises, we'll review the more general core work that will be part of your routine.

As you review the exercises listed in the following pages, you'll notice that for some there are two or more options presented: a basic method and one or more advanced versions, marked with a [+]. When trying an exercise for the first time or returning to an exercise after a significant layoff, begin with the basic version until your strength and balance improve. Once you feel comfortable and ready to take on more of a challenge, add some of the different advanced versions into your workout.

When you've mastered all of the advanced exercises, you'll have the option of mixing and matching the core strength exercises. The possible combinations are nearly endless.



## TARGET MUSCLE GROUPS

Before we get into our routine, let's identify some of the muscle groups that we'll be targeting (Figs. 4.1a and 4.1b).

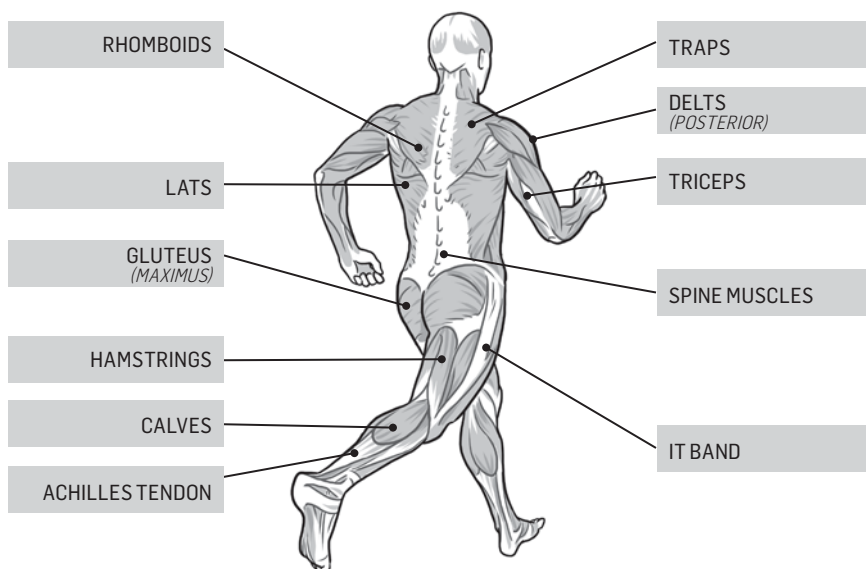
**Abs (rectus).** Commonly known as the six-pack muscles, these abdominal muscles are found on the front of your body. They are responsible for shortening the torso in spinal flexion, as when you curl up in a ball.

**Abs (transverse).** This is the deepest layer of abdominal muscle. It stabilizes your spine and pelvis and provides support for your vertebrae during intense exercise, such as running.

**Adductors and abductors.** These are the muscles of your inner and outer leg, respectively, which move your leg side to side. An easy way to remember which one is which is to recall that *adductors add* your legs together, which leaves the abductors to spread them apart. These muscles help stabilize and power the front-and-back motion of your legs during running.

**Calves.** The muscles on the back of the lower leg that power the lifting of the heel during running.

**Delts.** This group is made up of three major muscles: the anterior deltoid in front, the medial deltoid in the middle, and the posterior deltoid in the



4.1b

rear. Together, these muscles facilitate movement of the arms in almost all directions.

**Gluteus maximus.** This is one muscle group that most people can easily identify; it's the big muscle group we call our backside. Its chief function is to forcefully extend the hip, pulling the leg back. This muscle group is the big engine behind running.

**Gluteus medius.** This is the lesser-known glute muscle. While standing, put one hand on your side and find the point of your hip. Now slide your hand just behind it. That's your gluteus medius. It's responsible for maintaining lateral hip position, especially when you're off balance.

**Hamstrings.** These are three muscles on the back of the upper leg that together power knee flexion, as during the push-off phase of running.

**Hip flexors.** These are the muscles located in the front of the body near the crease of the hip and include the psoas muscle. Together, these muscles pull your legs forward in hip flexion during running.

**IT band.** A thick band of connective tissue that runs along the outer leg from the hip to the knee and lower leg.

**Lats.** These are the big muscles of the upper back. They're used to power almost all pulling motions.

**Obliques** Popularly called the love handles, these muscles facilitate lateral movement and twisting.

**Pecs.** These are the chest muscles, which power most of your pushing movements.

**Quads.** These are four muscles on the front of the upper leg that power knee extensions. They also help hold the kneecap in proper position during running.

**Rhomboids.** These muscles line the spine between your shoulder blades. They help pull your shoulder blades together, as when you pull your arms back behind you.

**Spine muscles.** These are the muscles of the lumbar region of your lower back. They help keep your body erect and absorb impact stress.

**Traps.** A large triangular muscle that straddles the spine from the base of the neck to the lower back, this muscle group helps power and stabilize most movements of the upper back.

## SETTING UP THE HOME GYM: EQUIPMENT

Even though I recommend joining a fitness center in order to access treadmills, steppers, stationary bikes, cables, dumbbells, and machines, it isn't absolutely required. You could easily get in a great workout at home using just these few pieces of equipment, which are relatively inexpensive and easy to store.

**BOSU.** Named for the acronym for "both sides up," this apparatus looks like a half dome, with a hard, flat side, and a soft, inflated round side. You flip the BOSU on either side and stand on it to work on balance and stability.

**STABILITY BALL.** This large inflated ball comes in a variety of sizes and varies in quality. Some are loaded with sand to increase resistance during lifting. Any of them will be sufficient.

**MEDICINE BALL.** This weighted, rubberized ball is available in most sporting goods stores. It comes in a variety of weights; aim to get one that weighs 8–12 pounds.

## FUNCTIONAL EXERCISES

You probably don't spend a lot of time as a runner thinking about your hips. You should; they're a big problem area for many runners. Weakness and lack of flexibility in this area can compromise your running mechanics, putting stress on your iliotibial band and knees and thereby leading to pain and injury. Most of the exercises in this section address that weakness directly.

No special equipment is needed for these other than a yoga mat or other soft surface to lie down on. At the end of this chapter, you'll find more details on incorporating these exercises into your program, but here are a few key points about these exercises:

- The order of these exercises isn't important.
- You can choose to do them in a group one after the other, or you can break them apart and do them between other exercises in your workout.
- In total, these exercises should not take more than 10 minutes to perform.
- These exercises should be a regular part of your routine.

## FLOOR EXERCISES

All of these exercises are to be performed a minimum of once a week, along with whatever core exercises you choose for that workout, and they can be performed two to three times per week for better results. You'll do most of these on the ground. If you don't own a good cushioned mat, be kind to your knees and tailbone and buy one.

For those exercises in which you start on all fours, you can make the exercise more challenging by extending the arm opposite the leg you're working. This will leave you balancing on one knee and the opposite arm, which will engage your abdominals as you struggle to stay balanced.

### MUSCLE TARGET

*Gluteus*

**CLAM** Lie on your left side, with legs together and knees bent (4.2a). Keeping your feet touching, raise your right knee, spreading your legs apart (4.2b). Start with 10 reps; then flip over and do the other side. Add 2 reps to each side each week until you get to 20 reps.



**SIDE LEG RAISE** Lie on your left side with legs straight, one atop the other (4.3a). Raise your right leg while pointing toes outward (4.3b). Halfway through the set, turn your foot so that toes are pointing upward and continue. Start with 10 reps, and then flip over and do the other side. Add 2 reps to each side each week until you get to 20 reps.

**MUSCLE TARGET***Gluteus*

4.3a



4.3b

**[ + ] ADVANCED** To make this exercise more challenging and to engage your obliques and transverse abdominus, perform this exercise from a side plank position, with your body elevated and held rigid in a straight line, resting on your left elbow, with legs stacked on top of each other (4.4a and b).

**MUSCLE TARGET***Gluteus**Abs*

4.4a



4.4b

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## About the Author



**JEFF HOROWITZ** ran his first marathon in 1987 and fell in love with the sport. Since then, he's run over 150 marathons and ultramarathons, doing at least one in every state in the U.S. and also around the world, from Antarctica to Africa to Asia. Formerly a practicing attorney, he now works as a program director for Achieve Kids Tri, Inc., a D.C.-based nonprofit that introduces at-risk kids throughout the country to a healthy lifestyle through the sport of triathlon. Jeff is also a certified personal trainer and running, cycling, and triathlon coach (AFAA, USAT, US-ATF, USA Cycling, and RRCA certified). He has been the Mid-Atlantic editor of *Competitor* magazine, and a frequent contributor to *Marathon & Beyond* as well as other publications. His book, *My First 100 Marathons: 2,620 Miles with an Obsessive Runner* was released in 2008. Jeff is married to the artist Stephanie Kay, with whom he has a 6-year-old son, Alex Michael.

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*JEFF HOROWITZ is a certified running and triathlon coach and a personal trainer who has run more than 150 marathons across 6 continents. A licensed attorney, he quit law to pursue his passion for endurance sport and now works with DC Tri; The Nations Triathlon; the nonprofit summer camp ACHIEVE Kids Triathlon; and Team Hope, a charity fund-raising training group.*

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