## Training Guide

These tips summarize what we've learned over our many years spent running and coaching. We're giving them to you now as you embark upon your training in the hopes that they make your journey easier, more fun, and less painful. This document has been broken up into eight sections that cover different aspects of your upcoming training.

Please take the time to read through each section. Even seasoned runners may find some suggestions they may have overlooked! You can also click on each section title below to visit that specific topic in the document. Good luck!

- Coaches Jeff, Marci, David and Tom

GENERALTIPS 2

SPEED \& HILL TRAINING / RUNNING STRATEGY
5

STRENGTH TRAINING 7

WHAT TO EAT 12

WHAT TO WEAR 12

BODY MAINTENANCE 15

RESOURCES 16

COACH JEFF'S LAST MINUTE RACE TIPS 17

## GENERALTIPS

## What If I'm Injured?

Are you feeling aches and pains not related to soreness? Maybe something in your foot or knee isn't feeling quite right? Go to your doctor. Don't ask your coaches or a mentor, and don't ask advice from a friend who had a similar injury. The only person qualified to diagnose an injury is a doctor. Trying to run through or self-diagnose pain can turn an annoying injury into a run-ending injury.

## Running Etiquette

Sometimes you feel like the only one out there-running gives you a sense of liberation. Sadly, you're not. For your own and others' safety, please be aware of your surroundings. If you're on a marked path, stay in the appropriate lane and keep right unless passing. If you want to change lanes, look before doing so. Think about running as you would driving. If you're running in a large group, run no more than two abreast, and don't take over the road. We want Fred's Team to be the best-trained, safest, and most polite team. If you are continuing to run outside while COVID-19 restrictions are in place, please abide by local laws and adhere to social distancing requirements, keeping at least six feet between yourself and anyone near you.

## Increasing Your Distance

You're meeting some friends for a run and they plan to go 10 miles. At this point in the season, maybe the longest you've run is 6 miles. You may ask, "What's another 4?" The answer: an injury waiting to happen! When the weather is nice and everyone is doing long runs, it can be tempting to throw caution to the wind and go for it. But even the most seasoned runners follow the 10\% rule. Never increase your distance by more than $10 \%$ in the course of a week. Abiding by this rule allows the body (muscles, tendons, and ligaments) to slowly adjust to the distance and respond accordingly. Not giving the body adequate time to adapt often leads to injury. So if your friends are doing that 10 mile run, just run 7 and let them know you'll meet up with them later!

## Avoid Overtraining

We've talked countless times about the importance of not "blowing off" a training run. Now we're going to tell you how important it is to do exactly the opposite! If you're still sore and tired from your last tough run, extra rest may be in order. It's very easy to step over the line into overtraining. When this happens, your body gives you clear signals, including accelerated resting heart rate, sleep difficulties, and lack of appetite. If you suffer from any of these symptoms, ease off and rest your body for a few days. Take this time to re-evaluate your training program to give your body ample recovery time. In an ideal world, we could nap after every training run, but work, family, and life happen. Train hard, but train smart.

## The Magic Pace

It's time for some brutal honesty from your coaches. Some runners do their long runs at a pace that's 1 to 2 minutes per mile slower than their targeted race pace. While we don't think it's detrimental to run some of your long runs this way, you should focus on running the majority at your race pace goal. If your body has not experienced long distance at a certain pace, it will not be able to sustain that pace, especially in a marathon or half-marathon. Our suggestion is to start slow and let your body ease into the run. If you have energy to spare in the last 10K, go for it! We just don't want you going out too fast and struggling to hang on.

## Step Out of Your Comfort Zone

Many runners are capable of a faster pace than they realize. They tend to pick a pace that will leave them with enough energy to finish strong. Well, if you finished really strong, you didn't leave enough of yourself out on the course. But how do you know how fast you can run? Pick a race or training run and take yourself out of your comfort zone. Don't fear going too hard and bonking (sudden fatigue and loss of energy). Get over it! So you may have to slow down or-worst-case scenario-you may have to walk. You'll get through it and will better in the long run. Somewhere between your comfort zone and your bonking pace is your true race pace. Seek and you shall find.

## Be Honest With Yourself

We've said it before, if you haven't trained at a certain pace, you shouldn't expect to run that pace on race day. So now is the moment where a reality check and the weekly tips converge. You'll learn your pace as you progress through your training and this will allow you to visualize your race day. If you have been pipe-dreaming that you'll finish at an unrealistic pace, you'll throw off your whole game on race day. Be realistic through your training-and you'll have a great time on race day.

## Mix it Up

We're all creatures of habit, and while it's true that consistency is the key to a successful running program, a consistent routine does not necessarily translate into a good running program. Our bodies are wonderful at adapting-if you do the same workout day in and out the benefits diminish. We all have our favorite running routes and places, but to challenge your body you need to mix things up. On some days, run the route a couple of minutes faster than you did the last time. On other days, work in intervals and speed up and slow down throughout the run. Run for time versus distance. If your body knows what's coming, it'll be prepared to endure with the least amount of effort. By changing things up, you'll become a faster, fitter runner.

## Make Your Enemy Your Friend

Each of us has a workout or exercise we dislike. Take it and attack it with a vengeance. Make it your own. Not only will it make you stronger physically, it'll sharpen your mental focus. It's something that'll work to your benefit during long runs, when it's easy to lose focus and just slog through the miles. You'll hear this many times from us: quality over quantity.

## Log On

We're often asked: "Why is it that on some days I feel like I can run forever and on others, every step is rough?" Keeping a training diary can give you the answer. By including and tracking such information as weather, terrain, distance, time, how you felt, food intake for the day, and time of day that you ran, you'll gain a better understanding of your body's rhythms. You'll also learn what foods are best for your energy levels. We can't control the weather, but we can control what goes into our mouths. Life and work dictate the time of day we run, so we tend to be morning or evening runners. Switch it up and see what works best for you. No matter how well you plan, you'll still have those days where you just "don't have it." Just pray that it doesn't happen the day of the race. If it does, you'll have time to get over it.

## For Seasoned Runners

Sometimes getting a few races under our belt can make us a bit cocky. Just clear last year's running times from your head and remember that although you're not a beginner, you still need to build back slowly. Face it-the grandeur of yesteryear is gone. Many of your coaches were once able to
eat junk food and drink soda without gaining an ounce. Those days are long gone. Build your base and stay away from the moon pies!

## The Mental Edge

When it comes to running, we're always looking for an edge-whether it's the latest supplement or the newest technology in running shoes. The biggest edge you can get comes from within. No matter your running level, you can talk yourself into being a better runner. The late deep water running coach Doug Stern had a great saying: "If you think you can or you think you can't, you are right." Mental imagery is a powerful tool. We all have days when we struggle during a run. Instead of focusing on how bad it feels (which will make it worse), focus on your breathing, smooth out your stride, and most of all-relax! When we're out of sorts, our running efficiency diminishes. Clear thoughts, rhythmic breathing, and an efficient stride can transcend from the mental to the physical and carry you across that finish line. Don't get me wrong, if you don't put in the mileage, all of the imagery you can muster won't help. So get out there and run-don't just think about it.

## Stay Focused

As you move into the later stages of your training, it can be easy to lose focus. The seasons change, the weather may improve and your friends will be tempting you with lots of distractions. This is where the balance comes in. Spend time with your friends, but get those runs in. This is when you have to battle your mind and not blow off training. While it's important to take an extra day off when your body needs it, don't allow one day off to turn into a few-or a week. I know it seems like you've been training for eons-well, you have. Races are not easy, but you need to stay focused, put your head down, and go. These next few weeks will make the difference between being able to go for a long run and running your race. Before you know it, the time to taper will be here, then race day will be here and gone in a flash. Enjoy the great training weather ahead.

## Stay Focused: Part Two

The adversity some of our runners, their family members and the cancer community bravely face never ceases to amaze and inspire us. We don't want to trivialize the hard work you're putting in, but the next time you're having a pity party for yourself, remember why you're running and how lucky you are to be able to do so. We aren't known for our warm and fuzzies, so we'll close with this: The next time you're tired and just don't want to run, suck it up and get out there.

## Making the Tough Choices

One of your hardest race-day decisions may come if you find you just "don't have it" during the race and choose to pull back your pace-knowing you'll miss your goal time. Even harder: suffering an injury and making the decision to DNF (does not/did not finish). Both choices are tough but smart. Risking your health or the possibility of an injury that ends your running days is just not worth it. One year, a 23-year-old Chicago Marathon runner of ours had the maturity to drop out at mile 11 because of an IT band issue. As a result, she'll easily be back to race another day. So, in the words of Kenny Rogers, "Know when to hold 'em and know when to fold 'em." Okay, so we're not mature, but you get the point.

## Running in the Rain

We're often asked if the training runs will be canceled due to rain. Unless there's thunder and lightning, splish splash away. If it rains during your race, you have no choice, there are no do-overs. Might as well know what it feels like. Dress for the temperature more than the rain. Be careful of some waterproof materials as they don't breathe and can cause you to overheat easily.

Wear a visor or breathable running cap to keep the rain out of your eyes. Lube up your toes-your sneakers and socks can cause blisters when wet. When you come home, put newspaper in your sneakers to help absorb some of the moisture.

## Running in Hot Weather

Let's face it, hot days can make training tough. But there's a big difference between being uncomfortable and pushing so hard you get sick in the heat. It's not worth it to do the latter! Pull back on pace and distance instead and consider cross training indoors with the A/C on.

## Running in Cold Weather

If it all possible, run on a treadmill or an indoor track. If this is not an option, it's important to pay extra attention to your footing. With challenging weather, it's best to slow your pace down and limit the mileage. Your stabilizing muscles are working extra hard, so intensity is increased and more energy is used. Fresh snow has more traction than packed snow, but can hide ice patches. Make sure that your foot is always under your center of gravity-underneath your hips. Run with short, light strides. If the path is very icy, walk on it, it's not worth taking a spill.

## Get Those Zzzs

You need your sleep! Training for a race is demanding on the body, and your muscles need some shuteye to repair from a long run. Be sure to get at least 7 to 8 hours of sleep on a regular basis. You'll make it through training injury free and improve your progress. Get into the habit now and ensure that your routines are set in stone by the time race day is here.

## What Do I Do If I Get Sick and Can't Train for a Week?

Colds and flu can shut you down. Just relax and let your body heal. When it's time to run again, don't try to play catch up with your training runs. Those runs are gone, so forget about them. Pick up where you left off. A week or even two is not enough to lose fitness. Your first couple of runs may feel tough, but your body will get back up to par in no time.

## SPEED \& HILL TRAINING / RUNNING STRATEGY

## The Need for Speed

There's an ongoing debate in the running world about when to incorporate speed and hill work into your program. Some coaches recommend waiting until later in the program, when you're in better shape to handle the workouts. Others, including us, believe that there's no better way to get into shape than starting the workouts early-as long as you count the workouts into your mileage and you approach them in the same way as your distance runs. Start off easy, and slowly increase the distance and intensity of your workouts. Your level of fitness will improve rapidly, and you'll also improve the quality of your other training runs.

## Speed Work

In addition to enabling you to run faster, speed work improves cardiovascular and endurance fitness. Choose one of the speed workouts below and add it to your training program once a week, preferably midweek. Very important: Always incorporate a 10-minute warmup and cooldown into your speed workout.

## Interval Training

These workouts involve alternating bursts of high-intensity training with low-intensity recovery. Here's how to get started:

- Run for 5 minutes at a pace that is about 30 seconds faster than your comfortable pace.
- Recover by running 5 minutes at an easy pace. The recovery is essential, so don't skimp.
- Repeat the set. On week one, start by doing 5 sets. On subsequent weeks, slowly increase the number of sets.


## Hills

Hill work improves strength and speed by challenging muscle groups that are only mildly used on flat runs. If you're in New York City, Central Park's Cat Hill is a quarter of a mile long, which is perfect. Or try the Brooklyn Bridge. Here's how to perform hill repeats:

- Run up the hill at your normal pace.
- Run down the hill at an easy pace. The downhill run is your recovery.
- Repeat the first two steps. On week one, start by doing 6 repeats. On subsequent weeks, slowly increase the number of repeats.


## Tempo Runs

These make you a stronger, faster runner by teaching your body to run faster over longer distances before fatiguing. Here's how to do a classic tempo run:

Run for 20 minutes at a pace that is comfortably hard-a pace at which you are able to speak a few words but not the entire Gettysburg Address. If you are huffing and puffing, then you are running too fast. Find your stride and then cool down. Slowly increase your working time each week.

By incorporating one of these speed workouts into your weekly training, you'll have a faster normal pace by race day.

## Gliding

During short races, charging downhill with reckless abandon is fine. However, once you start longer distances, the extra pounding on your quads will take its toll and leave you with little energy for later in the run. When running downhill, picture yourself gliding. Since the ground is falling away from you, you don't have to lift your knees as high to propel yourself forward. Lean forward slightly and let gravity do the work. Take deep breaths and let your heart rate come down. Your quads will be fresh, your heart rate nice and low, and you'll be ready to charge up the next hill.

## Pool Time

Swimming is the best cross training workout for runners. It'll increase your lung capacity since you can only breathe every other stroke and work all of the muscles involved with running without the pounding. You can do an all-out sprint swimming workout and recover quickly for your next run. The water also offers great "me" time. It's the most tranquil of all endurance disciplines. Put your face in the water, and everything else goes away. Before you hit the pool, know which swim style is best for runners and why a kick board is needed. Read all about it here.

## When Do I Taper?

There's a lot of uncertainty among runners about whether to do a two or three-week taper. It all depends on you. How quickly do you recover? If you bounce back from your long runs and have gotten through the season without any aches and pains, we suggest the two-week taper. It gives you more of a mental edge than a physical one. If you're slow to recover and the long training season has taken a toll on your body, opt for the three-week taper. This gives you more of a physical edge. Whichever you choose, you'll be fine on race day. Your training is all done except for the fine-tuning.

## STRENGTH TRAINING

## Weight Train like a Bodybuilder

Contrary to the old-school belief, you should lift like a bodybuilder. Start light to warm up, and then pyramid up to a weight you can handle for only 5 to 8 reps. We know a lot of runners think, "I should do light weight and high reps for endurance." This strategy duplicates what you do to your body during running and inflicts a pounding that tears muscle fiber down. To counter this, you need to rebuild the muscle.

It helps you prevent injury and it makes you a stronger runner. Some of you are shaking your heads, saying, "Oh, I don't want to get big." Trust us-unless you have a genetic abnormality, you're not going to get big. Most big bodybuilders have lifted for years to achieve their size, and they don't run, because running makes you small. Many also have had pharmaceutical help. So, if your idea of juicing it means enjoying a fruit beverage, lift away!

## Weight Training Options

We all have a predominant side-either right or left-that results in a muscular imbalance, leaving one side of our body stronger than the other. Running reinforces that imbalance-your body will naturally favor the stronger side-and the same thing happens when you train with weights.

For example, if your right leg is predominant, it'll do most of the work when performing a leg press, while the left leg merely offers minor assistance. You should work your legs unilaterally to correct and even out the muscular imbalance. Running also causes other muscular imbalances that can lead to bad form and injury. The impact of running causes the quads to build and strengthen faster than the other muscle groups in the legs.

## The following workouts will address these issues.

## Workout Session One

## Single Leg Press

1. Place legs on the sled just as you would normally perform the exercise, then drop one leg out of the way. Do not center the working leg.
2. Lower the platform until your knee is at a 90-degree angle.
3. Press the platform outward until your leg is nearly straight. Do not lock out your knee or bounce the weight at the top or the bottom of the movement.
4. Choose a weight at which you are able to perform 15-20 reps. Switch legs and repeat. Perform three sets.

## Hip Adductors

This exercise strengthens the inner thigh muscle.

1. Sit on the hip adduction machine and position your legs apart at the beginning of the movement.
2. Inhale and pull your legs together until the pads touch each other.
3. Exhale and return your legs to the starting position, keeping the movement steady and under control at all times.
4. Choose a weight at which you are able to perform 15-20 reps. Perform three sets.

## Single Calf Raise

Calf raises can be done while standing on a stair step or a thick book. Hold the stair rail or wall for balance.

1. Stand on a step with the balls of your feet at the edge of the step, lowering your heel as far as possible until you feel a good stretch in your calf muscles.
2. Raise your heel and stand as tall as possible. Focus on making your calf do all the work and hold the contraction for a few seconds.
3. Do not bounce. Keep your leg straight, and your knee and hip locked.
4. Do 20 to 25 reps. Switch legs and repeat. Perform three sets.

## Single Leg Curl

1. Lie on your stomach on the leg curl machine with your leg straight out.
2. Your knee should extend out over the bench.
3. Lift your heel up as close as possible to the buttocks. Contract your hamstrings at the top of the movement, pause, and lower your foot back to the starting position.
4. Choose a weight at which you are able to perform 15-20 reps. Switch legs and repeat. Perform three sets.

## Workout Session Two

This is Part Two of your weight training workout session, addressing muscular imbalance.

## Stationary Lunges

1. Standing with your feet hip-width apart, take a stride forward and lower your hips toward the ground by bending both knees.
2. Make sure your positioning is correct, with your front knee directly over your foot and your back knee pointing at the ground. Both knees should be bent at 90 degrees.
3. Using your glutes and thighs, straighten your legs and raise your hips back up to the starting position.
4. Maintain the stance and complete 15 reps on one side; then switch and complete 15 reps on the other side.

## Ball Hip Adductors

A rubber ball (like the ones used to play dodgeball) is inexpensive and very effective.

1. Lie on the floor on your back.
2. Bend your knees and place your feet together flat on the floor. Place the ball between your knees.
3. Squeeze the ball tight: hold for 3 seconds and repeat for 15 to 20 reps.

## Single Calf Raise

Calf raises can be done while standing on a stair step or a thick book. Hold the stair rail or wall for balance.

1. Stand on a step with the balls of your foot at the edge of the step, lower your heel as far as possible until you feel a good stretch in your calf muscles.
2. Raise your heel and stand as tall as possible. Focus on your calf having to do all the work and hold the contraction for a few seconds.
3. Do not bounce. Keep your leg straight, and your knee and hip locked.
4. Do 20 to 25 reps. Switch legs and repeat. Perform three sets.

## Step-Ups

1. Stand next to a flat bench or chair.
2. Step up onto the bench with your right foot; bring up your left foot and tap the bench, and then return the left foot to the floor.
3. Repeat for 10 to 15 reps, and then switch and repeat with your left foot on the bench.

Perform your weight training sessions on the "XT" days noted in your training chart. Make sure to perform a weight training session once a week, alternating between Session One and Session Two. For more variety, you can do step-ups instead of lunges on the third week.

## Plyometrics

When you don't have a gym handy, you can still give your lower body a runner-boosting workout with plyometrics. A cause of 'hitting the wall' during the race is muscle fatigue. If your body is not strong enough to handle the pounding-it will mete out-get ready to be acquainted with the wall.

A great time-crunched, all-over lower body exercise is the squat jump:

- Stand with feet shoulder-width apart, arms at sides.
- Start by doing a regular squat, then jump up as explosively as you can when you rise, reaching for the ceiling.
- When you land, lower your body back into the squat position to complete one rep.
- Do three sets of 15 to 20 reps.

This will get your heart rate going, work your quads, glutes, hip flexors, hamstrings and calves all in one move, and get the body used to the pounding of running.

## Core One

## Stability Ball Crunch

1. Lie on ball supporting upper glutes and lower back. Plant feet firmly on the floor.
2. With hands behind head, curl upper body up and tighten abdominals.
3. Roll back and repeat.
4. Perform three sets of 25 to 30 reps.

## Walk Outs

1. Lie face down on stability ball with the ball under the pelvis. Plant hands firmly on the floor.
2. Once balance is maintained, walk hands out in front of you, letting the ball roll down your legs until it reaches your ankles.
3. Perform three sets of 15 to 20 reps.

## Stability Ball Crunch Hyper Extensions

1. Mount back extension machine with your hips on the pad.
2. Slowly lower your upper body with your head toward the floor.
3. Slowly come back up, making sure you stop when the back is flat. Do not over-extend.
4. Perform three sets of 15 reps.

## Bridge

1. Lie on mat face up with legs out straight and calves resting on stability ball.
2. Tighten your abs and glutes, lifting your trunk off the floor.
3. Hold straight position for as long as you can. Relax and repeat.
4. Perform one set of 5 to 10 reps.

## Core Two

## Upper Crunch

1. Lie face up on a mat, knees bent and feet flat on the mat. Hands are behind your head with arms flat on the mat.
2. Keeping your eyes focused on a point well in front of you, use your abdominals to lift your upper back off the mat. Keep your head, neck and shoulders flat throughout the movement.
3. Bring your body up as far as you can without having to curl your body.
4. Lower yourself down without laying back on the mat and repeat. Perform three sets of 20 to 30 reps.

## Lower Ab Leg Extensions

1. Lie face up on a mat with your arms at your sides, palms down.
2. Bring your upper legs towards you until knees are pointing straight at the ceiling. Bring lower legs up until they are parallel with the floor.
3. Move knees away from you toward the wall until you feel the abs engage. Keeping the upper leg in this position, extend the lower legs up until the legs are straight.
4. Lower and repeat. Perform three sets of 20 to 30 reps.

## Hip Extensions

1. Lie face down on a bench with your pelvis at the end of the bench and your feet on the floor.
2. Keeping your legs straight, lift them toward the ceiling as far as you can without hyperextending the back.
3. Lower to the floor and repeat.
4. Perform three sets of 15 to 20 reps.

## WHAT TO EAT

Gels, Chews, Sport Beans, and more!
As you begin your training and long runs, it's a great time to try a variety of gels, sport beans, chews, and more. These items help replenish carbohydrates that are depleted during running. Take your time to find the right item that works best for your long runs. This will help you continue to make progress during your training and set you up for success on race day. It's so crucial to not try anything new on race day and go with what is best for your body.

Each item will have directions printed on the label, but a good rule of thumb is to replenish every 45 to 60 minutes during your long runs.

## Nutrition

You're burning a tremendous amount of calories as you train, but that doesn't mean you can eat whatever you want. Eating clean foods that balance carbohydrates, protein, and fiber is key. Carbs will provide you with the energy your body needs during long runs, and protein is vital to repair your muscles so you can come back stronger. Fiber helps maintain digestion and a healthy heart, and also improves blood sugar levels to maintain a steady flow of energy.

View your Nutrition Guide which includes sample menus.

## Nutrition for Recovery

There are three steps: rehydration, replenishment and repair. Once you finish a long run, it's essential that you rehydrate with fluids, electrolytes, and easily-absorbed carbs. A sports drink fits these criteria perfectly. If you can't take another sip of Powerade, then take water with pretzels. If the cells are dehydrated, you can't transport or absorb nutrients.

Replenishment is the next step, and this should be 20 to 30 minutes after you finish. You want carbs, protein and preferably some antioxidants to help deal with the oxidative stress you just placed on your body. A sandwich with protein and a piece of fruit is perfect.

Repair is the third, often-ignored stage. After a long run, many people reward themselves with junk food. Now is actually the time to make sure you get quality nutrition. Introduce both carbs and protein, with the emphasis on protein-it helps repair muscles. Add vegetables and fruit, and you'll supply yourself with everything your body needs to repair itself while you sleep.

## WHAT TO WEAR

## Clothing

You'll be running long distances, a number of hours, and exerting a lot of energy so you should be comfortable. Try out a number of brands and styles to find your ideal outfit. Your clothing should provide moisture-wicking properties (just like the Fred's Team uniform shirts) and also be comfortable. Be aware of the temperature outside when choosing your gear. Even though it might be a little chilly, your body temperature will warm up as you begin to run so dress accordingly!

## Clothing for Cold Weather Running

When it comes to cold weather running, it's all about the clothes. Your first layer is key: wear moisture-wicking fabric that fits snugly. The next layer should be insulating, such as fleece, and the third layer should be breathable with zippers, to help you regulate your body temperature as you run. For your lower body, one layer is fine-your legs generate a lot of heat. But stay away from shorts: although your legs will be warm during the run, the direct contact with cold air during the cool-down can cause cramps and muscle damage. Your body shuttles blood away from the extremities to the working muscles. You'll need to wear gloves and most likely a hat. Sometimes one layer of gloves doesn't cut it, so you may need to double up. The first layer should be a fitted glove with wicking material, and you may need to add mittens over it. You may also need to double up on socks. The temperature varies greatly in the winter, so see what works for you. When you finish your run, your body has stopped generating heat and you don't want to be shivering in the cold, even if home is just a few blocks away.

## Running Belt

Every runner should have a running belt! It'll be great to have on race day to hold your bib and energy gels.

## Running Bras for Women

Bra sizes fit differently depending on your body type. Running bras either compress breasts inward or encapsulate them. If you are larger-breasted, you might have to wear two bras to achieve a proper support. Try wearing two different types. You should always make sure the fabric wicks moisture away. Everyone is different, so you'll have to test what works for you. Take a few bras into the changing room and jump up and down. The one that comes as close to eliminating a bounce wins. Here are the guidelines:

- The band: should fit slightly tighter than a lingerie bra, but not so tight that it cuts off circulation.
- The cups: the breasts should be completely held within the cups without overflowing. The fabric should be smooth. Wrinkles indicate that the cup is too big.


## Select the Right Shoe for You

Your shoes are crucial to helping you run effectively and safely during your training season and on race day. You'll be running so many miles in these shoes, so you must choose the right one for your body and foot type. Visiting a specialty running store will help immensely. These stores have experts who can provide gait analysis and review your foot type which will better direct you to the best shoe. It's important to learn more about what shoe will better suit your training needs so that you can safely train.

## Make Your Running Shoes Last Longer

Running shoes typically last between 300 to 500 miles during training. When it's time for you to replace your trusted running shoes, buy two pairs. Even though you'll be laying out more money up front, you will save in the long run (no pun intended!). Alternate the pair you wear for each run. This gives your sneakers sufficient time to dry out. It's the moisture that speeds up the breakdown of your shoes' support and also contributes to that old running shoe smell. Your wallet, your feet, and everyone you know will thank you.

## If It Ain't Broke, Don't Fix It!

If you're looking for a new pair of shoes to make you a better runner, remember this: It's not the shoes, it's the runner. In fact, changing running shoes can wreak havoc. Even a slight shift in support can throw off your form, resulting in a new running injury. When a runner comes to me with a new pain while running, a new shoe is most often the source. Stay with your tried and true. Remember, successful running is about consistency.

## Socks

Get socks that wick away moisture. There are now many brands that you can choose from. Try a few and see what works best for your feet. Change out of those socks and running shoes as soon as you finish your run. You want to make sure your toes stay dry in the heat of the summer and cold of winter. Take care of your toes!

## How to Choose Your Non-Running Shoes

The shoes you wear when you're not running are just as important as the ones you wear when you do. The next section is about various shoes, their issues, and guidelines for better choices. The goal is to keep you safe, and to get you happily across the finish line.

## Flip-Flops

Several studies have shown that flip-flops cause more injuries than any other shoe. Here's why: In addition to providing very little cushioning, flip-flops alter good walking biomechanics. Walking with flip-flops causes your stride to shorten. Your foot tends to roll inward due to lack of support. The front of your foot doesn't come up as high when your leg swings forward and your heel hits the ground with less force. Your toes tend to curl to grip the shoe to keep it from slipping off. All of this can cause over-pronation, meaning the foot rolls inward too far and doesn't absorb enough shock. Flip-flops are designed to go from the lounge chair to the pool, and that's about it.

## Mules and Slides

These shoes cause similar problems as flip-flops. Any shoe without a back creates abnormal walking biomechanics and should be avoided.

## Flats

Ballet flats might be very comfortable, but they give absolutely no arch support. Doctors have linked this lack of support to back pain, heel pain, strain in the Achilles tendon, and plantar fasciitis.

## High Heels

Heels that are higher than two inches force you into an unnatural posture and stress the knee joint and associated tendons. High heels also tighten the calf muscles, increasing the chances of Achilles tendonitis or shin splints. The instability of the heel increases the risk of ankle sprains. If you must wear high heels, choose the occasion wisely, make sure the shoes have a strap, and limit the amount of time you wear them.

## Snow Boots

One of the best ways to avoid a spill is to wear waterproof snow boots that have good tractionrubber is better than plastic. Keeping your feet dry is also important.

## Better Shoe Options

Shoes should have good arch support, a back or strap, a decent-size heel (between 1 and 2 inches maximum) and the uppers should be made of a soft material. Sandals should have enough material or straps to keep your foot in place. Plenty of cute shoes and sandals out there have all of these important qualities. Sport sandals are always a good option because they do have the right amount of support. I recommend changing into them after a long run, as this allows your feet to dry off and breathe. Keep your feet happy.

## BODY MAINTENANCE

## Blister and Chafing Solutions: Cover and Lube

While running is very good for you in many ways, certain parts of your body may not do well with the wear and tear. Here are some simple solutions to beat blisters and control chafing.

Guys: Chafed nipples? Cover them with Breathe Right nasal strips, which are made to adhere to a sweaty nose. Unlike Vaseline and Band-Aids, these strips will stay put until the end of your run.

Girls: Chafing from your sports bra? Place surgical tape where the bra band rubs the body.
All: Blisters on your toes? Toenails falling off? Make sure your sneakers are at least a half size bigger than your normal shoe. If this does not stop the blisters on your toes, lube those puppies up. The best lube is A\&D diaper rash ointment. It has a thicker viscosity than Vaseline and will last longer. $A \& D$ is also good to use on other parts of the body with skin-on-skin chafing.

## Wear Sunscreen

Sunscreen should be part of your normal daily routine. Apply 30 minutes before training. Use one with an SPF of at least 30. We'll be in the sun for hours. Sunburn, even a small one, is inflammation, which prevents the skin from cooling itself. Don't forget to apply to your ears, back of the neck, and ankles, which all are often-missed areas. Let's be as healthy as we can, and that includes taking care of our skin.

## Take an Ice Bath

An ice bath is an effective way to speed up your recovery and can be done within a few hours or even a few days after your run. Fill your bathtub with cold water and as much ice as you can. Slowly submerge your lower body into the ice bath. The first couple of minutes will be painful, but your body will adjust. The cold temperature helps immediately bring down muscle inflammation caused by the pounding of running, and it works to flush out built-up lactic acid. You can make yourself a little more comfortable by wearing a hat and sweatshirt and sipping a hot beverage. Soak for 15 to 20 minutes. This bit of icy discomfort is worth the spring it will put back in your step. Turn on the hot water and open the drain. Slowly turn it into a hot bath. Once the water is hot, self-massage your legs.

## Massages

Massages are a great (and relaxing) way to recover. They can restore function, ease muscle spasms, reduce cramping, increase circulation, correct physical asymmetries, and flush lactic acid on a deeper level. A massage can be pricey, but as a runner, you are asking a lot of your body. Be kind to it!

## Stretching \& Why It's Important

We'll run for hours and hours during the training program, but a lot of you will not take the extra 10 minutes to stretch afterwards. You're asking a lot of your body, it's just asking for a little time for itself. When you run, your muscles tighten-the cross fibers that make up the muscle shorten. Stretching allows these fibers to lengthen so you can perform at peak levels. It improves your range of motion, and also improves blood and oxygen circulation, which will help improve muscle recovery after exercise. Flexibility allows you to perform at your best level. So find which stretches work for you, and stretch after all workouts! All stretching is good.

## Your Feet

We're on our feet for a long time so taking care of them, and making sure they are strong and flexible, is essential. Here are ways to keep your feet healthy:

- Self-massage. Using a wooden roller or golf ball, roll your foot back and forth. Go gently, your foot might be very tight.
- Towel grabs. Put a towel on the floor, grab the towel with your toes, and release. Do this 10 times on each foot.
- Alphabet. Write the letters of the alphabet with your big toes. To increase ankle flexibility, hold the back of your knee and write the alphabet with your whole foot.


## Take Care of Your Feet

Feet absorb more force during running than any other part of your body. As we run longer distances, you might develop large calluses. Before you book a pedicure-stop! Calluses are cushions protecting your feet from blisters. You worked hard for them. Time and again we hear this horror story: a runner goes for a pedicure, is adamant about keeping the calluses, but they're shaved off anyway. The next time they run, their feet are covered with blisters.

Don't let this happen to you. Keep your toenails as short as comfortably possible. Even with wicking socks your feet will get wet. Once you finish your run, get out of your wet socks as soon as you can. If you come to our training runs, bring a pair of open-air sandals (with backs) to change into. Toenail fungi and athlete's foot thrive in dark, moist areas, which is why keeping your feet clean and dry is the best prevention.

You might prevent your toenails from turning blue by wearing running shoes a half size to a whole size larger than your normal shoes. If you already wear a full size larger, we don't recommend going larger than that.

## RESOURCES

## Fred's Team on Strava

Strava is a social-fitness network. If you haven't already, join us on Strava and virtually connect with Fred's Team runners from around the world. Open the mobile app, click "Explore," then "Clubs," search for "Fred's Team," and select the "Request to Join" button. Screenshot your runs and post them on social using the hashtag \#FredsTeamFamily! We have runners worldwide so this is a great way to train along with your teammates wherever you are!

## Books

There are countless books on running, but very few are useful. Following the routine of a championship runner whose only job is to run will not help the average runner. "Programmed to Run" by Thomas S. Miller, Ph.D., is more about biomechanics and efficiency than training programs and it's one of the most useful books for runners of all levels.

## COACH JEFF'S LAST MINUTE RACE TIPS

## Don't Try Anything New

No matter how great your running buddy tells you that new sports drink is, don't try it on race day. It may be great for him but could disagree with your stomach and be a disaster for you. If you haven't trained with a particular supplement or sports drink, don't bring it to the race.

## Stick With What Works and Don't Wear Anything New

You'll find the newest running gear at the Expo. But resist temptation to run with a new pair of shoes on or too close to race day. Remember: It's not the shoes - it's the runner. In fact, changing running shoes with even a slight shift in support can throw off the form you've been training with, resulting in a new running injury. Stay with your tried and true. Successful running is all about consistency. The same rule applies to clothing. You don't want any surprises on the big day.

## Protect Sensitive Areas

Lube any areas that might chafe, such as your inner biceps and the sides of your lats. If you're wearing shorts, lube up your inner thighs.

Men will want to lube up their groin areas. Also, cover your nipples with Breathe Right nasal strips (Band-Aids tend to fall off with perspiration).

Women might experience chafing under the lower strap of their sports bra. Gauze tape can be used under this area-just make sure you don't put the tape on so tightly that it constricts breathing.

## Start Slowly

The most common mistake in running a race is going out too fast. Don't let your adrenaline take over when the gun goes off. Ease yourself into the run. Starting too fast can mean struggling to finish your race.

## Relax

Holding tension in your upper body can zap much-needed energy. Relax your neck and shoulders. Don't clench your fists. Let your body flow as if you were out for an easy run.

## Drink Up

Try not to skip the water stations. The time you gained by blowing through the water stations will be lost in the later stages of the race. Even the slightest level of dehydration will significantly decrease your performance level. Don't wait until you're thirsty. By then it'll be too late-you'll already be dehydrated.

## Be Safe at the Water Stations

When approaching a water station, aim for one of the end tables. While gradually working your way over, make sure you don't cut off another runner in the process. If you're going to slow down or walk to drink your water or sports drink, make sure you move over as far as you can to avoid blocking other runners.

## Congratulations!

Running any race is a great achievement. Enjoy every moment and don't look at your watch when you cross the finish line unless you want a nice photo of the top of your head. Happy running!

