



Strength Running **PR** Guide

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[Strength Running](#)

The Required Disclaimer

For Everyone's Safety:

You should consult with your primary health care physician before beginning any nutrition or exercise program. Use of the programs, advice, and other information contained in this guide is at the sole choice and risk of the reader. By using this guide you hereby forfeit any and all claims, past, present, and future, against the owners, editors, contributors, administrators, and other staff of www.strengthrunning.com.

Now, let's answer your questions.

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Who am I?

I'm a running coach and the author of Strength Running. I love trail running, strong coffee, a full-bodied red wine, and helping runners run personal bests.

I once heard some good advice that went something like, "Whatever you find yourself doing on a Saturday morning – that's your passion. Follow that."

If I'm not running on a Saturday morning, I'm sending an updated training plan to one of my runners or writing a blog post about running. You could call me a running nerd.

I've been running for nearly 13 years, starting at the high school level and



then being lucky enough to run at college. I've won a lot of races, from cross country to track to road races. The last two years have been the most important in my running career because they've rapidly accelerated my understanding of the sport. I had to understand and learn more – **because I nearly quit.**

See, in 2008 I received a guaranteed entry to the New York Marathon. I had grand hopes of running 2:37 and negative-splitting the last miles in Central Park. That turned out to be a fantasy.

Instead, I went through 20 miles in 2:01:58 and crashed hard. I ran out of fuel and felt worse than I ever could have imagined. Depleted of energy, every foot strike over the last 3 miles felt like a hammer smashing my legs.

I finished in a respectable 2:44:38, but wouldn't run again for 6 months. After trying to start running again, my illiotibial band (IT Band) tightened up like a violin string and gave me shooting pains on the outside of my left knee.

After six months, four physical therapists, three massage therapists, and countless hours of online research I beat my IT Band pain. I also learned how to train more effectively, run smarter, and prevent injuries.

I haven't had a serious injury in two years. I used to count my blessings if I made it through 3 months. Instead, I ran more miles in 2010 than any other year. I won four races. I'm stronger than ever.



I wanted to share the training strategies that I had to learn the hard way. I started **Strength Running** in early 2010 to share the simple message that you can run more and stay healthy if you train smarter.

I named my site Strength Running for a reason: runners need to be strong, athletic, and coordinated to run fast and stay healthy.

People seem to like my training ideas – **Strength Running** is growing fast and the athletes I'm coaching are running personal records. Their success is more rewarding than I can explain. The messages I get from runners in my inbox keep me posting every week. Thank you.

If you like the **Strength Running** message, I'd love for you to [subscribe](#) for weekly training advice, friend me on [Facebook](#), or continue the conversation on [Twitter](#).

What is the Strength Running PR Guide?

I sent a simple message to my newsletter readers: “Send me any question you have about running and I’ll answer them.” I thought that it would make a great blog post.

Within an hour, I had enough questions for a great post... but they kept coming. After I had over 25 questions in my inbox, I decided to put together a massive Q&A-style ebook for my readers to showcase the answers to their questions.

Now, there are over 35 questions in this guide. Every one of them is reader-generated so this is truly a cooperative effort: I couldn’t have done it without you! These questions are YOURS and that’s why this guide is only for you.



I edited questions only for grammar and conciseness – you’ll see that some are long and some are short. The “flavor” of the question is still intact.

Use this guide to answer your own questions about training and racing. It’s certainly not an exhaustive list, but it samples issues of mileage, workouts, pacing, injuries, and running gear.

There are a lot of resources you can look to for running information, including Runner’s World, Letsrun.com, and Running Times. It seems to me that many of them are a bit too “corporate” and don’t speak to the average runner.

They write articles so they can sell advertising space. There’s nothing wrong with that, but sometimes the simple questions that most runners have are overlooked.

That’s where this guide comes in – it’s driven 100% by YOU and the specific concerns you have to your own running. I put a lot of work into making this guide and probably could charge for it – but I’m not. Since I asked all of you for your questions, it seems silly to charge you for the answers. So here you are – free, personalized running advice.

Once again, I want to thank all of the Strength Runners who helped make this ebook possible. What you’re reading couldn’t have been done without your participation. Your passion for running is why I continue to write the Strength Running blog.

Mileage and Endurance



1. I am currently upping my mileage from about 25 miles per week to about 60-70. What's the best way to increase my fitness?

You have to be VERY careful while increasing your mileage this much. Increases in volume require your body to be *structurally* (muscles, tendons, ligaments, and bones) ready to handle this extra time on your feet. If you don't have experience running more than 25 miles per week, then you should focus on a more modest increase of 5-10 miles over the course of 2-3 months. We're still talking about a 20-40% increase, so it's nothing to scoff at.

Consistency is one of the most important factors for success with distance running, so don't chase a mileage number that you think will get you to a personal record but will likely only leave you injured. Any increase in mileage will result in more aerobic capacity and endurance, but you need to ensure your body is ready for the increased workload. Now is the time to stay consistent with your core exercises, strength workouts, and gym sessions to ensure your muscles and connective tissues are ready for the extra mileage. By staying on top of your strength work and keeping your mileage increases modest beyond what you're used to, you'll drastically reduce your risk of injury – and put yourself to run well now and in the future.

2. Why is it that for most races, it is recommended to run a long run of a greater distance than the race itself but then for marathons, training plans max out long runs at 20-22 miles? People hit the wall at 20 miles - is that because they've never run further? Is the ideal training really different for higher mileage races such as marathons and ultras?

Shorter races in the 5k - 10k range are by definition relatively short, so it's fairly easy for most runners to run longer than these race distances on their long run (and often, for many other runs during the week). When you start training for the marathon, however, you approach a race distance so long that the wear and tear on the body is too great to run longer during training. Even professional marathoners rarely run more than 22-25 miles in training. The risk of injury and the compromises in training you would need to make for several days after a 26+ mile long run are too great to make it a standard part of any training plan.

People "hit the wall" around the 20 mile mark because of fueling issues - in other words, they come close to using all of the stored sugar in their muscles. Your body can only store roughly 2,000 calories worth of

glycogen (sugar) in the muscles, blood, and liver – which is enough to carry you roughly 20 miles. You can increase the distance you can run without hitting the wall by training and taking in carbohydrates during the race. For ultramarathons, consistent fueling is mandatory to just *finish* the race.

3. The 10% Rule always assumes that one has never built up to that mileage before. But what about more experienced runners who are coming back from a post-season mileage reduction of a few months? Can I build my mileage faster?

This is such an important question and one that a lot of running "experts" just don't seem to understand. Of COURSE you can build faster! Let's use me as an example: I'm very comfortable running about 60 miles per week. If I take two weeks off after a serious race that included two weeks of reduced mileage during my taper, then I'll start my mileage at about 40. But in one week I'll jump straight up to 50 (that's a 25% increase!) and then settle into a 10-15% increase until I reach 65. Only when I reach my top-end mileage will I be more conservative. When I reach about 70 miles per week, then I rarely add more than 5%.



The point is: you can build your mileage aggressively until you reach your baseline mileage - this is where your body is comfortable training. Once you start running high mileage (for you; it will be relative), then be more conservative with adding miles to your weekly plan. A great strategy I frequently use is to only add

mileage every 2nd week, allowing 2 weeks for my body to adapt to a certain training volume before an increase.

Another issue to consider is what types of workouts you're running. Be careful not to increase both volume and the intensity of your workouts too drastically at the same time. A 20% increase in mileage may be fine for you at a certain level, but only if you're not also increasing your hard workouts. It's a balancing act to determine what your body can handle. My advice is to always err on the side of doing slightly too little as opposed to too much. **You'd rather be a bit under-trained than injured or over-trained.**

4. Is there a limit to how fast someone can get? Especially an older runner starting out?

Yes, there is a limit to how fast someone can run, but it will probably never be reached. To reach your true physiological limit you'll need the planets to align: perfect race conditions, perfect race weather, a perfect training cycle at the peak of your running career (and when exactly is that?), consistent and uninterrupted training with no injuries or breaks, perfect race execution, and the mental ability to push your body to its maximum limit (which is incredibly rare - your brain usually doesn't allow you to do this or else you risk doing damage to your body). Meeting all of these requirements to running at *your absolute physiological capacity* is virtually impossible – so I recommend not even worrying about it. Just do the best that you can with your current situation.

Older runners are limited by the inevitable effects of getting older - less muscle mass, fewer beneficial hormones, and slower recovery times between hard efforts. But if you're an older runner who's just starting to run, you'll still have an impressive improvement curve so don't despair. All new runners should

focus on the one thing that is holding them back the most (and conveniently, the one thing you have the most control over): endurance. Gradually increase your overall volume and run a consistent long run. Good runners run a lot. Just focus on the basics of volume and good form and that is enough to get you started running a lot of PR's in the early days of a running career.

5. I can run a steady pace until I hit 6 miles and then I need to stop because I'm winded. My legs are fine though. How do I increase my endurance so I can run a half-marathon without stopping?

This is an endurance issue, plain and simple. I think you're probably reaching the maximum distance that your body is ready to run and you start feeling the cumulative fatigue of a long run - I'm not sure "winded" is the correct way to describe it, though. To start getting comfortable with longer distances, you first need to start running more per week. If you can run several runs per week in the 3-6 mile range, then there's no reason your body can't adapt after several weeks and be ready to run 7 miles for your long run. **Small, consistent increases in overall volume will help you develop the aerobic capacity to run a half-marathon without stopping.** After a few months, you should be able to run a half-marathon without stopping. The excitement of race day and the support of the crowd and other runners will surely help you overcome any fatigue you may feel!

6. Because of the bad winter weather, I've worked out on an elliptical for the last three months without any running. I was recently on vacation and went for a short run but it wasn't easy. Why did my legs feel so tired?

Your legs felt tired because you haven't been running for three months! The elliptical is a non-impact cardio exercise and is best used as a supplemental aerobic exercise. There are two good reasons to use the elliptical (or any type of aerobic cross-training exercise): to replace a run when you can't get outside because of the weather, if you're hurt and can't run, or to add more aerobic exercise to your running volume. Cycling and pool running are more specific to running in my opinion and better approximate the actual act of running, but the elliptical isn't bad at this either.

Running isn't easy because your body isn't accustomed to the impact of running. You haven't done that specific movement in a long time. To be a good runner you have to run; other types of exercise can bolster your fitness but without running, it will always be a challenge to start after a long layoff. Since your body has been doing zero impact exercise for three months, it's important to **slowly** start running again and do lower body strength work to enable your legs to handle the stress of running's impact forces.

7. What do you do after your race training and race are over? Specifically for me, I am halfway through a 12 week beginner half marathon schedule, and as a novice, I am not sure where to go once the half marathon is run and done. I am sure I will run more races in the future, just not sure when, and I am not sure how to train in between those stretches.

It really depends on your running goals and how you want to perform in the long-term. Running is cumulative, so what you do today will help what you do next week, which will help how well you run next month and next year. If you frequently take breaks from running, you'll lose fitness and find it hard to run personal records. If running faster is your goal, you should take strategic recovery breaks several times throughout the year after long or particularly difficult races.

Otherwise, you should be in some type of training cycle to maintain your aerobic base and continue building your fitness. If you don't have a race goal yet (and that's ok!) you can run a reduced weekly mileage without any hard workouts. This will approximate an easier base period and put you in a good position to jump into more specific training when you're ready.

Pacing



8. The various calculators online and in books (including Daniels, Galloway, McMillan, Runner's World, etc.) have the easy pace and the long run pace set at a pace that feels sooooo slow for me. Will it hurt my training or pose a risk of injury to run faster if it still feels easy?

The short answer: no way! If a certain pace feels easy, then it's easy. But here's the caveat: that pace has to feel easy for the entire run to truly be considered easy. If I were to start running every run at 5 minute mile pace, that would feel easy...for the first minute.

Make sure you can hold a conversation during your easy runs. If you can do that, you're not risking an injury. Your long runs should typically be a moderate effort and could venture into “hard effort” territory during the last few miles if you’re fatigued. I recommend that runners run “by feel” on their runs so instead of being married to a particular pace, run what your body is ready for on that particular day.

9. How should I set my race strategy for a hilly race? I have heard that even or negative splits are best, but when there is a substantial hill (or more) later in the race, how much slower should my pace be per mile? What if the first mile is entirely downhill?

Hilly races will certainly slow you down and require a different race strategy. Instead of monitoring every split like clockwork, realize that hills will slow you down and move on. Pace is less important than effort, so race based on perceived effort. If your effort level is a 9 on a flat section, keep that same effort level on a steep hill or a longer, more gradual hill. The effort level will be the same but each will be a different pace.

Now for some hill strategy: one of the best pieces of advice I ever received about racing hills is to never attack a hill when you first start climbing. Instead, keep an even effort for the first two-thirds of the hill and then surge over the last one-third and briefly when you crest the summit. This is a more advanced technique, but it's very useful in pulling away from competitors around you.

When races start downhill, you can afford to run a bit faster than your goal pace. Aerobically, you won't be over-taxed. Be careful with pounding your legs on a steep section, though. Downhills can beat your legs up if you're overzealous.

10. I'm coming back from a long layoff of no running. I used to run my normal distance runs a lot faster but now I'm slower. How can I get back to my old pace per mile?

For right now, I wouldn't worry about your pace. When you're getting back into the swing of training, the effort level of your runs should be low-moderate, no matter the pace. This is the strategy I took after my layoff from ITBS and it worked well. Your body just isn't ready to physically handle those harder runs. By staying consistent, strategically running moderate paced workouts when you're ready, and running simple strides after your distance runs your body will gradually get in better shape. It can be a long road (like I said before, it took me a year!), but the patience pays off in dividends.

11. If the training schedule calls for a certain pace on a speedwork or threshold day, but you are easily able to go faster, should you?

I'm a big believer in running by feel, so if a prescribed pace (based on a running calculator or a previous workout) feels too slow, then it's fine to run a bit faster. Here's the caveat: don't start running faster early



in the workout where you'll naturally be more rested and fresh. Wait until about half-way to start picking up the pace - if you still feel great at that point, then by all means run faster.

If you're running a tempo/threshold workout, you should err on the side of running a little bit slow rather than too fast. If you're beyond your aerobic capabilities (i.e., you're running faster than your lactate threshold pace or 85-90% of your maximum heart rate), then you're not getting the same benefits of a tempo run.

Here is an exception: when you're close to an important race, you shouldn't run harder than needed in workouts. You want to save your energy and prevent unnecessary soreness. Gauge your effort level carefully.

12. How do I get over the middle part of a race where I always slow down?

Ah, the essence of successful racing! I wish there was an easy answer for this question. If you're slowing down in the middle of a race but not at the end, then that probably means it's not an endurance problem. Being able to run strong at the end of a race means you have a solid aerobic foundation that enables you to hold a fast pace when you're fatigued.

Slowing down in the middle of the race could be because of several reasons:

1. You went out too fast. Races aren't won in the first two minutes, but they can be lost. It's fine to run faster in the first several minutes or mile of a race than your goal pace, but don't go overboard or you'll pay the consequences later.

2. You could lack confidence and the mental toughness to hold on to your pace. Improving confidence can be done by running race-specific workouts, exposing yourself to race pain more frequently, and successful training.
3. Not enough race pace running in your training. Your body will be shocked when it tries to run race pace if you never do it in training. Specificity is key.

Strength Routines and Lifting

13. My weekly schedule is Tues - strides, Wed - intermediate long run, Thurs - tempo run, Sat - long run, and Sun - recovery. I'd like to integrate some posterior chain work into my weekly routine. Which days do you suggest I visit the weight room and what exercises would you recommend?

First, let's define the posterior chain: muscles on the back side of your body like the hamstrings, glutes, erector spinae, deltoids, and lats. This isn't an exhaustive list but it gives us a good picture of what the posterior chain is made of. The best exercises for these muscles include squats, dead lifts, good mornings (<http://en.wikipedia.org/wiki/Good-morning>), and the two Olympic lifts - the snatch and clean and jerk. All of these are compound, multi-joint exercises that train movements, not muscles. However, they're also advanced. If you have questions about performing them DO NOT try any of them until you can do it with very low weight with perfect form.

Based on the sample schedule above, good gym days are Monday and Friday, but many variations can also work: Tuesday/Friday or Tuesday/Sunday. No schedule is perfect. An ideal schedule has you doing strength workouts twice a week based on feel. So, if you're damn tired after your Thursday tempo run, don't attempt a gym workout on Friday if your form will suffer. **Any strength session should complement your running and not detract from it.**

14. Do you recommend any plyometrics to improve strength? If so, which plyometric exercises do you recommend?

I am very weary of plyometrics for two reasons:

1. They need to be done with superb form or the risk of injury is very high.
2. Even when done correctly, they are explosive and high-impact exercises that can unnecessarily raise the risk of injury.

For beginner and intermediate runners, I'd prefer that they do strength exercises, core exercise, and running form drills instead of plyometrics. Read more about the [strength and core routines I recommend](#). You can get very similar results without that injury risk. In fact, I myself don't do any classic plyometric drills. It's just not worth it in my opinion.

If you do really want to do plyometrics, my suggestion is to do them with a partner who knows how – she can evaluate your form and give you suggestions on how to improve. Some of the best plyometrics include box jumps, squat jumps, bounding, zigzag hops, and tuck jumps. As with any new training stress, start with just 1-2 exercises and perform only a few repetitions until your body is comfortable with the new movement.

I'm not aware of a great resource online for demonstrating plyometric exercises so if you're interested in learning more, there are several books on Amazon.com that you can search for. I haven't read them so I won't make a recommendation.



15. How often do you recommend core strengthening exercises? McMillan Core DVD's recommend 2-3 times per week. This seems like it's not enough.

Doing core 2-3 times a week is a good recommendation. The term "core" is very general though; I consider core to be stability exercises that focus on the core muscles of your body, like your abs, lower back, obliques, hips, and glutes. An example of a core routine is the Standard Core Routine that I do 2-3 times per week.

In addition to core, there are light strength routines that you should also do every week, including 1-2 sessions in the gym with weights and body-weight exercises you can do at home. An example of a light strength routine that I do 1-3 times per week is the [ITB Rehab Routine](#).

And then we have flexibility and mobility exercises that are like active stretches: the Standard Warm-up I developed is a good example of a mobility routine. An ideal training schedule would have you do SOMETHING before and after every run to prepare you to run, increase your strength, and promote recovery.

16. Other than minimalist shoes, what other exercises do you recommend for strengthening feet?

Two of the best exercises for strengthening your feet are picking up marbles with your toes and putting them in a cup and scrunching up a towel (put a weight on the opposite side to make it harder) with your toes.

But my favorite exercise for strengthening your feet and lower legs that also helps you improve your running efficiency is barefoot strides. Done after an easy run, barefoot strides are usually about 100 meters long and have you start running at a jog, build to a sprint, and then slow to a jog again. Run these on a well-manicured grass or artificial turf field.

Strengthening your feet doesn't have to be very structured: start going barefoot in your house at all times and then start doing your core and strength routines barefoot. Both will help you develop more foot strength but don't take any added effort.

17. What are your recommended strength exercises for those who frequently travel and do not have access to weight equipment?

Fortunately, there are a lot of strength exercises that you can do without weights or a gym. Most runners don't need to go to a gym for their strength workout, although I believe 1-2 sessions a week are ideal. Instead, focus on core and body weight exercises that you can do in any hotel room. See my detailed post on [core, strength, and dynamic warm-up routines](#) for a good start.

By sticking to the basics like pushups, lunges, squats, planks, and bridges you can accomplish a lot without the use of a gym. If you're still unsure of where to start, check out the [Rebel Fitness Guide](#) by Steve Kamb of Nerd Fitness. With a full body weight section and videos for every exercise, it's a great companion guide to any running program. I recommend this program for beginners because it's extensive and covers more than just exercises – the diet guide can help you get healthier and closer to your ideal weight.

You can also get creative to simulate weights with everyday objects. Use your laptop bag (with your laptop in it) for added weight during lunges and squats. Put your feet on your hotel bed to do decline pushups. If you're in a hilly area, short hill sprints at maximum effort simulate weight-lifting for your legs. Elite coach Brad Hudson has all of his athletes do hill sprints instead of lift weights. Hudson has coached professional runners like Dathan Ritzenhein and Tera Moody.

18. What are your recommended strength and flexibility exercises to heal or prevent plantar fasciitis?

First, see the above question on how to strengthen your feet. Other strategies to help you break up any scar tissue include rolling your foot on a tennis or golf ball and using a foam roller on your soleus and calves. Make sure any self-massage isn't too painful - you don't want to be doing any more damage. During the acute phase of the injury, use ice to reduce swelling. I don't want to reinvent the wheel, so check out iRunFar's analysis of plantar fasciitis here: <http://www.irunfar.com/2011/02/how-to-recover-from-plantar-fasciitis.html>.

19. Can I lift and run on the same day?

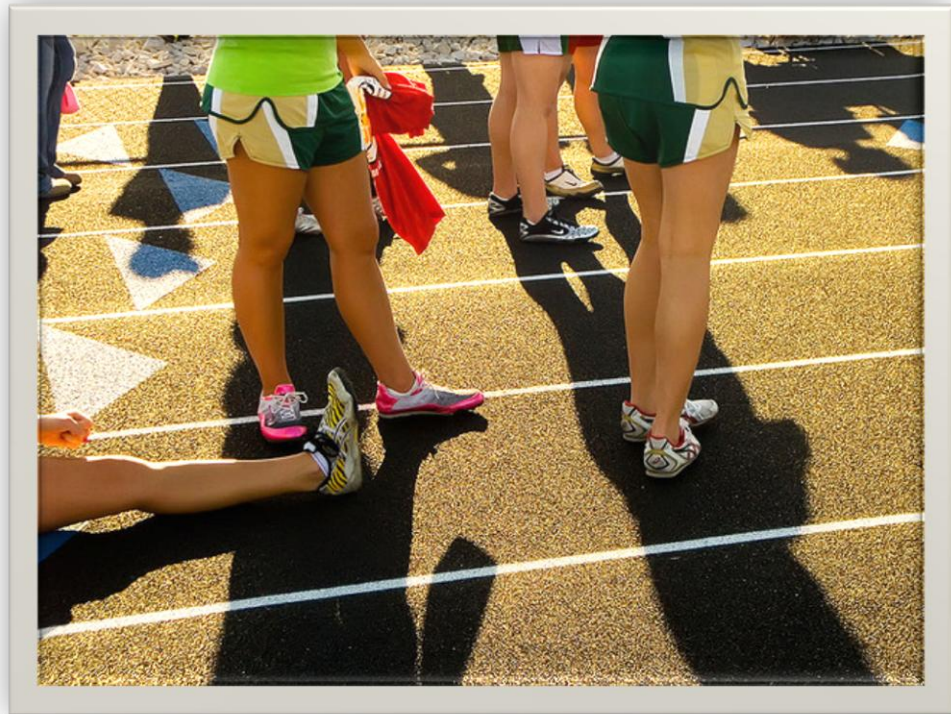
The simple answer: yes, of course. The more complex answer: It depends on how often you run during the week. If you only run three days per week, it makes more sense to lift on a non-running day - but this isn't so much a rule as something I've seen practiced more often than not.

The more important principle when scheduling these workouts is: lift when you're not exhausted from a long run, race, or hard workout. Be sufficiently rested to give a solid effort in the gym, but don't lift the day before a hard workout or your running may be compromised. If you follow [my training on Dailymile](#), you'll noticed I rarely lift and run workouts on the same days. I'm always making micro-adjustments to my schedule based on how I feel to maximize my recovery and overall feeling of preparedness. I'll post-pone a gym workout if I'm sore from running and the schedule I keep is never set in stone. Make sure you're physically ready to lift and don't compromise your health just to fit it in.

20. Can core fix my shin splints?

Probably not. Certainly not directly, but it depends on why you're getting shin splints in the first place. It's possible your shins are sore because you heel strike as a result of over-striding. Certain core exercises could help you keep a more erect posture and compact form while running. This could reduce your over-striding and lessen your shin splints.

More likely, correcting your running form, running on softer surfaces, and making sure not to increase your volume/intensity too quickly will help lessen your shin pain. Minimalist shoes can help also, as they usually make runners increase their cadence and reduce over-striding.



Workouts

21. I've been doing mostly easy mileage. Should I be doing workouts and strength exercises? Or should I just keep adding miles until I reach my goal mileage, and then add in workouts?

A lot of runners are simply doing easy mileage - and there's nothing intrinsically wrong with that if you run for fun or general fitness. If you have racing goals, there is definitely a need for more structured workouts and strength exercises. Strength workouts (like lunges, the ITB Rehab Routine, or core work) enable your body to handle additional mileage and faster running, so I believe almost all runners should do some strength training 3-4 days per week.

If you have performance goals or want to get faster in a race, then harder workouts will help you get there. First start by doing 4-6 strides after your easy runs 1-2 times per week and then transition to 20-30" surges during the end of your distance runs. Once you're comfortable running a little faster, the best workouts for beginners are fartleks. Fartleks are unstructured (or structured) pick-ups of varying length and effort during a distance run. My favorites are 5 x 1' hard with 2' recovery jog. But you can do *anything*. Keep them short, fun, but challenging.

You can add strides, strength workouts, and small increases in mileage all together, provided that you're only making small changes to your program every week. Remember, consistency is king. Keep increases in volume and intensity modest and you'll see big rewards later.

22. Do all runners have to do speedwork or tempos to get faster in the marathon and half marathon, or will steady distance runs suffice?

I think all runners can improve significantly in the half and full marathon with just distance running. That improvement, however, will only last for a little while. Your body will adjust and you won't see any further improvement so harder training is necessary. Faster running produces a lot of fitness benefits, including better efficiency and even injury prevention.

Classic interval workouts of 400m – mile reps at 5k pace or faster don't have as much place in a marathon program; however, tempo workouts can help almost every runner. They help you become more comfortable running faster, improve your body's ability to utilize oxygen at faster speeds, and increase your endurance. Tempo runs are also not as demanding on your body as classic interval workouts, so they can be done twice a week.

On the opposite side of the spectrum of easy distance running there are sprints. And, contrary to what a lot of runners think, I believe sprinting is beneficial for every runner - even if you're training for an ultramarathon. Sprinting at 99-100% of your maximum effort improves your stride efficiency, stride power, neuromuscular coordination, and when done on a steep hill can protect you from injury. You don't need a lot and it shouldn't be difficult, but short sprints are critical.

If you want to continue progressing, you start moving in toward the middle of the spectrum. Marathon pace tempo's can become half-marathon pace tempo workouts. Strides and hill sprints can become fartlek workouts of a longer duration. Ultimately, you will need a variety of workouts to reach your potential in the marathon.

23. How many rest days are needed per week? Can I run on those rest days?

There is no right answer to this question, unfortunately. How many days you can run per week (and the quality of those sessions) is dependent on your running history, durability, goals, and time commitment. This is often where a coach can help you plan your volume and workouts.

Beginning runners usually start with 2-4 days of running per week based on their fitness background. But most elite and competitive runners run every day and their "easy" day (if they even take one) is often a beginner's long run! Studies have shown that easy running on a recovery day can boost fitness and running economy, especially when a hard workout was done the day before.

But as always, never run more than your body can handle even if it means doing less than you think you should. Longevity in the sport is more important than getting in a few extra miles. Pay attention to your body and respect what it tells you after long runs and workouts.



24. Is it better to do three hard runs per week and three easy ones? Or is better to run just four hard workouts per week?

The number of hard runs you do per week will vary based on your experience and fitness level. For highly trained runners who are running 7 days per week, three hard days is about the maximum that they should run. Adding more hard workouts won't allow the body to recover and absorb the training.

For beginning and intermediate runners who are comfortable running 3-4 days per week, I recommend 1-2 hard workouts per week. Keep in mind that "hard" is a relative term and simply means a structured workout of faster running. Very few workouts in a long training cycle should be maximum efforts where you test what you're made of!

Especially for beginning runners, it's important to focus on the basics: easy mileage to build the aerobic base (endurance) and short, easy sprints to work on mechanics, muscle fiber recruitment, and your comfort level with running very fast. Once you're very comfortable with running at opposite ends of this spectrum, you can begin moving closer to the middle - prolonged, harder workouts.

25. Should cross-training and strength work be done on an easy day or hard day?

Strength training in the gym should be done on easy or moderate days. Since weight lifting is typically a very stressful activity, you shouldn't combine that with a faster workout or a long run. Cross-training should usually be done on days that you do moderate running, but there are always exceptions. An easy, short cross-training workout of cycling or pool running can enhance your recovery if done in the afternoon after a hard morning workout.

Since your easy days should be just that - easy - then you should either take the day off (easiest), cross-train (easier), or go for a short run (easy). It depends on your running history and fitness level. Only advanced runners should combine running with cross-training on their easy day. Advanced runners are typically more durable and can recover quickly, so light cross-training on an easy day can benefit them.

26. I can only run 30-40 miles per week during maximum training. What workouts should I focus on to get faster and stronger?

During the introductory and base periods of your training, a solid long run and tempo workout are the best ways to develop long-term endurance. Both of these workouts will help you hold a faster pace for longer - so they'll even help you get faster! You should also be running strides and short pickups (like 20 second to 1 minute fartleks) in your moderate distance runs to work on your turnover and stride mechanics.

When you're training for a specific race, your workouts should start to become more like the race itself in terms of distance and pace. There's an almost infinite number of workouts that you can run, but never do anything that you're not prepared for and make sure the workout you're running is specific to your goal race. Check out the workout guide I wrote for ideas: [52 Workouts, 52 Weeks, One Faster Runner](#).

27. The Pose Method and ChiRunning recommend a fairly fast leg turnover or cadence and to shorten your stride length to do it. What's the best stride rate and length?

There's no "magic" stride rate, although many people have recommended 180 steps per minute (including me). A faster stride cadence than what you're currently doing will likely help you prevent injuries and become a more efficient runner. If your cadence is a common 160 steps per minute or less, you should definitely try to increase your cadence by 5-10%. Keep in mind that if you're running very slow, your stride rate will probably be lower than when you're doing a track workout or racing. That's ok.

Another issue that's important that you mentioned is stride length. To get to a faster stride rate, you don't want to artificially chop your stride so short that you're running in a very unnatural way. What you want to do is put your foot down underneath your center of mass. You won't land directly underneath your body,

but it's a good cue for yourself. When you start over-striding and "reaching out" with your lead leg, then your cadence will be much lower than it should be.

Another strategy is to never let your foot reach out further than your knee - if this happens, then you may be aggressively heel-striking and you're probably landing very far out from your center of mass. When you do this you're wasting energy, slowing yourself down, and increasing your injury risk.

Gear, Improvement, and More Randomness

28. I have heard shoes last about 300 miles. Do people who run 100 miles a week really buy a new pair of shoes every 3 weeks? Does this rule of thumb apply to minimalist shoes like the Nike Free, NB101, or Vibram Five Fingers?

The general rule with running shoes is that they last between 300-500 miles. Not every shoe will last 500 miles and some shoes may last longer. It depends on the type of cushioning, the surface you run on, and how often you run.

A shoe's lifespan also varies widely based on YOU: your stride pattern and weight will affect how fast a shoe degrades. You can track the number of miles on a shoe or simply look for wear and tear. Look for fine lines in the foam that show wear from repeated compression. When there are many little compression lines, you probably need new shoes.



Some shoes can theoretically last for thousands of miles like the Vibram Five Fingers or a Nike Waffle. These shoes have a rubber sole which won't wear from compression. Unless the upper rips, your shoe could last for a *very* long time. My fiancée does 90% of her running in a pair of Nike Waffles that are over 11 years old! They likely have over a thousand miles on them but are holding up great.

For most people, it's not very practical to do all of your mileage in the types of shoes that last this long. High mileage runners do have to buy shoes more often, but they're often rotating 2-3 pairs at once. They usually need new shoes after 2-3 months of heavy training.

29. How can I increase my motivation to train and crush mental hurdles?

There's going to be a different answer for each person for this great question. It helps to have a goal. What are you running for? I can tell you right now that my 2011 goals are the Cherry Blossom 10 Miler and the Philadelphia Marathon. 2012 will see me tackling the Boston Marathon. To succeed in these goals I need to train seriously for the next *year*! For me, that's incredible motivation.

I have both short-term and long-term goals which keep me motivated in two different ways. I'm also really into statistics and metrics, so I like to track my mileage and workout times. If things are progressing then I'm happy and more motivated.

Some runners like to raise money for charity, get in better shape so they can play with their kids, lose weight, improve their health – running has so many benefits. Sometimes, though, it's still hard to get yourself out the door every day despite all these benefits.

Some quick tricks I use:

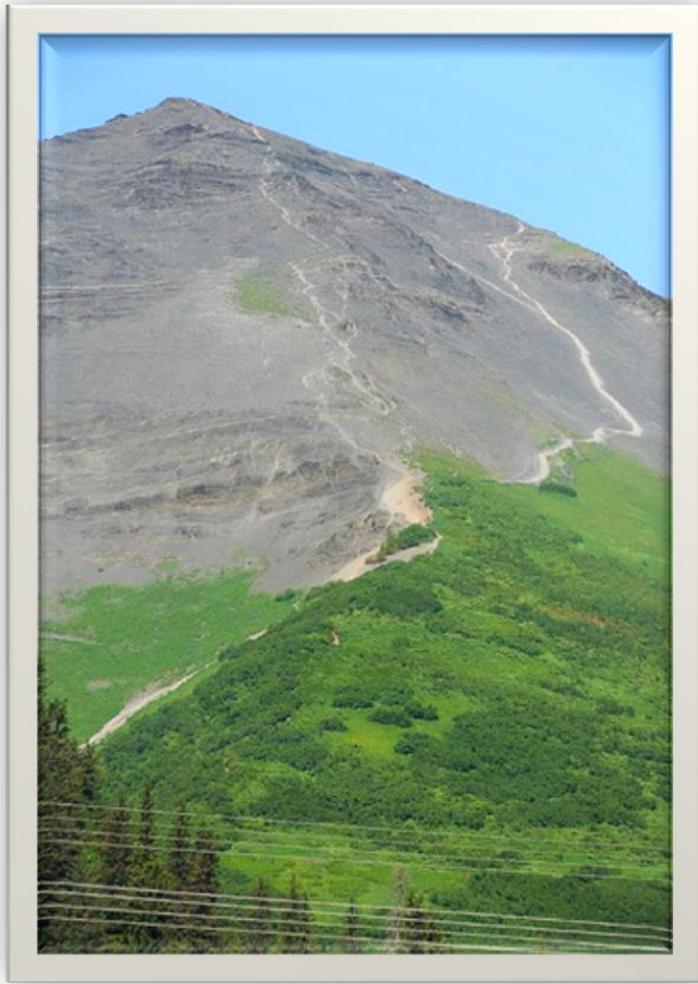
1. Make it easy to run. If you know you're a morning person, then run early. Don't wait until you're tired after work.
2. Leave your clothes out and prepare your lunch and breakfast the night before so you're not rushed.
3. Print your goal out on a sheet of paper and frame it next to your alarm clock. That will get your ass in gear!

Consistency is king with training, so the more successful you are with not missing planned runs the better you'll run.

30. How are you supposed to breathe when running? In through the nose, out with the mouth, in for 2 breaths out with 3, or something different?

I've seen this question come up frequently with new and beginning runners. Ideally, your breathing should come naturally and be a sub-conscious activity. Do you think about your breathing when you're walking to work, cycling at spin class, or doing laundry? Probably not. The same is true with running: your breathing rate will automatically change based on your pace and effort level.

Breathing is quite personal and some people swear that a 2-1 second ratio is the best (breathe in for two seconds and out for one) while others think some other ratio is better. At the end of the day, you need to find something that works for you and a lot of practice will help you get there. As you start to run more you'll probably stop thinking about your breathing just like you do with most everyday activities. It will be secondary, a subconscious pattern regulated by your effort.



31. How do you plan a training program for your runners and how to you change the running program following a injury or set back?

For my runners in the [Full Coaching](#) program, I have them fill out a detailed questionnaire so I know as much as possible about their past running history. I ask about mileage, workouts, race PR's, goals that they have, injury patterns, even what surface they typically train on. I also ask about the last several weeks of their running so the plan I write won't come out of nowhere - any good coach will progress intelligently.

The training program has a few components: a weekly template of mileage, workouts, and other exercises. I call it a template because I actually don't like training schedules. Flexibility is important and life often gets in the way - and that's ok! My runners know that one run won't make or break their training, so we just move on and keep training.

Regarding setbacks, I've been lucky in that the vast majority of my runners have never had a serious injury. There have been small issues that require reduced training or taking several days of rest or cross-training. When there is a setback like this, the progression of

training stops. When they can run pain-free again, then we repeat the last full week of training. If there is a harder workout planned I may reduce the volume/intensity of that workout to be safe, but it's very personalized. I'm often in daily communication with my runners and I get updates on how their training is going so I can adjust the plan on the fly. I'm thankful that my runners are healthy and training well.

32. If I'm injured, sore, tight, or achy how do I know when it's ok to run? When do I decrease my volume and when do I rest 100%?

Everyone is different with their tolerance for small aches and pains. Some runners can train through a tight hamstring and it just goes away – others always seem to get side-lined by minor injuries. The latter was me for the first 10 years of my career. I was always getting hurt, consistently sore, and typically fighting some type of pain.

A good rule of thumb to determine if you can keep running is: if it's a dull and achy type of soreness, then you can still run. If that soreness turns into an intense, sharp pain then stop immediately. Stabbing, sharp pain means you're doing *more* damage.

Use these strategies to figure out if you're ready to run:

- If you're particularly sore or tight, but still have normal range of motion, you can probably still run easy. Don't run a fast workout, though – your body isn't ready for that yet.
- Never go to bed tight. Just 5-10 minutes of light flexibility exercises before you go to sleep will help your legs feel better in the morning.

- Treat especially sore or tight muscles right away by icing, self-massage with a foam roller or tennis ball, and dynamic stretching.
- Skip your run if you need to alter your running form to avoid pain.
- If you're skipping a run, try pool running or cycling to promote recovery. If you can do these exercises without pain, you'll help your body heal faster by encouraging blood flow and range of motion.

Instead of treating overly sore or injured legs, it's clearly better to prevent this from happening in the first place. You can make a lot of progress in preventing injuries by consistently doing 10-15 minutes of strength and mobility work every day. A little bit goes a long way.

33. How did you know you had recovered from your IT band injury if you weren't training for 6 months?

Good question! My ITB injury was so severe that it was often painful while walking. So even though I wasn't running, I could still feel that there was something very wrong with my left leg. After about two months of trying to jog slowly for 30 seconds and failing every 4-5 days, I just quit. I went through a period where I almost gave up hope on ever running again. I sat on my couch and ate a lot of Oreos. And ice cream. Often Oreos in ice cream. Clearly, I was a wreck.

When I stopped feeling sorry for myself, I got proactive. I bit the bullet and paid for a lot of physical therapy. My first three physical therapists had no idea what they were doing but my fourth was really good. He had me doing a lot of exercises that are in my ITB Rehab Routine. I also started doing a lot of

research on what causes ITBS (very often it's weak glutes and hips) so I added several exercises to the routine and started doing it three times every week in addition to PT.

After about a month, I got the green light to run. This decision was based on a diagnosis of my mobility, pain threshold during massage, and the level of scar tissue that was broken up by massage. I went for a 15 minute run and probably covered about 1.5 miles. I was horribly out of shape after having not run for six months, but there was no pain. I was ecstatic, but it took me about a year to get back into the shape I was in before.

34. You talk a lot about your use of lightweight trainers and racing flats and how you rotate them. How would you advise those of us who want to move in that general direction to carefully transition without causing injury?

If you want to run in less shoe, first you need to understand what you're currently training in. If your current shoe has a fairly substantial heel, a medial post (a "roll bar" - that darker, harder material in the sole underneath your arch), and weighs about 11-12 ounces, your first step is to reduce one of these variables. It's always a good idea to rotate two pairs of shoes, and one of those pairs should be your "control" or the shoe you're used to running in. Slowly, you'll transition to more [minimalist running shoes](#).

For example, if you run in the Nike Zoom Structure Triax now, then your next shoe could be the ASICS Nimbus. It's a bit heavier, but there's no medial post. Rotate through the Triax and the Nimbus until your next shoe purchase where you buy the Nimbus and the ASICS DS-Trainer. The DS-Trainer has a medial post, but is over an ounce lighter and has a lower heel.

It's best to change one thing at a time until you're at a shoe you're comfortable with. To help your legs and feet adjust, you should be doing foot strengthening exercises like picking up marbles with your feet and dropping them in a cup or scrunching up a towel with your toes. Barefoot strides on a grass field will also help you develop strong lower legs. Check out David Csonka's [Couch to Barefoot guide](#) for an introductory plan to minimalism and barefoot running.

35. I recently saw a news item that the London Marathon is using new non-slip timing mats for their chip timing. Have you ever heard of someone slipping and wiping out on a timing mat during a race?

I haven't personally seen a runner fall on a timing mat, but I bet it's happened before. Some mats are a hard rubber material that's very non-slip, even when wet. Some other timing mats are a more flimsy rubber material that I could see being very slippery when wet. I'm glad to see that London is becoming safer to run!

36. Are fast runners fast from the beginning? It seems that fast runners have been fast since they started running.

Definitely not. There are a lot of runners who ran relatively slowly in high school and went on to become very fast runners. One example is Brian Sell, who didn't even break 10 minutes for 2 miles in high school. You may think that 10 minutes is incredibly fast, but it won't win most state meets. Sell went on to qualify for the Olympics in the Marathon, running a faster pace over 26.2 miles than he did in high school for two.

For me, and one could make both arguments that I'm slow and fast (it depends who you're comparing me to), I didn't make my high school's varsity team as a freshman. I was a middle of the pack JV runner but worked hard for the next year. I made varsity as a sophomore and worked my way up to winning several races as a senior and being 4th in our conference meet. I've since improved on that success, running the same pace over 10 miles that I did for 5k in high school.

Being "fast" is relative - the more important thing to consider is your own personal improvements. **There's not one fast runner who doesn't work VERY hard**; success doesn't come easily.



37. I know I can improve a little with training, but at what point do I just accept that I've gotten as fast as I'm going to get?

Runners should always be hungry to run faster. Even if you have just run a big personal record, the next step is to evaluate your training and race execution and see where you can improve. World records have been set by men in their mid-30's, long past when "experts" think runners reach their physiological peak.

If you've been running competitively since high school, there's a better chance that you will know when you have reached your peak. Despite the same or better training, your race performances will start to decline.

But for those runners who started later in life, it's difficult to pinpoint when you've reached your best performances. My recommendation is to **never settle** and always stay hungry for better training, smarter workouts, and flawless race execution. Don't be fooled - there's always room for improvement. And you won't improve a little with training - you will improve by leaps and bounds.

The Finish Line

What a whirlwind of Q&A! I sincerely hope you enjoyed this guide and are able to take some valuable lessons from the many questions that were posed. Whether you're a new runner just starting out or have several marathons under your belt, these questions illustrate how important it is to keep questioning.

I learned a lot from those who participated and shared their thoughts with me. Once again, **thank you** for being part of the **Strength Running PR Guide**. I couldn't have done it without you.

My hope is that you'll continue to refer back here and use this as a resource to answer questions as they come up in your training. I know that this ebook doesn't cover every running question out there – but it covers every single question that my newsletter readers submitted to me.

As **Strength Running** continues to grow in popularity, my goal is to continue interacting with everyone as much as possible. I respond to every email, every tweet, and almost every blog comment. I'd love for you to dive deeper into the Strength Running community by:

- Following me on [Twitter](#)
- Liking Strength Running on [Facebook](#)
- Signing up for [instant updates via RSS](#)

I'd love to hear from you about this ebook. What do you think? Are there any questions you have that I didn't answer? Email me anytime at support@strengthrunning.com. If there's enough demand, I'd love to do a 2nd edition!

Thank you for reading, participating in the creation of the Strength Running PR Guide, and being a supporter of the Strength Running philosophy. Your encouragement is what keeps me going.

To your running success,

Jason Fitzgerald

www.strengthrunning.com

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