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INTRO

It starts today.

Let's be honest, we all want to be a little bit faster—whether you're running a mile for the first time in your life or aiming to set the world record in the 100 meter dash, there's always that desire: "Can I get there faster this time compared to last time?"

And who could blame us?

Being fast is freaking awesome—just ask the Flash or Usain Bolt (yes, he's superhuman).

Now, running well isn't as simple as just putting one foot in front of the other—okay, that's actually exactly what running is, but there's way more to it than that! You must learn to crawl before you can walk, and walk before you can run. Fortunately, we don't actually make you start with crawling.

First and foremost, you have a responsibility to take care of your body. A busted up body doesn't do you any good, does it? On the other hand, a fit and healthy body will give you years upon years of awesomeness.

You've already purchased this guide, which means you're serious about becoming a (better) runner. You're going to learn how to run SAFELY—every day thousands upon thousands of new runners step outside for their first run without having a freaking clue as to what they're doing, and a huge percentage of those people end up continuously injuring themselves.

That will NOT be you.

Remember your first day driving a car? You probably weren't handed the keys and told "Whelp, go for it!" You probably had to sit shotgun and listen to your mom or dad tell you that your hands belong at 10 and 2, to go ten miles below the speed limit (just to be safe), and then after getting behind the wheel, they yell at you every three seconds about how to be a safe driver.

After we teach you how to run safely, we're going to teach how to run better. If you've never run a day in your life, we've got you covered there too. We'll teach you how to train for your first 5K, teach you how to run in all different kinds of weather, how to eat healthy for maximum performance and optimal health, and more.

Think of this as the only thing you'll need to get started with running.

Well, that, and the two things that dangle below your waist.

I'M TALKING ABOUT YOUR LEGS. Pull your head out of the gutter.

Thank you for putting your trust in us to help you get in shape and become a better runner. We're going to do our best to keep you happy, healthy, and fast as hell. (We're of course making the assumption here that hell is fast.)

-Steve Kamb and Jason Fitzgerald

WHO IS STEVE KAMB?

Hey, I'm Steve Kamb, creator of NerdFitness.com, a fitness community dedicated to helping average Joes and desk jockeys get in the best shape of their lives while still having some fun.

I've been seriously interested in fitness since my junior year of high school, and have been training and learning to level up my life since then. I've been running Nerd Fitness for three years, and it has been my full time job for the past 15 months.

I ran cross country in high school (and was even given an award for my contributions to the team), though I quickly discovered that my passions did not lie in distance running.

I'm very busy and often traveling around the world on some crazy adventure, so I don't have time for long, drawn out workouts. Even when I'm not traveling, I am still quite busy, doing things like playing Assassins Creed, watching Arrested Development reruns, playing the piano, and more. Forty-five minutes to an hour is often all the time I have to dedicate to exercise, so I make sure my workouts are incredibly efficient in that time period.

Exercise is part of who I am, but it isn't all that I am—I still live a full life that makes me happy—the exercise helps me to live better and healthier.

But enough about that—back to running! As I said before, although I'm not a big distance runner, I do love sprinting, hiking, trail running, hill workouts, and strength training. I'm a big fan of the Paleo Diet (if you don't know what this is, don't worry, we cover it in the diet section of the guide). I love being part of the Nerd Fitness community because I get to work with people at every possible fitness level—old, young, big, small, strong, weak, male, female. I love that no matter who you are or where you are in life today, there's a way to be better tomorrow.

And that's my goal with this book—to get you to become a better person in as many ways as possible - speed, strength, health, and more.

But I'm just one-half of the dynamic duo that put this guide together; let me introduce you to my buddy and running Yoda: Jason Fitzgerald, creator of the incredibly awesome and popular site **StrengthRunning** (with a name like that, it's no wonder why he and I get along so well).

-Steve Kamb
NerdFitness.com

WHO IS JASON FITZ?

My name's Jason and I run (ha!) StrengthRunning.com, a community of distance runners who want to achieve their best using the best training possible. Strength Running has helped thousands become better runners.

I started running as a freshman in high school and got hooked. I ran cross country and indoor and outdoor track for four years and then ran Varsity cross country and track for Connecticut College. I won a few track races, improved my mile time to 4:33 (Steve's note: um, holy crap), and ended up being a Top Ten finisher in New England in the Steeplechase.

After a few years of post-collegiate racing, I ran 2:44 in the 2008 New York Marathon but was injured for six months after that with IT Band Syndrome. I saw way too many physical therapists and doctors but couldn't get healthy. After a lot of research and using some of the advice I learned from the one good PT who helped me, I finally got healthy. My training has never been the same.

My new training philosophy led me to run more than I ever had in 2010—and I'm on track to beat that in 2011. I haven't had a serious running injury in nearly three years.

I started Strength Running to help other runners where I used to fail. It's everything I've learned (and continue to learn) about running, born from one of the lowest points in my running life. You'll find that training philosophy in the workouts and running advice in this guide.

The philosophy that I use for myself and with my athletes is all about balance. Running a lot is definitely a key to competing well in a very long event, but it's only part of the puzzle. With shorter races, it's equally as important to be a good athlete, not just a good runner.

There's a lot of extra workouts in the Rebel Running Guide besides running. Dynamic stretching exercises, core workouts, body weight exercises, and more. Combine them into a solid running program and you're going to run faster than ever with far fewer injuries.

You may be wondering what business I have helping you run a good 5K. Good point. Besides the 13 years of competitive running experience, I've won seven 5Ks in my life in cross country, on the track, and in road races. My best time is 16:02 (though I think I can run faster than that now) and I'll definitely be sharing what worked for me and for the runners that I coach.

Teaming up with Steve to write this guide and combine our philosophies was a no-brainer for me. We both emphasize strength and think that exercising enables you to live a better life. When you're running for the right reasons, paying attention to your body, and being a well-rounded athlete you're going to be a better runner.

The Rebel Running Guide will show you how.

-Jason Fitz, Strengthrunning.com

THE NERD FITNESS RUNNING PHILOSOPHY

Okay, so you're ready to start running.

My first question to you is this: Why?

Why are you running? Are you running to get healthier? Are you running to impress the cute girl/guy at work who runs every day after hours? Are you running to raise money for a great cause at next month's charity 5K?

Maybe you're running because your doctor said you need to get healthy and running is the most logical thing you could think of to get started. Maybe you're just running because it sounds like fun and you need some way to be active.

Whatever your reason is for running, and whatever your reason is for wanting to get in shape, keep that at the front of your mind. I've seen far too many people tell me "Steve, I'm going to get in shape" and I ask them why and they say "Eh, because."

Within two weeks, these people have given up—they didn't have a legitimate reason for wanting to get in shape or start running.

So, before we start running, we make sure that we have a reason behind it. It's this reason that will keep you going when you feel like quitting. It's this reason that will get you out of bed in the morning when all you want to do is sleep in. It's this reason that will get you to lace up your shoes (or Vibram FiveFingers) after a crappy day of work when all you want to do is plop down on the couch and eat Ben and Jerry's.

Okay—you now have your reason for running. Right? Write it down, hang it on your fridge, tape it to your bedroom wall so you see it every morning. Constantly remind yourself why you're doing this.

I used to have "Get busy living or get busy dying," a quote from *The Shawshank Redemption,* hanging on my bedroom wall to remind me every day to make the most of things. It got me out of bed when I wanted to sleep, away from my computer when I wanted to play games, and out the door and exercising when I wanted to slack.

HOW TO RUN

Now, as we've said previously, we're HUGE fans of strength training, and think this should be the cornerstone of any fitness program—if you're only going to do one or the other (only strength training or only running), we would push people in the direction of strength training... However, if you're looking for a great all around level of fitness, or you want to be a better runner, you'll find more success and have more fun and less injury if you successfully combine the two areas. (By our powers combined…)

So, when it comes to running and how it fits into the Nerd Fitness spectrum, you will learn how to be a jack of all trades. What do I mean by that? Tell a person who only runs marathons that they have to do 100 push ups and they might punch you in the face. Conversely, take somebody who power lifts like a machine but has absolutely no endurance—tell them to go run six miles and they would power bomb you through a table. These are two ends of the spectrum that we want to avoid.

I like to think of somebody right in the middle that is good at all of these things: Jason Bourne. He "can run flat out for a half mile before [his] hands start shaking," can climb whatever, is strong as hell, is trained to fight, and more.

He's the perfect weapon, prepared for any situation—he would do incredibly well in a both a strength competition AND a 5K race...though I'm not sure why Jason Bourne would sign up for a 5K (The Assassin 5000? Nevermind that sounds like a lame robot), but you get the point I'm trying to make here.

Take a look at most (though not all) elite marathon runners and they look like a stiff breeze would blow them over, or that they're deathly ill of some weird sickness. Compare that to the body of an elite sprinter—all muscle, built for raw power and lightning fast speed, but little in the way of muscular endurance. We're going to aim for somewhere in the middle—a healthy looking body, with good muscle mass, strong legs that can run a 5K incredibly fast, and still allow for great distances on occasion should the need ever arise.

Personally, I don't push people towards running anything more than a 5K or a 10K, primarily for health and time-commitment reasons—far too many people who run long distances are constantly sick or injured, mostly because they don't have a solid workout plan (outside of "run a lot today, and the next day, and the next day…").

On top of that, training for a marathon requires an INCREDIBLE time commitment, which can quickly lead to overtraining and sickness if not looked after; this is when the wheels fall off the wagon and you're back at square one.

So, if you are interested in training for things like half marathons and marathons, I would strongly advise you to build a solid foundation with a fantastic 5K training regiment FIRST, and then you can build on that success. Hmmm… if only you could find a book of sorts that would teach you how to do just that…

You're in the right place. :)

In this guide, your running plan won't just be "run today, run tomorrow, run the next day," as that doesn't build the kind of happy, healthy body that we need.

Instead, you'll find workouts and philosophies that will prepare you for any occasion, including running a 5K (and running it well). **Here's a great study** that shows just how important strength training can be to a runner, especially when it comes to the type of runner that we want to become.

By successfully jumping back and forth between strength training and running, you can turn yourself into an absolute machine, ready to take off and run like the wind at a moment's notice.

Pretty cool, huh?

FIRST STEPS

Alright!

You have your reason as to why you want to run, you understand the importance of strength training, and you want to put on those shoes right now and fly out the door.

Am I ready to run?

Hold your horses. Not literally. It would be tough to read this book whilst doing so, though I'd be pretty impressed if you could. And why do you have horses next to your computer?

Rule 1 of Fight Club… I mean Rule 1 of the Rebel Running Club—your safety is the most important thing. I understand that you're eager and ready to run, but if your body is not adequately prepared for running, you're only going to do serious (and possibly permanent damage) to your body by doing too much too soon.

If we had our way, you would not begin running extensively unless you are at or close to your goal weight with a good level of athleticism under your belt.

"But, Steve and Jason! I'm overweight, and running will help me get to my goal weight, how dare you tell me not to run!" I hear where you're coming from, but hopefully we can convince you otherwise.

First and foremost, your weight is 80-90% determined by what you eat. Unless you are able to run for hours upon hours upon hours and have a fast metabolism, no amount of exercise can undo a bad diet.

What that means is if you are interested in losing weight, the absolute most important, not-up-for-debate decision you can make is to CLEAN UP YOUR DIET. We cannot stress this enough—eat like crap, live like crap.

We have an entire book in the Rebel Running Guide package dedicated to helping you eat better—that's how important it is.

If you are overweight or obese, one of the worst things you can do for yourself is to throw on tennis shoes and go clomping around your neighborhood. Instead, put your focus on healthy eating, and follow a strength building routine like the **Angry Birds Workout** or the **Beginner Bodyweight Circuit**, combined with powerful walks and/or hiking to build up your cardiovascular health.

- **As you begin to drop weight,** a lot of the stress on your joints, organs, bones, etc. will start to decrease.
- **As you strength train,** the ligaments that hold your body together will become stronger and more adequately prepared for the rigors of running.
- **As you refine your running form to minimize resistance and jarring shocks throughout your body,** your body will learn to become more efficient.

These are all the things that need to happen before you think about running. Yeah, I know it might feel like we're holding you back.

"What's the big deal? It's only running, blah blah blah."

Trust us on this—we only have your best interests at heart. Better to have you start slower or later than you wanted and keep you safe than to have you rush into things and get hurt.

Being hurt sucks. Having permanent damage to your joints and ligaments sucks even worse. How many older people do you know who "have bad knees"—probably all of them, right? This book is designed so that you don't end up being one of those people.

If you're brand spanking new to running or you're very overweight, we've included a rookie workout plan to get you started in the workout sections.

Obviously, you're going to do what you're going to do, but we recommend that you stick with this plan for as long as it takes for you to get down to a healthy weight and your body adequately prepared for running. The focus is on strength training, hiking, long walks on the beach...low impact activities that strengthen rather than deteriorate your body.

GETTING STARTED

Okay, so let's say you're relatively close to your goal weight, you're ready to start running, but you have no freaking clue what you're doing.

PERFECT. It's much easier to teach somebody a new skill than it is to convince them to unlearn a skill they've learned incorrectly. Insert your favorite joke here about old dogs and new tricks.

1) Read the rest of this book, with a tremendous focus on the next section: Running Technique and Injury Prevention.
2) Read the Rebel Running Diet, and start to work towards a cleaner, healthier diet. This will help you in every aspect of your life, including how well you run.
3) Select one of the workout plans included, based on your level of fitness.
4) Select a race about 8-12 weeks out and sign up for it.
5) Form your support team, people that will keep you accountable and on track.
6) Strap on some shoes and work on that form!

RUNNING TECHNIQE

It's time to learn how to run, sucka! This is probably the MOST important thing you'll get out of this book. In a typical 5K, you'll take around 4,000 - 5,000 steps. That means if you have crappy form, you are harming your body thousands of times in a very short amount of time. Unless you're a masochist, this is what we like to call a "BAD IDEA."

Let's get you running right, so each step is a success rather than an epic fail.

Perfecting Your Form - Five Principles of Efficient Running

If you've played any sport before, you remember the early days of practice. Your coach would have you line up and practice the fundamentals. Swimmers worked on stroke technique, basketball players practiced dribbling skills, and lacrosse players perfected their stick handling abilities.

Yet runners aren't usually taught how to run efficiently. People think that everyone can run because it's considered a basic movement. But it's not—running is a complex series of coordinated hops that require stability and balance.

If you don't learn how to run correctly, you're doomed to develop an overuse injury or make things a lot harder for yourself—like playing a video game on extra hard difficulty...if that video game could physically injure you. Before you start with a running program, let's go over the five principles that will help you become more efficient.

1) Lean from your ankles. I see too many runners leaning from their waist, which is only going to give you a bad back and other problems. Your body should be straight with good posture. If you're a desk jockey or a nerd, you're probably used to being hunched over your keyboard anyways, so running is a perfect opportunity to work on fixing it.

You want to lean from your ankles, which helps keep a straight line from your ankle, through your butt, and up to your head. If you're standing still with this slight forward lean, you may feel like you're about to fall forward. That's a good thing!

When you start running, gravity will help keep you progressing forward. A proper lean from the ankles keeps your body in alignment and loads your muscles properly and efficiently.

2) Increase your cadence. Cadence is your stride rate, or the number of steps you take per minute. Many coaches think 180 steps per minute (for both feet) is ideal, but in actuality there's no magic number.

Instead, focus on taking more steps per minute than usual. It will probably seem weird at first, but you're putting less stress on your legs with each foot strike. Ideally, your cadence should be at least 170 steps per minute when you're running at an easy, conversational pace. It will probably increase once you start running faster—that's normal.

Recent research has shown that increasing your cadence and taking more steps (around 180 per minute) provides many of the same benefits of barefoot running: less impact shock that goes up your legs, improved running economy (or your efficiency, which means you'll run faster with less effort!), and a reduced chance of injury.

3) Foot strike at the right time. Have you ever seen a new runner trying to run fast? Often what he'll do is "reach" his leg out and try to take a longer stride. You're going to avoid this like the plague. If you happen to read this after the upcoming zombie apocalypse, then replace "plague" with "zombies."

Just trying to stay topically relevant here...

Anyhoo! When your foot comes down and makes contact with the ground, it should be underneath your body, not in front of it. Combined with a quick cadence and a slight forward lean from your ankles, you'll be distributing impact shock evenly—and efficiently.

This aspect of running form is often skipped over by beginning runners. Instead of focusing on where the foot is landing in relation to the rest of the body, they focus too much on running on their forefoot. If you don't first land in the right place, a midfoot or forefoot strike will only do more damage.

As you're running, a good mental cue is to think that you're just "putting your foot down" in a straight line underneath your body. There's no reaching or stretching your leg out in front of you. Practicing this mental cue will have your leg touching down almost exactly underneath your center of mass, distributing your weight evenly and safely.

4) Land on your mid-foot. While not as important as landing underneath your center of mass, becoming a mid-foot striker has a host of benefits. It can help you avoid a lot of injuries by absorbing impact shock and preventing a severe heel striking running stride.

Heel-striking can't be entirely blamed for injuries and labeled "bad." Even elite athletes heel strike when they run races! It's not entirely bad—especially if you're putting weight down on your foot just after you heel strike, instead of directly on the heel.

This is called a "proprioceptive heel strike" and is done just to get a sense of where the ground is. (If you ever use the word "proprioceptive" in scrabble, please take a picture and email it to us at contact@nerdfitness.com). The full weight of your body doesn't go down directly on the heel, but it's mostly absorbed in the midfoot stance.

As you continue to run more, you'll be better with this.

What you should focus on is having a higher cadence, landing underneath your body, and not aggressively heel striking. Try to land with your foot flat on the ground, instead of with your toes angled upwards (when your toes are angled up, this is called "dorsiflexion" - nerd alert!).

5) Symmetrical arm swing. Nobody wants to look at you running if you're flailing your arms wildly all over the place like **Elaine from Seinfeld**. An ideal arm swing has your arm bent at about 90 degrees and a front to back—not side to side—swing.

Imagine a pretend line that goes down your mid-line or center of your body. When you run, your hands should not cross over this imaginary line.

Cup your hands loosely together (no clenched fists!) and if you want to use your arms for momentum, pump your elbows, not your hands.

Once you incorporate these changes into your running form, you'll feel a lot more comfortable and your injury risk is going to plummet.

For extra credit, learn to run softly and quietly. Foot stomping isn't allowed and gets increasingly difficult as you approach 180 steps per minute. If you can sneak up on a dog on the sidewalk, then you're doing great!

A few other things you want to keep in mind are keeping a tall back (no slouching) and looking 30-50 meters in front of you—not head down looking at your toes. Both are easy cues to keeping an athletic posture and good running form.

At this point, go back through and read that section a few more times... we know it's a LOT to think about while running, but it is incredibly important. If you get a chance, have somebody film you running, and then watch your tape back to see how you're doing.

As you do these things over and over and over, it'll will eventually become new habit, and then something that you don't even need to think about anymore. And above all, RELAX! You should be having fun, not tensing up your muscles as you're running.

If you are looking for more specific direction, here are some videos of proper running form - try to mimic these movements and REALLY concentrate on running technique.

Think of it like "money see monkey do" Not that you're a monkey. Unless you are a monkey, in which case we're very impressed.

It will probably feel really really weird to run this way if you're used to running a different way - it does get easier as your body gets used to the new form and eventually it will become second nature.

WHAT SURFACE SHOULD I RUN ON?

For the most part, it doesn't really matter what surface you run on if your form is good and you're resting enough to recover between your workouts. But each surface does affect your body in different ways, so you should know the pros and cons of each one.

Asphalt (road): People have been running on the roads since they were first paved over 100 years ago. Most people run exclusively on the roads since they're the most common surface that's available for running.

There's nothing inherently wrong with road running. It's stable and has a relatively predictable surface so you probably won't twist an ankle. Just watch out for potholes. As long as you're avoiding cars and running AGAINST the flow of traffic (so you can see approaching cars) you'll be safe.

The danger with roads comes when you run on the same side of the road all the time. Conventional wisdom on safety has you run against traffic so you can see oncoming cars, but the problem lies with the road's slope.

For drainage reasons, every road has a slight slope toward the curb. If you're always running against the flow of traffic your left leg is going to be slightly lower than your right. You can see where this is going: do this over and over again and you'll end up with an injury resulting in a muscle imbalance.

The solution is to switch sides of the road. Hopefully the traffic isn't too heavy where you live (don't try this in a city) and you can run on the right side of the street. Another option is to run on the sidewalk for part of your run.

Speaking of sidewalks...

Concrete (most sidewalks): Most sidewalks are made of concrete, not asphalt, and are actually a lot harder than the road itself. Again, this isn't necessarily a drawback, but you will be experiencing more impact forces on concrete than the road. If you do a lot of running on the sidewalk, make sure your form is as good as it can be!

Heel-striking is going to bite you in the ass if you're smashing your heels against one of the hardest surfaces you can run on.

Studies have shown that the human body adapts to the surface it's running on and provides the necessary shock absorption. If you're on concrete, you'll land more gently than if you are on grass, where you'll look for stability and come down harder.

Most experienced runners are aware of this and can even feel the subtle changes in their stride. If you can do this, then congratulations! That's awesome. If you can't tell the difference in your stride, then you should limit your sidewalk running to less than half of your total running.

As the great Kenyan runners say, "Hard roads kill fresh legs." And last time we checked, Kenyans generally do pretty well in races. :)

Grass (fields): Unless the grass is very hard packed and smooth, I don't recommend running on it for a long period of time. Grass is very soft so you won't be sending jarring impact forces up through your legs like concrete, but the uneven surface is going to break up your stride and you could tweak your ankle or a muscle in your foot.

Depending on where you live, it may be too hard to find a field big enough to run on even if the surface is smooth. Nobody wants to run 12 laps of a small field as their workout—that's incredibly boring.

Some grass is great to run on, though. The harder and smoother it is, the better it is for running. We're not recommending you sneak onto a golf course to run... but if you do, you'll experience our favorite running surface. Many high school cross country meets are held on golf courses for this reason: they're soft enough to be easy on your joints and muscles, but hard enough to give you enough spring to let you do some fast running.

Just don't run down the the fairway screaming while golfers are playing... actually, depending on the golfers, that could be the safest place to be... heyooo! Get it? Because they're not good at golf. We'll be here all week.

Dirt or crushed gravel trails: Smooth dirt or crushed gravel (very fine—not big chunks of gravel you find in some driveways!) are some of the best running surfaces. Like the hard grass surface of a golf course, dirt and crushed gravel trails offer the same impact-dissipating qualities while still retaining firm footing. It's the best of both worlds.

You'll find these types of trails at larger parks with walking paths or in national/state parks with well-maintained trails. Since these trails represent an ideal training surface, you should aim to do more than half of your running on them. It's easier to prevent running injuries when you're running on trails like this!

Since these trails are softer and also clear of bigger obstacles like rocks or roots, they're also ideal for workouts. If you have a tempo run or fartlek (stop giggling, this is a real word) workout planned, you can easily do them on this surface. You'll be running for time, not distance, so you don't need a perfectly marked course or a 400 meter track.

Single-track trails: This is the gnarly stuff. We're talking sudden sharp turns, rocks, roots, stream crossings, hills, and anything else Mother Nature can throw at you. In a word: FUN.

These trails are usually narrow and filled with obstacles. They're definitely not as pedestrian-friendly as your maintained dirt trails or cushy golf courses and because of that, they offer a lot of strength benefits. The hills, direction changes, and irregular surface will force you to use a lot of stabilizing muscles in your lower legs.

Like any additional stress on your legs, you should exercise caution on these technical trails. While they offer a lot of benefits, the injury risk is higher so you should limit your running on them to about once a week or 10% of your total weekly running. Any fast running or workouts will be almost impossible here, so save them for a smoother surface with fewer abrupt turns.

Be sure to maintain a quick cadence to avoid falling flat on your face and stay constantly alert for uneven terrain. It can be mentally draining (or exciting) to run technical trails, so have fun out there and be safe!

Track: Found at most local high schools and colleges, a 400 meter outdoor track provides a great training place for workouts. But that's what they're for: workouts. Not every day running!

Since they're perfectly measured at 400 meters to a lap, you can run intervals precisely and get a lot of great data on how fast you're running. You can use that information to predict how fast you'll race in your 5K.

Run by your local track and take note of the markings on each turn. Get familiar with the starting line, 200m mark (on the opposite side, at the next turn), and how to run a mile there. Note that a mile on a track is not 4 laps! You need to find the mile marker line, which is about 9 meters behind the starting line. It should gradually curve closer to the starting line as you reach the outside lanes.

The surface is forgiving like hard packed dirt or a very firm golf course. But while the surface is great, the turns are what makes a track not ideal for every day training. By doing all of your running on a track, you're constantly turning left and setting yourself up for muscle imbalances.

You're better off running somewhere where the turns are varied so you expose yourself to different stresses instead of the same thing over and over again. That's how overuse injuries happen. Tracks are for faster workouts, not easy distance runs.

The Beach: Everyone who enjoys running has day dreams about running on a beautiful white sand beach at sunset on some tropical island. Truth be told, it's not a very good place to run.

First, there's the dry, soft sand up by the dunes away from the water. It's like running in quick sand! Your form is going to seriously suffer with such unstable footing. It's like running on ice—every time your foot plants, you'll slide around.

Our recommendation is to stay far away from the soft sand when you go running. The chance of injury is much higher when you're flailing around in that sand, so it's best just to avoid it.

A better option is to run on the hard packed sand closer to the water at low tide. Not so close to the water that your shoes are getting wet, but close enough that the sand is packed down hard to give you a stable surface to run on.

Depending on the beach, there might be a serious camber to the sand near the water. Camber is the slope of the surface—many beaches have a gradual or significant downhill that goes into the water.

This is fine if you're running into or out of the water, but it's bad news if you're running along the shoreline.

The problem is that one side of your body is lower than the other side. This also happens on the side of most roads (so be careful there, too) for drainage reasons. It's not a level surface so you shouldn't spend a long time running there.

If you're on vacation and can't dream of not doing a short run on the beach, then by all means enjoy yourself! Just switch directions a few times so you're not spending too long with one side of your body running on the lower end of the camber. Better yet—find a beach with a tiny or nonexistent camber.

When to train on which surface?

Your training would ideally be a combination of all of the surfaces that are available to you. Exposing your body to as much variety as possible will give you a better chance at preventing injury since you're not doing the same thing over and over again.

The few types of running surfaces that lend themselves to more frequent training are smooth dirt trails, crushed gravel paths, and hard packed grass (like a golf fareway). The footing is sure and the surface isn't too soft or firm.

Limit your running on concrete and technical trails because of the injury risk. Most sidewalks are made from concrete and are incredibly hard. Throw a tennis ball on one to see for yourself—it'll shoot right up into the air because of the returned energy. Those same forces are being returned into your legs when you run on them. Technical trails present a different challenge: roots, streams, rocks, and uneven terrain. Run sparingly!

A good strategy to use when deciding where to run is to figure out how your body feels. If you're sore or have a tender muscle, run on a softer surface. A dirt trail or well-manicured field will help you recover better than the roads. But if you're doing a workout, you want to avoid technical trails or a concrete sidewalk. Pick the track, a clear dirt trail, or a road without a severe camber.

THE GREAT BAREFOOT DEBATE

Every running and fitness site on the Internet has its view on barefoot running and what you should do to embrace "natural" running. In the Rebel Running Guide, we're combining the best of both worlds to ensure you get to the starting line stronger than ever but still healthy and injury-free.

The benefits of barefoot running are well understood and we want you to enjoy all of them. If you run barefoot the right way, you'll strengthen the muscles, tendons, and ligaments in your feet, ankles and lower legs. This part of your body is typically weakened by wearing over-supportive shoes every day, so our goal is to build up that strength so you'll get fewer injuries.

One of the biggest benefits of regular barefoot running is that it reinforces great running form. It's much harder to have a slow cadence and excessive heel strike when you're barefoot. Barefooting allows you to feel the ground, react to the surface, and learn how to control your stride.

The type of barefoot running that we recommend is called strides and they're about 100 meters long with you building up to about 95% of your maximum speed and then coasting to a jog. They should only take about 20-30 seconds to run. Barefoot strides are a better workout than regular barefoot running for a lot of reasons:

Since you're running faster, you build extra strength compared to just slow running.

Faster running promotes an even more efficient form than slow running.

The time you spend barefoot is much less, even though you're getting more benefits.

It's just a lot more fun to run fast barefoot!

Limiting yourself to 4-6 barefoot strides is easier than limiting yourself to 4-6 minutes of BF running. The temptation of doing more easy barefoot running is a lot higher than for strides.

This is a conservative strategy that will help you develop your lower leg strength and an efficient running stride without the risk of an overuse injury. Barefoot running is a tool to use in your training arsenal. Jumping into it too soon and doing too much before a 5K race is risky when you're also doing faster workouts.

This guide will help you to a great 5K race; it's not meant to make you into a barefoot runner. Using elements of minimalism in your training is the best way to train and that's what you'll see in the workout section of this guide.

There's no need to take an all or nothing approach to running barefoot—it's a spectrum, after all. First, you should transition out of your bulky motion-control or stability running shoes if you have them. Only a tiny minority of runners with severe biomechanical issues actually require motion-control shoes or orthotics.

We've included a separate book with looks at the latest shoes out there that we recommend checking out for running. If you purchased the deluxe version, you'll also see how to transition from one to the next.

Moving to a neutral shoe will help get you used to a lighter, slightly less supportive shoe. So what does a more minimalist shoe even mean? It typically:

- **Weighs less than 10 ounces**
- **Has a lower heel-toe height difference** (called the "drop") than a bulkier shoe
- **Usually has no medial post** (the darker, more firm foam on the inside sole of a shoe)

You should look up what your current shoes weigh and (if you want to move to a more minimalist shoe), transition into one that's a little lighter. Every time you need new shoes, buy a pair that weighs 1-2 ounces less than the previous version. If you're doing barefoot strides once a week, you'll be a minimalist runner in no time!

Once the weight of your shoe gets down to about 7-8 ounces, you probably don't want to go much lighter unless you want to be a total minimalist. You can try out the Vibram FiveFingers or New Balance Minimus shoes for some of the best "real" minimalist shoes on the market. Just make sure your transition is gradual!

PROPER ATTIRE

We're not your parents, and we don't want to dress you—you're a big boy/girl/robot and can wear whatever floats your boat.

With that being said, if you maybe want some slight guidance in what to wear while running, we're here for ya.

Side note: yes these are affiliate links, so we'll make a small commission if you click through and buy something!

Shirts - Sweat wicking gear is always the first choice—**Nike Dri-FIT shirts** or **Under Armour** —things of that nature. They're very light weight and keep the sweat off your body. Try to avoid heavy cotton shirts when possible; this is what they hand out at races—you can do better.

And yeah, I'm a total slacker, but Nerd Fitness performance shirts ARE coming. Keep an eye on NerdFitness.com so that you can be the FIRST to buy one. Well, second. My mom has to be the first person to buy anything I put out—she's the best.

Shorts - Run in **running shorts**, not long mesh shorts. Those things are going to cause a lot of chafing! Some soccer shorts work too, but they don't have a liner so you'll need to wear athletic briefs/boxer briefs. For ladies, wearing underwear with shorts is probably a bad idea, so you'll also need running shorts with a liner.

Just because you're wearing running shorts doesn't mean they have to be ridiculously short. They make both the short ones (**with that sexy split-leg**) and **longer shorts**. Buy whatever you're comfortable with.

Socks - Basically, anything not cotton, which goes for all advice we have about what to wear. Our suggestion is **Wrightsock** —they're double layered so they prevent friction but they're not hot. Win-win!

Water - Should I bring it? Only if it's really hot and you're running for more than 45-60 minutes, or you're doing a fast workout. Better yet, plan your workout around some water fountains because carrying stuff is obnoxious while running. Keep those hands free so you can flip off random strangers you don't like while running—I hear they love that.

Running watch - Get yourself a basic **Timex watch** - use this to keep your time. It's cheap, durable, reliable, and you won't get bent out of shape if you lose it or it gets wet or breaks.

Music - Sure, you can run with music! This is a personal preference thing. Pick songs with high tempo that make you happy or mad (depending on your personal motivating technique). My friends Tyler and Tripp over at **Reluctant Runners** put out a new running playlist each Friday if you need some inspiration.

THE MYTHS OF RUNNING

There is so much bad information out there when it comes to running that we wanted to do our part to set the record straight and help educate the people!

Running Myth #1: Running damages your knees.

This is completely untrue and actually, the opposite is true if you do a few key things. Running helps accustom the knee joint to bearing heavy loads and can even protect the knee from future injuries. Don't take my word on it; read it in **this study** and **this one**.

To help prevent knee injuries, follow the workouts in the Rebel Running Workouts and pay extra attention to the strength and flexibility exercises. When your joints are used to carry extra weight, they'll be far less likely to get injured from running.

Another big prevention measure is to try to be as close to your goal weight as possible. Carrying extra weight can increase your chances of a knee injury (along with a host of other running-related injuries), so losing any extra weight should be your first priority.

Running Myth #2: Stretch before you run.

Static stretching before running is a bad idea. It used to be the status quo, but research shows that not only does it decrease your performance, but it can predispose you to running injuries.

Instead of static stretches, you should incorporate dynamic stretches as a warm-up before every run. See the Rebel Running Workouts for specific exercises and complete routines that you can do before you go running.

These routines are going to do exactly what a good warm-up should do: raise your heart rate, increase blood flow, lubricate your joints, increase your functional range of motion, and prepare your body for running.

Running Myth #3: Runners don't need strength training.

Perhaps one hundred years ago when almost everyone performed manual labor all day this myth would be accurate. But in a world where people are sedentary for far too long every day, strength training is vital to correct imbalances and strengthen your muscles, bones, and connective tissues for the impact stresses of running.

Strength exercises improve your durability and allow you to run longer and faster. They're your insurance against overuse injuries that stem from weaknesses.

An analogy that I always turn to is that of a car: You can't put a Ferrari engine in a Geo Prizm. If you do, it'll tear the car chassis to pieces.

Here we have your heart, lungs, and aerobic system (your "endurance" or ability to run longer) much more developed than your muscles, ligaments, tendons, and bones. If your infrastructure can't handle the easy running that your heart and lungs are dishing out, you'll have a running injury in no time. Strength training corrects this imbalance.

It not only helps you prevent injury, but it can increase your endurance. Numerous studies show that heavy weight lifting can help you run longer and faster before fatigue sets in. Strength training improves your brain's ability to recruit more of your leg muscles while running. And when you can use more of your muscle, you're going to run more efficiently and get tired later. It's a win-win!

Running Myth #4: You can't change your running form.

If I hear a new runner say, "This is just how I run" one more time, I'm going to lose it. (Steve's note: You don't want to see Jason "lose it." It ain't pretty.) Your running form is dynamic and will most definitely improve if you work on it. So get this myth out of your head right now because it is not true.

Use the Running Form Videos in this guide, along with the top 5 principles of good running form, to help you run more efficiently. A side benefit of running is that the more you do it, the better your form will become. Your body learns to be efficient when you continue to run more.

Running Myth #5: You have to carbo load for every run.

Eating an inordinate amount of carbohydrates seems like a rite of passage for every runner. The truth is, you don't need as many as you think.

Sure, carbs have their place in any endurance sport. You definitely need more than a sedentary person or someone who's a pure weight lifter. They're especially important during three key runs: a fast workout, a long run, and a race.

During these three types of runs you should monitor your carbohydrate intake and eat more than usual. I highly recommend Loren Cardain and Joe Friel's book **The Paleo Diet for Athetes** which will give you the background on how to alter a paleo diet when you're training for an endurance sport.

Read the Rebel Running Diet for advice on how to eat carbs strategically so they won't cause you to gain weight or give you any negative health consequences. There's a time and a place for carbs and we'll show you how to do it right.

AVOIDING INJURY

People run, and people get injured.

This is generally because these ill-informed individuals haven't read the Rebel Running Guide; they were being too eager, pushing too hard, running too much, or running with poor form. Not cool! Here's a look at all of the most common running injuries, how they affect you, and what you can do to prevent it or treat it.

These are the injuries we cover. Click on the links to skip ahead to the particular injury you need more information about.

Injury Spotlight: Runner's Knee

Runner's knee is the common name for what is usually patellar tendinitis, an inflammation of the tendon that connects your knee cap to the shin bone. Like most running injuries, it occurs when you run too far, too fast, too soon.

Pain occurs directly below the knee cap along the thick tendon that runs toward your shin bone. If the pain is intense or sharp you don't want to continue running on it as you'll be doing additional damage.

When it first happens you should ice consistently to reduce excessive swelling and control any pain that you're feeling. You should ice 2-3 times per day with a bag of ice or ice cup.

Luckily, this injury is rare for runners who also follow a good strength training program that includes exercises like lunges, squats, and dead lifts. These exercises strengthen your quadriceps, the thigh muscle responsible for ensuring your knee cap is tracking properly.

Using a **foam roller** or **The Stick** to loosen your quadriceps, hamstring, and hip muscles will help these muscles do a better job of controlling your running stride. Reducing the swelling and acute symptoms through icing, coupled with consistent use of a foam roller, is your first step to beating runner's knee.

Once you can fully extend your leg without pain, you should start back on strength exercises. Be conservative in the amount you lift—the knee bears almost all of your weight and you should be careful not to overload it when it's injured. Start slow, keep good form during all of your lifts, and work on basic moves like lunges and squats.

Runner's knee is often caused by improper running form, so be sure to diligently practice good form. Aggressive heel striking and a forward lean from the waist will put excessive weight on your knee and send impact forces through your knee that it's not designed to handle.

Injury Spotlight: Achilles Tendinitis

Achilles tendinitis is an inflammation of the Achilles tendon that runs from your heel to your **soleus** and calf muscles. This injury is common in new runners who run too much, too soon and for those who jump into barefoot training too aggressively (sensing a pattern yet?).

Achilles tendinitis sufferers will commonly hear or feel a crunching or crackling of scar tissue along the thick, fibrous tendon near their heel. When it's painful to run, you should stop your training and treat the injury right away.

First, ice your Achilles and soleus to reduce excessive swelling and control any pain that you're feeling. You should ice two to three times per day with a bag of ice or by taking an ice bath for 20 minutes.

After a day or two your Achilles will likely be stiff but not painful. You're not ready to run just yet but you can start the rehabilitative process. Get a foam roller or **The Stick** and use it to roll your Achilles, soleus, and calf muscle to loosen it while breaking up any scar tissue that you might have. Spend 3-5 minutes rolling your injured Achilles but not much longer.

Now you're ready for specific strength exercises that are going to get your Achilles back to full strength. Eccentric muscle contractions are what helps to heal Achilles tendinitis. Here's how to perform them:

1) Stand on a step with your affected leg (the leg with your injured Achilles) on the edge of the step. Place the ball of your foot on the edge of the step so your heel is hanging off.

2) With your uninjured leg, lift your body up so your affected leg is on its tippy toes.

3) Take your uninjured leg off the ground so you're holding all of your weight on the ball of your foot on the affected leg.

4) Use a wall or railing for support and slowly lower your affected heel down to a parallel or slightly beyond parallel position.

5) This movement is the opposite of a calf raise—you're essentially performing a calf lower with your bad Achilles.

6) Don't use your injured leg to move your leg back to the starting position. Instead, use your uninjured leg to raise your affected foot back to its original position on the ball of your foot.

7) Repeat this process of lowering your injured heel from a tippy toe position back to a parallel position. Never use your injured Achilles to raise your body weight—use your healthy leg.

8) Start with 1-2 sets of 10-15 repetitions. Over the course of several days you can increase this to 2-3 sets of 15 repetitions. Do these exercises 1-2 times per day.

9) After about a week you'll be ready to test your Achilles and go for a short run.

This process will heal 90% of Achilles tendinitis cases. If, after a week, you still have a burning or very painful Achilles, you should see a physical therapist or your doctor for a more advanced treatment program.

Prevention strategies: If you want to prevent future Achilles injuries, these are specific exercises and training tips to keep you healthy:

Make sure your running shoes are in good shape. Most only last 300-500 miles and this will depend on your weight, the shoe itself, where you run, and your foot strike pattern. When you see significant compression lines in the foam, you know it's time for a new pair.

Don't transition into minimalism or barefooting too quickly! Use barefoot running as a tool to develop strong feet and lower legs—not as an end in itself.

With that said, you should do some barefoot work weekly. Barefoot strides, 1-10 minutes of slow barefoot running once per week (based on your gradual progression, of course), and spending time barefoot in your home will get you most of the benefits of barefooting without the risk of a serious overuse injury.

Use your foam roller consistently to massage your soleus and calves.

Including consistent strength work will ensure you're developing general athleticism that prevents most of the wear and tear from running.

Most roads have a significant camber as they slope toward the curb. Your Achilles will develop serious imbalances if you're always running on one side of the road. Stay on the sidewalk, change which side you're running on, or, better yet, hit the trails for a softer surface.

Injury Spotlight: Shin Splints

Shin splints are a common injury among new runners or those with poor form. So make sure you read the running form section and do your best to run as efficiently as possible!

If you've ever had shin splints, you'll be familiar with the feeling: a tender, sore feeling running down your shin muscle either on the outside or inside of your lower leg. It can be higher up, closer to your knee or lower near your ankle.

No matter where it hurts, you probably want it gone. Right now. We don't blame you - when each step hurts, you'll start dreading your running workouts awfully quick. Here's your action plan to get rid of shin splint pain:

> **Run on a variety of surfaces, not just the roads or sidewalk.** When you expose yourself to dirt trails, grass fields, and crushed gravel paths your legs become more resilient. Bonus: rotate two different pairs of shoes for added variety.

Strengthen your lower legs with some barefoot running or strides. You don't need a lot, but just a few minutes 1-2 times per week is enough to strengthen your feet and shin muscles.

Ice your shins with bags of frozen vegetables, a frozen cup of water (ice massages work wonders), or by submerging them in a bucket or cooler of ice water. Try doing this after longer runs and workouts when your shins might be more sore than usual.

Shin splints are a tricky injury to treat because their cause will be different depending on the runner. Try a variety of these treatment options and you'll find one that works for you.

Injury Spotlight: ITBS

Illiotibial band syndrome (ITBS) is an inflammation of the connective tissue that runs from the outside of each knee to your hip. Injuring this band often results in weeks or potentially months of pain because it's very difficult to rehabilitate. Since it's not a muscle, massage doesn't work well because it's so difficult for the ITB to receive much blood flow.

Pain typically starts on the lateral or outside edge of your knee. If you begin to feel a tingling sensation or pain on the side of your knee, start a rehab plan immediately:

Stop running. If it hurts to run, then don't run.

Begin a targeted strength routine that helps to remedy the weak areas that are usually responsible for ITBS. The most important muscle groups are your hips and glutes.

Increase flexibility with dynamic stretches for the glutes, quads, hamstrings, and hips.

If you own a foam roller or The Stick, use them aggressively if it's not too painful. Instead of massaging the IT Band directly, focus on your glutes, hamstrings, and quadriceps.

Once you're healthy, there are numerous prevention strategies that you can do to prevent another flare up. Keep in mind that the best prevention is having a varied training program where you run at different paces, include some trail running, rotate your shoes, stay loose with dynamic warm-up drills, and strengthen with body weight and gym exercises.

It's tough to get an overuse injury when you're including so many types of exercise in your weekly running program.

Specifically for ITBS prevention, focus on these top prevention tips:

In the gym, focus on **pistol squats (one-legged)**, **dead lifts**, and **squats**. These compound, multi-joint movements strengthen the weak areas that typically cause ITBS. The videos are of my friend Vic (who cowrote the Rebel Strength Guide with Me), not a random hobo :)

If you know you're susceptible to ITBS you should do a prevention routine regularly—at least twice per week. I developed a routine called the **ITB Rehab Routine** that has helped hundreds of runners strengthen the weak areas that caused their injury.

Run more hills! It sounds counter-productive, but hills are strength work in disguise. They are the most running-specific strength exercise you can do. Initially, you'll avoid them during your injury, but once you're healthy a weekly hill workout or regularly running hilly terrain can help prevent another flare-up of ITBS.

Injury Spotlight: Plantar Fasciitis

Plantar Fasciitis is often called the "vampire bite" of running injuries because it can last for months and the treatment options are bleak. I disagree and think most runners can cure their PF in a matter of weeks (or less).

Plantar Fasciitis is an inflammation of the thick tendon that runs from your heel to the ball of your foot. It helps stabilize your foot during the stance phase of running and is commonly injured in runners who drastically increase their training or barefoot running.

Like most running injuries, when you first experience the intense pain of plantar fasciitis you should stop running and ice your foot 2-3 times a day for 20 minutes. The most effective way to ice your foot is to fill a bucket or cooler with water, dump in a few trays of ice, and submerge your entire foot. It's damn cold and you might feel ill at first, but I promise that feeling goes away after 2-3 minutes.

Massaging your foot should be a regular part of your treatment plan. Use a tennis or golf ball to roll the bottom of your foot for a few minutes. There's no specific procedure for rolling your foot on a ball, but "feel" the muscles of your arch and massage anything that is sore.

Strength exercises are crucial to rehabilitating plantar fasciitis. You won't see too many people doing the exercises below in a regular gym because they're a little weird. But they're damn effective at giving you strong feet that are resistant to pesky overuse injuries.

Scatter a bunch of marbles on your floor and put a plastic cup next to them. Take off your shoes and socks, sit in a chair, and pick up the marbles with your toes, dropping them into the cup. Use 10-20 marbles and repeat this process a few times.

Lay a hand towel flat on the floor next to a chair. Sit down and put the ball of your foot on the end closest to you. Using your toes, scrunch up the towel so you're moving the end closer to you with every scrunch of your toes. Repeat this 2-3 times. After a week, put a hardcover book or 5lb weight on the end of the towel for added resistance.

Take off your shoes in your house and go barefoot! There's no need to always have your feet in shoes, which only weaken your foot muscles and make you more susceptible to lower leg injuries. Only a tiny minority of people with legitimate foot deformities need consistent foot support.

Regular, but controlled, barefoot running in small quantities will strengthen your feet, arches, and lower legs. Your best options: barefoot strides (4-6 on a well manicured grass or artificial turf field) or 1-10 minutes of slow barefoot running. Yes, barefoot running is strength work!

Pay careful attention to your running shoes, which often contribute to plantar fasciitis. Both bulky motion control or minimalist shoes can cause the injury. Bulky shoes weaken your foot muscles so you get hurt, while minimalist shoes put too much stress on your foot musculature. Strike a balance between the two: a neutral shoe often works best with 1-2 barefoot running sessions per week (plus foot strengthening exercises).

MORE running injury questions? email us at Contact@nerdfitness.com with "RRG INJURY" in the subject line so we can get back to you.

PROPER RECOVERY

Recovering from your training is important if you want to stay healthy and run a successful 5K at the end of your running program. It's a balancing act of pushing your body to get stronger and resting enough to absorb your training and adapt to the new stress of running.

The most effective tool in your recovery arsenal is sleep, hands down. Getting enough sleep every night will help you recover from your workouts, protect you from injury, and run at your potential. Yet too many runners skimp on sleep so they can watch a movie they've already seen six times.

The only movie this is acceptable for is The Shawshank Redemption. You get a free pass on that one.

Aim for at least seven hours of sleep, but preferably 8+ when you're running more than you ever have. That little bit of extra sleep goes a long way and helps your body repair itself from the damage of running a lot.

Aside from sleep, you also want to be smart about your training. The training plans in the Rebel Running Guide will help you with that— keeping you from increasing your running more than what you can handle. Start at a level that you think will be comfortable—running is a long-term sport and you'll gain a lot of fitness with consistent running (not cramming too many runs into a 1-2 week time frame).

Instead of thinking about daily or even weekly running totals, shift your mind-set to think about monthly mileage and workout progressions. It takes the body longer than you think to adapt to workouts, so plan accordingly. You can't rush a 10-mile training run just like you can't rush a 300-pound dead lift.

Most times, recovering properly from your workouts is more about what you do before and after you run than what you do during your workout.

That's where a good warm-up and cool-down can help.

Instead of static stretching, prepare for your run with about 10 minutes of dynamic stretches and body weight exercises. This type of warm-up will literally warm you up by increasing your heart rate and blood flow to your muscles. You'll get looser, lubricate your joints, and prepare your body to run.

Likewise, immediately following your run is an important time to focus on recovery. Your workout doesn't end when you stop running. Allocate at least 10 minutes to a core, body weight exercise, or gym workout to help your body get stronger and loosen up from running. These exercises may not feel like cooling down, but they help shake out the tightness you probably feel after a run.

Doing something before and after every run will help your leg muscles stay loose and supple on a day to day basis. Runners recover best and prevent more injuries when they pamper their muscles with strength exercises, dynamic stretches, and consistent use of a foam roller.

Recovery extends beyond your training and includes a healthy diet. The Rebel Running Diet will ensure you're eating a nutrient-rich diet.

Providing your body with the right food (at the right time) will keep your muscles fueled, repaired, and ready for your next run.

Hydration is a key component of recovery and allows your body to remove byproducts of hard exercise while giving your muscle cells the water they need to do their job. Staying hydrated isn't a difficult thing and too many runners obsess about staying hydrated at all times.

The truth about hydration is that it's important but not as crucial as most runners think. The human body is designed to sweat to keep the body cool. Losing some amount of water and being more dehydrated than when you started your workout is normal. You do not need to replace every ounce of water you lose during the workout.

Instead, focus on rehydrating after you finish your workout. There's no magic formula for fluid replacement so just monitor the color of your urine. If it's clear or pale yellow, you're hydrated. If it's a solid yellow color or darker, you need to drink more water. Rainbow colored? You're eating too many Lucky Charms.

Some runners may even have heard that you should drink ahead of your thirst. In other words, once you feel thirsty it's already too late and your body is dehydrated. This myth has recently been discredited through research. The human body is an amazing machine and it knows how to regulate your fluid levels. If you're thirsty, drink. If not, you don't need to force down extra water.

Exception: you're running in 110 degree dry heat and you don't even feel yourself sweating. Pack a water bottle!

TRACKING YOUR WORKOUTS

As the saying goes: "What gets measured gets improved." If you want to be a better runner, you need to keep track of how well you're running, namely how far you ran and how fast you ran it.

Here are some suggestions:

- **RunKeeper**
- **Footsteps**
- **Nike+**
- **Dailymile**

You can also just keep track on a watch of how long it took you to run, and then come home and plug in your running path on google maps (select the foot method). Certainly not the BEST method, but it will work if it's your only option. Keep track of your distances and times in an excel sheet or something similar.

If you have more suggestions for great running apps, let us know contact@nerdfitness.com and we can add them to future editions of the Rebel Running Guide.

TIPS AND TRICKS

We've got all of the basics covered up to this point, but that doesn't mean there's nothing left to learn! Think of this like the tips and tricks section of a video game strategy guide—not essential to beating the game, but certainly helpful for making your character more bad ass.

Getting Your Fix

If you want an edge on race day (or for a particularly tough workout), there's something you can drink that increases your pain tolerance, alertness, motivation, and performance level.

Yes, it's legal.

Horse tranquilizers.

Hahaha just kidding, we're talking about a simple cup of coffee. That cup 'o joe contains caffeine, the most powerful, legal performance enhancing drug on the planet.

Recent research has thoroughly proven that caffeine helps performance in everything from weight lifting to cycling sprints to running for up to two hours.

Even for people who habitually drink coffee, the performance enhancing effect is the same. So no need to abstain before your workout or race—you'll still run faster.

Caffeine helps you run faster in numerous ways. It makes you want to run faster and can be a powerful motivator. But it's not just mental. Caffeine fundamentally changes how muscle fibers contract—making them able to contract more powerfully and faster.

You may be cautious because coffee is a diuretic. Fear not, because it's actually NOT a diuretic. You'll pee the same amount after a cup of coffee than after a cup of water. The only difference is that coffee isn't the best hydrator, so while it's not dehydrating you, it's also not hydrating you very well. Monitor the color of your pee and make sure it's light yellow or clear.

Coffee isn't your only option for caffeine—you can go with straight caffeine pills—but coffee is a preferred source because it's actually healthy. Along with tea, coffee contains powerful anti-oxidants and studies have shown it to have numerous disease fighting properties.

Take that, Red Bull.

So drink up on race morning. As many as a third of professional track athletes drink coffee before competition, so join their ranks and enjoy the performance-boosting effects of a cup of coffee.

Running in the Rain

Running in the rain is a blast. There's far fewer people outside so you have the sidewalks or trails to yourself and you can enjoy the sound of falling rain drops.

Yes, you're going to get wet. Yes, you'll need to dry off your shoes (more on that later). No, you won't ruin them.

Running in the rain is perfectly safe. There are only a few cases when you need to be very careful:

- **Traffic might be more difficult to navigate.** Stay on the trails or a sidewalk just in case.
- **If there's lightning, you should postpone your workout.** Running during a thunderstorm isn't a good idea. Unless you're Thor, in which case you can do whatever the hell you want.
- **Running in the rain is fine.** Running in a hurricane isn't, so use your good judgment on the severity of the storm when you go outside.

Running on trails or dirt paths in the rain means you'll avoid traffic, but you might get muddy. No big deal, but if there's a lot of mud then you may slip and slide through your run. It sounds fun, but all that sliding is going to make you pretty sore and puts you at a greater risk for straining a muscle. Make sure that you can run with your normal (good!) form—or else stay on the roads.

The best method for drying soaked shoes is to remove the inserts and stuff them with crumpled up newspapers. Every few hours, replace the newspaper. It will draw out the water and they'll be dry for your next run.

To speed up the process, you could put your shoes next to a radiator or on top of an air conditioner or heater. Warning: if your shoes smell, be prepared for that smell to travel much farther in your house! If your shoes do smell, put them into a plastic bag, and put them in your freezer overnight. Yeah, you heard me—your freezer. They'll be nice and chilly, and odor free, the next morning.

But How Do I Breathe?

Too many runners over think breathing while running. I've heard it all: lots of short, shallow breaths and long, deep breaths. They're both wrong. If you don't believe me - go ahead and try both strategies. You'll feel really weird, will probably get a side stitch, and you may scare the children.

The simple answer is that there's no magic formula - just breathe normally! Just like you don't try to schedule your breath rate while walking, playing basketball, or writing on the Nerd Fitness message boards, you don't need think about it too much while running.

The real question is: should you breathe through your nose or mouth? Some people prefer their nose because breathing in through their nose just feels weird and awkward. That's fine.

But you're going to get less air into your lungs. If you're running a faster workout or your 5k race, this could be a problem and might slow you down.

Since your mouth and throat are significantly bigger than your nostrils, they allow you to get a lot more oxygen into your lungs a lot faster. So our recommendation is to breathe through your mouth. It's simpler, you get more oxygen, and that's what the pros do!

You are training to be a professional, right?

If being a mouth-breather really weirds you out, then you can breathe in through your nose and out of your mouth. The choice is yours. But once your effort level increases, you may need to get in more oxygen - so don't be shy, open that mouth and gulp down that air.

Handling Common Running Annoyances

Black toenails. Bleeding nipples. Blisters. Chafing. Athlete's foot.

Running is gross.

Fortunately, you probably won't experience most of these things because they're almost entirely preventable with a few common sense prevention strategies. Let's tackle them one by one.

Black toenails. Common with runners putting in mega mileage (think 80+ miles/week), you absolutely don't need to get a black toenail to "prove" you're a runner. Don't let any other runner tell you otherwise.

Black toenails are caused by shoes that are too small. When you don't have enough room in the toe box of your running shoes, your toenails are going to be cramped. With enough friction, pounding from your footsteps, and contact with the inside of the shoe, your toenail will get bruised.

A simple way to prevent this is to buy running shoes that fit. You should have about a half inch (or the width of your thumb) from the end of your big toe to the end of the toe box. If you don't, your feet will end up touching the end of your shoe, which could give you a black toenail.

Since your feet expand when you're standing up (and are actually bigger at the end of the day), and especially when running, you need that extra room. If you do happen to get a black toenail, it's not the end of the world. They usually don't hurt and if you're a girl (or a guy...), you can paint them. Nobody will know! You can also paint your toes with a clear strengthener to help prevent them.

Bleeding nipples. Yikes. This one happens only to guys because they don't wear sports bras. The bras prevent chafing—or friction—which causes the nipples to chafe and start bleeding. If you're a dude, you need **a bro**!

So there you have it: Nipples bleed from too much rubbing up against your shirt. You can prevent this by putting Band-Aids on your nipples, running without a shirt, or finding a moisture-wicking shirt (not cotton) that doesn't irritate your skin as much.

If you sweat the Band-Aids off or can't bear to put them on (because that means you have to rip them off), try a lubrication like Body Glide to protect your nipples from your shirt.

It's really that simple.

Wow that was a lot of nipple talk!

Blisters. Every runner is going to experience a blister soon enough. They're usually fairly mild and you can run through them. No, they won't cause any permanent damage unless they get infected (very rare).

Most blisters occur on your feet when there's too much friction between your shoes, socks, and feet. Like bleeding nipples, blisters are caused by excessive rubbing, which can make your skin raw.

Preventing blisters is all about preventing friction and excessive moisture. The first step is ditching those cotton tube socks. They might have been cool in high school gym class, but they're not helping you out on a training run. Stick to synthetic material that wicks moisture away from your skin.

Our favorite sock is **Wrightsock brand**, because there are two layers of synthetic material that prevent chafing. Instead of the sock rubbing up against your foot, the two layers rub against one another. In three years of wearing these socks I haven't had one blister on my feet.

Also make sure your shoes fit right. You'll need a thumb's width or ½ inch in between your big toe and the end of your toe box. But not more! Any extra room is going to cause your foot to slide around in the shoe itself, causing blisters and a lot of chafing. Like Goldilocks, find a shoe that fits just right.

Chafing. Booo, raw skin! Chafing is common among runners, unfortunately, especially during the summer months when you sweat more. It's caused when skin rubs against skin repeatedly (especially when wet), giving you what looks like a red rash. In severe cases, it can actually bleed.

Luckily, it's more common in runners who run a lot longer than what you'll be doing as you prepare for a 5K.

Chafing is caused by a lot of rubbing, so that's what we're going to avoid.

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The two most common chafing areas are under your armpits and in between your thighs. So, first, avoid cotton running clothes. They hold onto moisture and when they rub, they hurt. Invest in some performance gear which will wick moisture away from your skin and help keep you dry.

Wearing antiperspirant is sometimes all you need to prevent underarm chafing because it will reduce how much you sweat. Couple that with a moisture-wicking shirt and you should be ready to run.

If you need to go the extra mile (ha!) to prevent chafing, both in your armpits and thighs, use a running lubrication like **Body Glide**. It will prevent excessive rubbing and keep you safe.

Athlete's Foot. Besides being gross, athlete's foot is simply a fungus that grows on your foot, giving you an itching rash that's usually accompanied by dry skin. Lovely.

You can get it in locker rooms and other places where a lot of people go barefoot. But prevention of Athlete's Foot is actually very simple—keep your feet clean and dry.

That fungus can't grow in a dry environment, so you want to ditch your cotton socks (they absorb moisture) and wear flip flops as often as possible. Go barefoot in your home and don't hang out in your sweaty running shoes when you finish a run. The longer your feet stay in your sweaty shoes, the better your chance of getting Athlete's Foot.

If you do come down with it, fear not—it can be cured in about a week and for just a few bucks. Go to your local pharmacy or CVS and pick up a non-prescription foot fungus cream. Follow the directions and you'll be good to go by race day. Athlete's Foot isn't painful (but it is itchy and annoying) and won't limit your running, but you should get rid of it as soon as possible.

Keep those feet dry!

To Run or Not to Run in the Heat?

It's no surprise that running in the heat and humidity is hard, miserable, and uncomfortable. When temperatures are high you're going to wish you were at the beach instead of training for a 5K.

Let's be honest: Running in the heat sucks. It causes your body temperature to rise out of the optimum range for running well. Your body chemistry and metabolic processes slow down and aren't as efficient, limiting the use of oxygen in your muscle cells. As a runner, this means you're going to run more slowly—and likely more uncomfortably.

Unfortunately, there's not much you can do about it. You're going to run more slowly and feel worse in the heat. There's no way around that.

The good news is that the human body is damn good at exercising in the heat: We have relatively little hair, we can sweat profusely, and our two-leggedness keeps much of us out of the sun. Yet we're not impervious to the effects of heat and humidity.

Prolonged exposure for an hour or more to heat, sun, and humidity during strenuous running could cause heat exhaustion or heat stroke. These heat illnesses aren't to be messed with and include symptoms of dizziness, lack of sweating, confusion, and a body temperature greater than 105 degrees.

If you think this is happening to you, stop running immediately. Consume cold water, get out of the sun and into an air-conditioned home. Take a cold shower. The only remedy to heat stroke is to rapidly cool your body. If your confusion persists, get a friend or family member to call 911. Don't take any chances.

The good news is that preventing heat exhaustion and heat stroke is fairly easy. First, no hard workouts or races in the early afternoon when the sun and heat are at their worst. A common misconception is that heat stroke is caused by dehydration.

This isn't true at all—it typically occurs far before you're able to reach a serious level of dehydration. Heat stroke only occurs when the body can't dissipate the heat it produces by strenuous exercise in a hot environment.

To make your hot summer runs more comfortable, stay hydrated, splash your face and head with cool water during your run, and stay in the shade when possible. Trail running is a good option as you're usually out of the sun and off the hot asphalt.

Try to run early in the morning when the sun is weak and the temperature is at its lowest. It's more humid in the morning hours, but with a weak sun and much lower temperatures it's a better choice.

Luckily, your body adapts over just a few weeks to running in hotter conditions. Your sweat rate optimizes and you lose less electrolytes. Your body also improves its ability to control its internal body temperature, so you'll feel more comfortable running in the heat than you did before you acclimated.

You'll also get tougher mentally and be better able to psychologically deal with the hotter temperatures. As long as you're running easy and staying on top of your hydration you shouldn't have any problems with summer running. Just make sure to hydrate more than usual when you finish running!

Once summer fades and the temperatures start to drop, your body retains the efficiency adaptations it developed over the months of training in the heat. Use this opportunity to race during the early fall weeks. You may just surprise yourself.

Running in Cold Weather

"There's no such thing as bad weather, just soft people."
– Bill Bowerman

Unless you live in the Arctic or in Siberia, with temperatures dipping under -30 degrees Fahrenheit, you can run in the winter. And you can run comfortably.

Successful winter running is about layering your clothing so you protect your extremities from extreme cold and wind. When the temperature dips below freezing, you'll need:

- **Hat that covers your ears**. Most body heat is lost through your head, so cover up!
- **Gloves** (not too bulky or you'll be uncomfortable).
- **Moisture wicking shirt against your skin, layered with 1-2 other shirts depending on the temperature.** Wear a wind-proof outer layer for best results.
- **Depending on the temperature, you may want a shirt that has a high collar to protect the skin of your neck.**

-Wind-proof briefs—especially important for men… Trust me.
-Running tights or pants. I prefer Under Armour ColdGear tights (**mens** and **womens)**, but if you can't handle wearing tights then a looser pair of running pants will work.

For more extreme conditions, you may need a scarf, double hat and gloves (I've done it—the second hat works wonders), and maybe even two pairs of pants. After running through ten Boston winters I've seen some pretty cold temperatures and the human body generates more than enough heat to stay comfortable—provided you're wearing enough clothes.

It's important to wear a moisture-wicking shirt against your skin because sweat can rob your body of heat over twenty times faster than air. If you're not getting that sweat off your skin and away from your body then you'll never warm up.

So as long as your extremities are covered, you should be all set to survive—and thrive—in the winter months of training.

But what about the risk of "freezing your lungs" that your parents or friends keep warning you about?

Believe it or not, that's a myth. Humans evolved through multiple ice ages to deal with very cold temperatures and we're very good at warming air through our nose and mouth as it enters our body.

If you happen to be running in -30 degrees Fahrenheit or less (are you crazy?), it's best to wrap a scarf around your mouth. You'll recycle some of the moisture in your breath and prevent excessive drying of your throat. Don't worry, though—your lungs and throat won't freeze!

There actually have been no documented cases of cold air causing damage to a runner's lungs. Runners have completed marathons at the South Pole and North Pole—no damaged lungs. You might get an uncomfortable burn when you reach -40 degrees Fahrenheit, but when you put a scarf over your mouth that should go away.dizziness, lack of sweating, confusion, and a body temperature greater than 105 degrees.

What happens when you don't cover up? Prolonged exposure to cold and wind can cause frostnip—a mild form of frostbite. It usually isn't serious, but requires immediate attention.

If you feel a tingling, burning sensation in your fingers, nose, ears, toes, or, ahem, other extremities, you should get indoors immediately and try to warm up by removing any wet articles of clothing and covering yourself with blankets. If a particular body part is very red, gradually warm it up with body heat.

Take care to gradually warm yourself and not immerse a frozen finger into a cup of hot water. If you do use water, keep the temperature under 110 degrees F. Instead of rubbing the area, put it on your stomach or underneath your armpit if you can. Intense rubbing or very hot water can actually cause additional harm.

If it's also snowing out there, then you can still run. But you should be careful because your footing isn't going to be as stable. The principles of good running form are going to be especially important when you're traversing snow and potentially ice.

As a good rule of thumb, if your feet are sinking a few inches into the snow, you probably can't run. Your form is going to be very compromised (meaning you'll be slipping all over the place or marching through high snow) when you're running through a lot of snow, so you'll need to find another place to run. A treadmill (boring, I know), plowed road, or shovelled sidewalk will have to do during the winter.

Sidenote for guys: If you wear tights to run, then don't wear shorts over them. Not cool. Other runners will mock you mercilessly and assume you are not a real runner. Wear those tights proudly and confidently. Sure, you may look like a more naked version of Batman, but it screams "I am a confident bad ass!"

Rebel Trail Running

Trail running isn't much different than running on the roads unless you're climbing the Pyrenees or running an ultramarathon in the Colorado mountains. But that's crazy—you're training for a 5K.

Trails usually have more obstacles for you to navigate like roots, rocks, fallen branches, and even creeks to jump over. You'll need to stay vigilant to avoid falling flat on your face. The rapidly changing elevation and quick turns will have you super focused on the ground in front of you but don't forget to look ahead and anticipate what's in front of you.

If the terrain is especially technical where you are, you may want a pair of trail running shoes. While they're not necessary (I've never worn them and run some gnarly trails), if you're dealing with slippery rocks and a lot of roots they might help you get better traction. They're most useful when you're running downhill and navigating loose rocks and twigs.

The best advice on trail running is from Christopher McDougall's Born to Run and the character Caballo Blanco. He advises that if you're debating between one step or two between rocks, take three.

He's talking about your cadence or your stride rate. To stay on your feet and avoid a fall on a particularly rough patch of trail you need to take shorter strides and stay light on your feet. Long strides are inefficient and put you at a higher risk of injury—both overuse and falling over a rock.

Hills are going to be a common element to most trail runs. Get used to them! They help build strength, stride power, efficiency, and guard against overuse injury. They're your best friend when it comes to training.

To run them effectively, keep your back tall and don't slouch into the hill. Keep your elbows pumping back and try to land on your midfoot underneath your center of mass. You might be tempted to drive your knee up like a sprinter when going uphill, but this will probably tire you out prematurely. Just focus on a quick cadence up the hill with your back tall, arms pumping, and a midfoot strike. The rest of your form will take care of itself.

What goes up must come down—running downhill is as important as (or more important than) running uphill. If you're not careful, you can do a lot of damage running down a steep hill.

First, keep a very high cadence or else you'll put a lot of stress and impact forces on your legs. It's going to be harder to land on your midfoot going downhill, so don't focus on it exclusively. Instead, try to land lightly, despite gravity pulling your body down on your legs.

Above all, you need to relax. If you're tense then you're asking for an injury. A relaxed muscle will absorb impact forces and generate power a lot more efficiently. Keep your legs turning over at a high stride rate—over 180 steps per minute is ideal while coming down hills—and you'll cruise comfortably back to sea level.

Running Safety

Make sure you're running on the correct side of the road, AGAINST traffic, so you can avoid a car that's coming at you quickly. Don't run with traffic. If you are running at night, wear some sort of reflective gear. May we recommend **this**?

Be smart and wear ID! You probably aren't going to be running with your wallet/passport/drivers license in your pocket, and it's certainly possible that something could happen that requires you to be taken care of. We HIGHLY recommend picking up **something like this** so that you can be correctly identified and helped should you pass out on the side of the road or get hit by a bus. Obviously, we advise you avoid buses, but that decision will be up to you.

CONCLUSION

Be faster today than you were yesterday.

Be stronger today than you were yesterday.

These are your goals, and now you have all of the knowledge that you need to get there.

To borrow from a movie I reference all too often, The Matrix, we can only show you the door. It is up to you to walk through it.

Now that you've finished this section of the guide, it's time to clean up your diet, and start eating for maximum awesomeness and efficiency.

Once you learn the fundamentals of a healthy Rebel Runner's diet, you can start making small adjustments to how you eat, what you eat, and when you eat.

At this point, you can decide what level you need to start at as far as your workouts go:

-**Rookie**
-Recruit
-Rebel
-Elite

We've also got plenty of information for you on exactly HOW to run your first race, from deciding on which one to run all the way up through crossing the finish line. If you're doing an adventure race, we have specific tips and tricks for that!

Run smart.

Run safe.

Run well.

Ready...set...GO!