

ALL THINGS MARATHON

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INTRO

THIS IS NOT A TRAINING PLAN.

I repeat, this is not a training plan. This is everything you need to consider outside of your training plan in order to run a successful marathon.

From MOTIVNY's Doctor of Physical Therapy Jessica Chang with contributions from DPT Luke Greenberg, Strength Coach JP Lemire, and Athletic Trainer/Run Coach Greg Laraia, comes a comprehensive marathon prep guide.

Read on to learn about non-running factors to consider as you prepare for your race, and glean expert insights from our team. Start incorporating these actionable tips into your marathon training today.

NUTRITION

INTRO

Nutrition and hydration are possibly the most overlooked part of a first timer's marathon training. Runners tend to be so focused on the running itself that they forget that our body needs the necessary nutrients and supplements to succeed at running.

Consider: how much better could your body perform if it is given a consistent supply of energy throughout the race rather than relying on the single PB&J you had at 5am that morning?

GENERAL DIET

Your day to day diet is just as crucial as your intra-race fuel plan. A simple way to measure your food intake in any given meal is to use Precision Nutrition's hand-measuring system; instead of counting ounces, you use a visual measuring system. The daily recommendation using this system is 2 hand portions per meal for men and 1 hand portion per meal for women.

A simpler way to measure is to eat slowly until you are 80% full. Most importantly, check in with how you feel after your run when you have eaten like this. Did you feel energized? Did you hit a wall?

In general, aim for an average of 3 meals with the above portions on any rest/baseline days with consistent meal timing.



A serving of carbs = 1 cupped hand



A serving of protein = 1 palm



A serving of fats = 1 thumb



A serving of vegetables = 1 fist

PRE-LONG RUN

You should be hyper-vigilant of your calorie consumption starting at least 24 hours before your long runs. Consider increasing your carbohydrate and protein portions but add this onto your usual mealtimes so that you're not throwing any curveballs at your body and its digestion process. If you are preparing for an early race, get used to eating earlier in the day. Figure out what foods sit well in your stomach that early in the morning, whether you are running that day or not.

LONG RUN FUEL

Nutrition for performance will likely be new to your body if you've never done an endurance race before. You will have to practice fueling often in order to iron out what your body does best with in a race situation.

A GENERAL FUEL PLAN LOOKS LIKE:

- Food intake 30-40 minutes into the run
- Additional fuel each 30-40 minutes after that
- Using foods in which you are confident work well with your digestion

**For some people, those intervals may be shorter, and for others, longer.
When you hear about the “wall” that marathoners hit, that wall is most commonly due to a depletion of calories and energy, not due to under-training.**

For most, gels or chews are the easiest fuel source. Certain brands like Maurten, SIS, and PowerBar don't require water intake with the gels, which makes them easier to take during a race. For others, real food sources like bananas, pop tarts, gummy bears, or pretzels are easier on the stomach. Be sure to check if the gel you purchase contains caffeine; the recommended intake of that is roughly 100mg per hour and is only recommended if you already regularly consume caffeine.

Figure out which of these fuel options work for you by practicing on each long run. Test the timing, test different types of gels, chews, or foods, and take note of how you feel with each (a run journal can be helpful for keeping track!). You can even just pop a random gel during any shorter run to train your stomach to digest them.

Pro Tip: When testing a gel for the first time, keep each “bite” in your mouth for at least 20-30 seconds before swallowing. Sugar, more than other macronutrients, metabolizes in your mouth by the use of salivary amylase, which can help ease the feeding your body in the heat of battle.



POST-LONG RUN

Eat as soon as possible after your run. You may not feel like eating, or your stomach may be upset, but it's of the utmost importance that you get your calories in. Sometimes, that may be a real meal, sometimes that may be a meal replacement shake or a smoothie. Do your best to maximize carbs and protein. Finally, remember that the first meal is the most important but is not the end of the story - your body will be recovering for a while after that run, and it's important to keep up the calorie intake.

HOW MANY CALORIES DO YOU NEED?

This is dependent on your age, gender, and activity level, but taking a resting metabolic rate test can give you specific numbers to aim for.

Below is an example of the results of a RMR test: notice that it tells you how many calories you burn at baseline as well as how many calories you burn during a 45 minute workout. You can use these results to calculate what your caloric needs are during training.



HYDRATION

Electrolytes are a must! These are basically salt compounds (crucially: sodium, potassium, and magnesium compounds) that help your body absorb and retain water.

There are two main ways to get electrolytes into your system:

- 1 Electrolyte drinks such as Skratch Labs, LMNT, or sports drinks such as Gatorade all contain the necessary salts for exercise



- 2 Plain water plus electrolyte supplements such as SaltStick Fast Chews or chews/gels that contain salt



NUTRITION & HYDRATION RECAP

Nutrition and hydration are specific to each person's body and require training and strategizing. REI or running-specific stores typically sell single servings, which allows you to try the different brands and flavors. Beyond getting the right nutrients in your body, you want to find something you'll enjoy eating/drinking, because the last thing you'll want to do when you're running a marathon is eat something that doesn't taste good to you.

Want more resources? Check out motivny.com/journal or thefeed.com.

For a sample Nutrition and Hydration Journal, see the next page.



SAMPLE NUTRITION & HYDRATION JOURNAL

Long Run	Pre-Run Meal	Run Nutrition	Run Hydration	How did the run feel?
10 miles	Oatmeal, banana, brown sugar, coffee	Maurten 100 every 30 minutes	Salt stick chews + plain water	Too much coffee pre-run led to HR spike for first half of run
12 miles				
14 miles				

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WARM UP & RECOVERY

CONSIDER THESE TWO GOALS THE NEXT TIME YOU WARM UP:

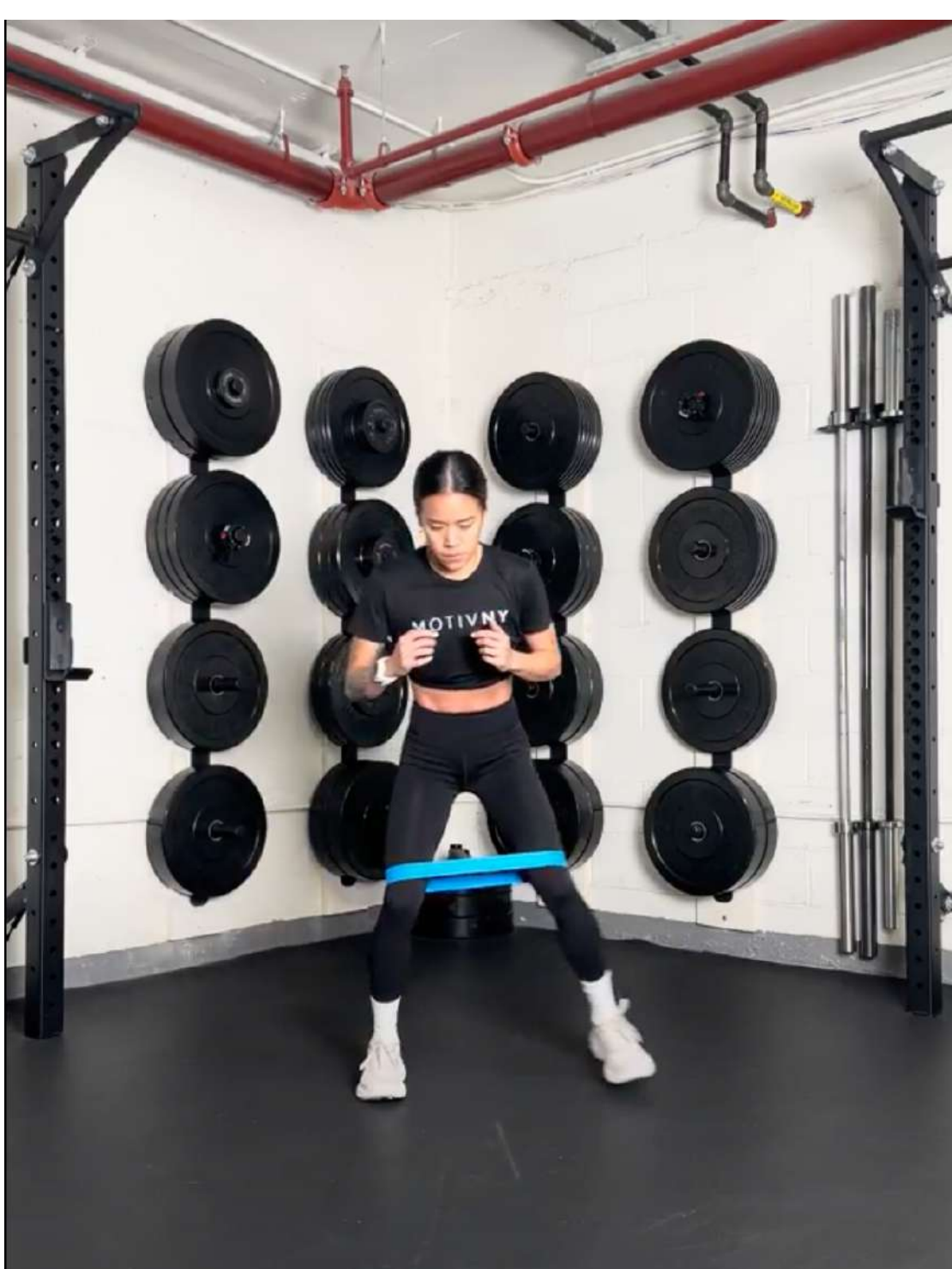
1 Increase heart rate and blood flow to literally, “warm up”

2 Activate the muscles that are about to get used

For #1, a simple yoga flow, a few jumping jacks, or even hopping on a bike for a few minutes can be enough to signal to your body that it’s time to move.

For #2, exercises that challenge single leg hip stability and coordination are great for awakening your nervous system and bringing your brain’s attention to those running muscles.

Below are a few exercises for a quick targeted pre-run warm up. For more, check out this [MOTIVNY blog](#) for coordination drills to wake up your mind-body connection.



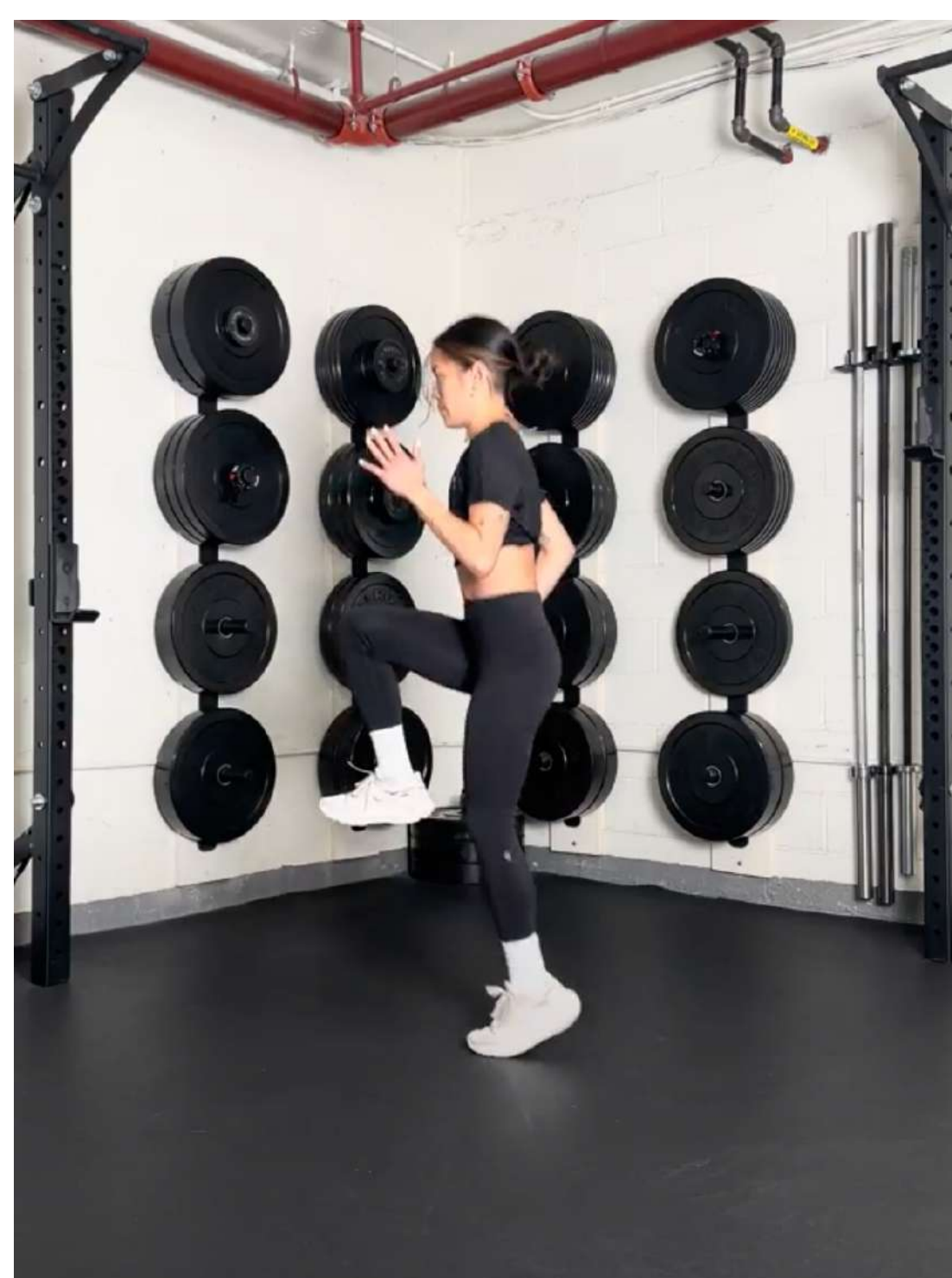
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CRAB WALKS



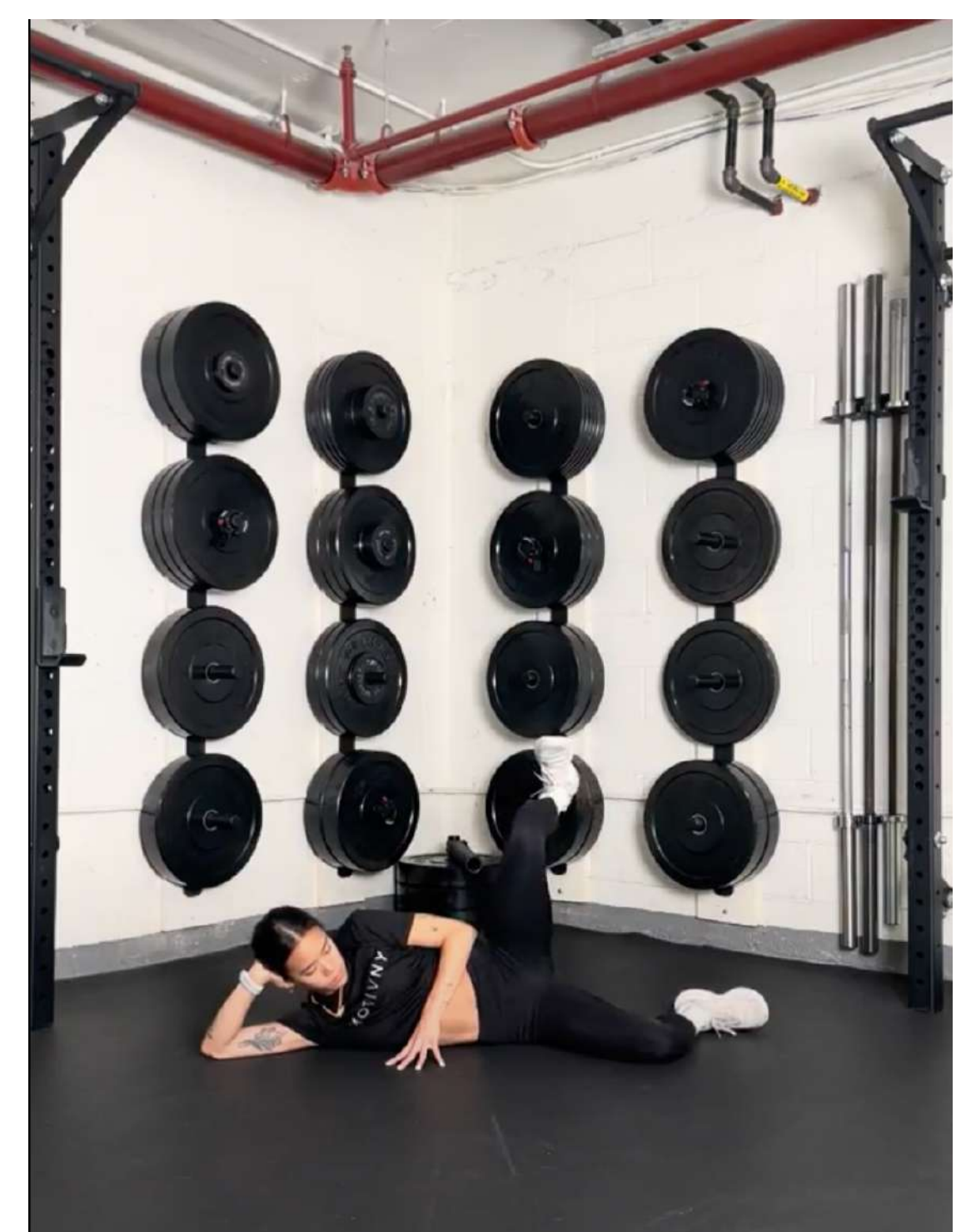
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BANDED SQUATS



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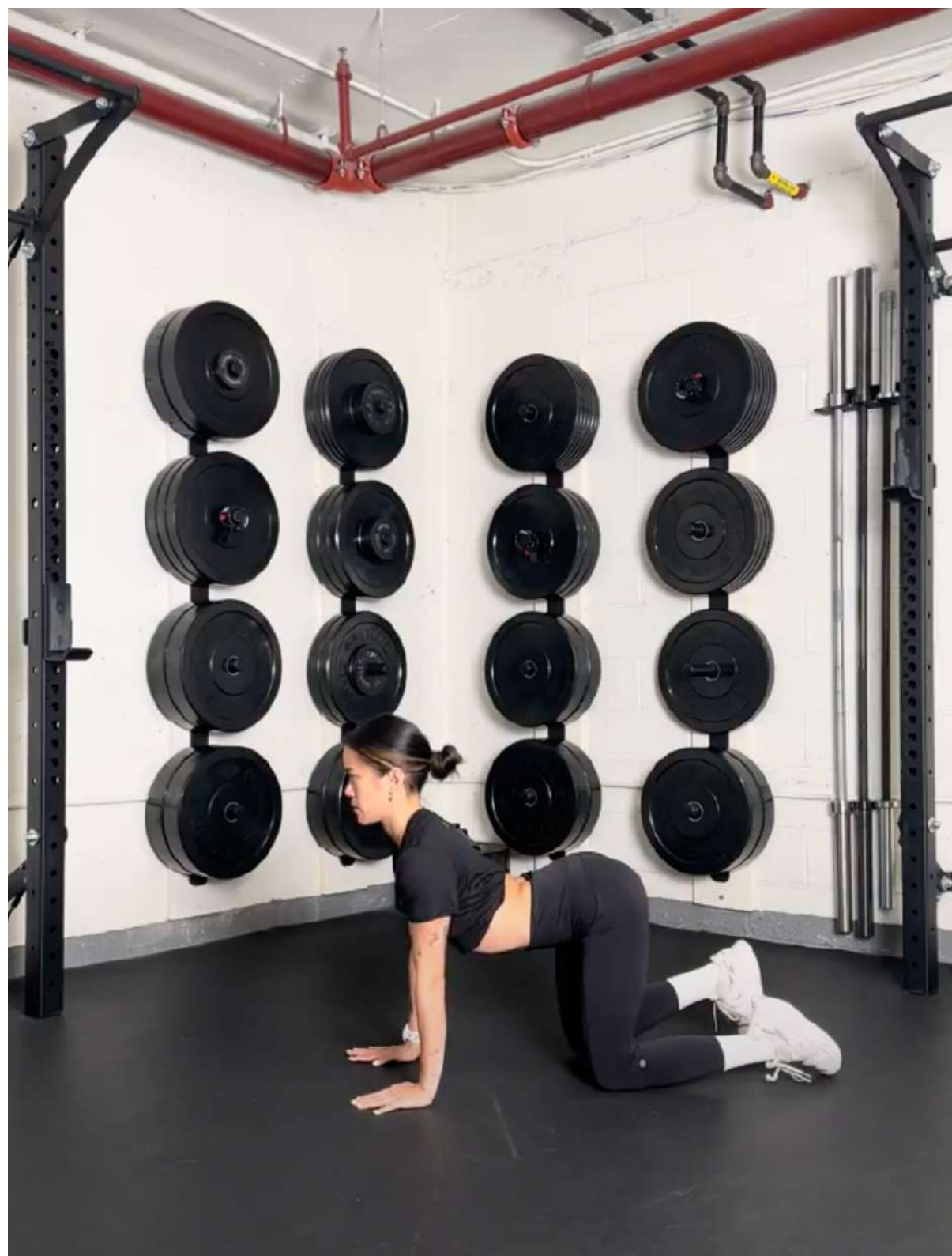
A SKIPS



[Click to view video example](#)

SIDELYING CARS

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CAT COW



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BEAR CRAWLS

Recovery can be just as important as the warmup. Immediately after a run, your goal is to cool down your muscles and bring down the intensity of your nervous system. For that, an ice bath or a compression boots session (check your local wellness centers/PT clinics for Normatec rentals), as well as a power nap generally does the trick. The use of epsom salt baths or saunas are great as well, but should be saved for after your body has cooled down - aches or stiffness 24+ hours post-run is a signal from your body that it's ready for some heat.

Don't be afraid to get on a foam roller and work out any kinks you may be having in specific muscle groups. Rolling out the tissue is a good way to rehydrate and improve tissue tension. Finally, don't forget about nutrition, hydration, and a GOOD NIGHT'S SLEEP. Below are some core post-run movements.



[Click to view video example](#)

JEFFERSON CURLS



[Click to view video example](#)

COUCH STRETCH



[Click to view video example](#)

90/90

For a sample warm-up and cool-down routine, see the next page.

SAMPLE WARM-UP/COOL DOWN ROUTINE

Warm-Up	Cool Down
<p>Hips Circuit x3</p> <ul style="list-style-type: none">▪ Sidelying Hip CARS: x3/direction▪ Banded Squats: x10▪ Crab Walks: x10 steps/direction▪ A Skips: 20 seconds <p>Core Circuit: x2</p> <ul style="list-style-type: none">▪ Cat/Cow: 30 seconds▪ Bear Crawls: 30 seconds	<p>Jefferson Curls: x5</p> <p>Couch Stretch + Lift Off: x10/side</p> <p>90/90: x10 knee/ankle lifts</p>

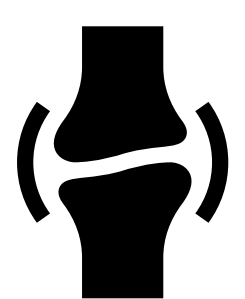
Working through injuries or limitations? Speak to a physical therapist for specific exercises to warm up those specific areas.

CROSS-TRAINING

Cross-training is often the most overlooked part of a runner's training cycle. Intuitively, it makes sense that the best way to train for a marathon is to run more and run often. But like any other sport, developing the different systems of your body is important for improving your body's ability to adapt to the demands of the sport.



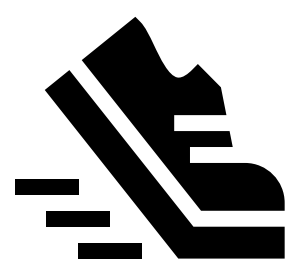
WHY DO RUNNERS NEED TO STRENGTH TRAIN?



To improve the resiliency of your joints



To strengthen your NON-running muscles to keep your body balanced



To strengthen your running muscles to improve your running power



To work on your **mobility** to combat the repetitive nature of running

While these reasons are valid for all runners, which ones you prioritize may depend on your body, your running experience, and where in your training cycle you are. For example, your off-season is the best time to strengthen your running muscles, while the mileage demand is low. On the other hand, mobility and joint resiliency become more and more important later into your training cycle as the load on your legs add up. That being said, both are always essential for a healthy productive training cycle.

HOW SHOULD RUNNERS CROSS TRAIN?

HIIT training tends to be one of the first things runners say they do to cross train. That is actually one of the last things you want to be doing as you get deeper into your high mileage weeks of your training cycle. A good running program gradually increases weekly mileage in a way that doesn't ever overload your body all at once. But by adding burpees, jump squats, etc. to the program, you are adding excessive force and shock through your bones and joints that isn't accounted for in your program.

Strength programming, in comparison, is highly flexible and can be adapted to fit every part of your training cycle, even down to the very last week. During your off season and base building, you should be lifting heavy to build strength and power while your mileage is low. As you approach peak mileage weeks, your strength priorities will shift to maintaining strength while conserving energy, as well as emphasizing movements that explore all ranges of motion.

Pro Tip: You may actually make more range of motion gains by training strength rather than flexibility.

SPEAK TO THE EXPERTS

Though these tips are a great place to start when thinking about the longevity of your body, **find a physical therapist** you trust to evaluate your body's specific strengths and weaknesses and get targeted advice on how to take care of you.

Join a run club to immerse yourself in the community and learn from peers through their lived experiences.



A background image showing a person's arm with a tattoo and a hand holding a water bottle, suggesting a fitness or athletic theme.

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INJURY PREVENTION

What is the ultimate goal of training? It is not to simply check the boxes of your workouts; you should be focused on making adaptations in your body by exposing it consistently to strain.

MANAGING STRAIN

What you may notice about marathon plans is that most of them reference mileage, pace, and frequency as their parameters for measuring training “success”. The precision with which these miles or paces are denoted can tend to stress runners out when they are not hitting their marks.

If you’re noticing that your body is starting to complain about the running, here are some options for managing the increasing load on your body. The hardest part of these options is convincing yourself mentally that you ARE doing enough even when you are deviating from the original plan. A mantra to remind yourself of is:

IT IS BETTER TO ARRIVE AT THE STARTING LINE HEALTHY THAN OVERTRAINED.

RUNNING FOR TIME

Some of the most successful stress and load management programs consist of running for a certain duration at a specific heart rate zone or intensity (conversational vs. maxed out). This method allows the athlete to focus on an internal feedback loop and go based on their feeling, while the duration is there to guide the overall physiological adaptations. Athletes will be less likely to force miles that will hurt them because they aren't tied to a specific pace or a number of miles for most of their training runs.

LOGGING YOUR "MILES" ON A DIFFERENT PIECE OF CARDIO EQUIPMENT

This method consists of running for the number of miles that you know you can do pain-free or without any negative consequences, and then supplementing with additional cardio on a bike, rower, swimming, walking. This could also include any other modality to keep you in the heart rate zone that you're looking to train for your long runs. This way, you won't accumulate tons of excess volume and will minimize the chance of injury. Yes, “time on feet” is an important part of running, but if you are managing fatigue or injuries, this is a perfect way to manage the load.

RUN-WALK-RUN

Nobody sets out to walk their runs. But that being said, run-walking can still help you feel like you are on target with your training and getting the “time on feet.” This is maybe the most powerful tool in your toolbox for learning to mentally manage your race.

Teaching yourself during training that you can run again after walking or slowing down translates to teaching yourself that your day isn’t over if you need to take a break during the race. This is essentially the idea of a fartlek run: varying intensities over one single run.

Walking is not failure - it is dialing down your intensity with the goal of being capable of dialing it back up again.

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TRAINING INTENSITIES

Whether you are just starting your training cycle or you're a month out from race day, it is never a bad idea to revisit and reevaluate training intensities.

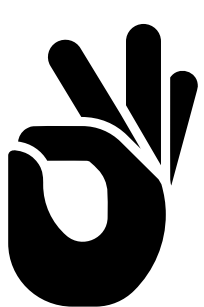
Take a moment to reflect on your running so far. Have you been running all of your runs at the same pace? Have you been trying to hit your goal marathon pace with every long run? If your answer to these questions is yes, then this section is for you.




There are a million acceptable ways to approach training intensities. Below are a few of the most popular ones:

Hanson	Known to employ lower total mileage (long runs are limited to 16 miles) but includes shorter mid-week marathon paced running
Jeff Galloway	All plans use walking breaks, which can be helpful for injured runners or those who don't have a solid base
Jack Daniels (also known as the VDOT method)	These plans specify two runs per week, a long run and a speedwork, with the rest left up to the individual
Hal Higdon	These plans are focused on progression through mileage, so workouts are kept pretty plain and simple
Maffetone	This plan focuses on running at a conversational pace or zone 2 training with the primary goal of improving your aerobic fitness

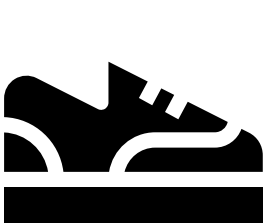
What you'll notice in all of these is that intensity is always varied, whether that is by tracking heart rate, perceived exertion, or pace. What that tells us is that varying intensity is the most widely supported way of creating the necessary adaptations in your body to running. A few tips to abide by regardless of which plan you are currently following:



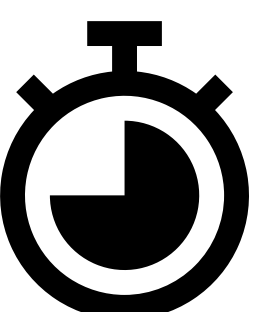
Your long runs should be EASY



The ability to run slow is just as important as the ability to run fast



Time on feet is a better measure of your training than total mileage

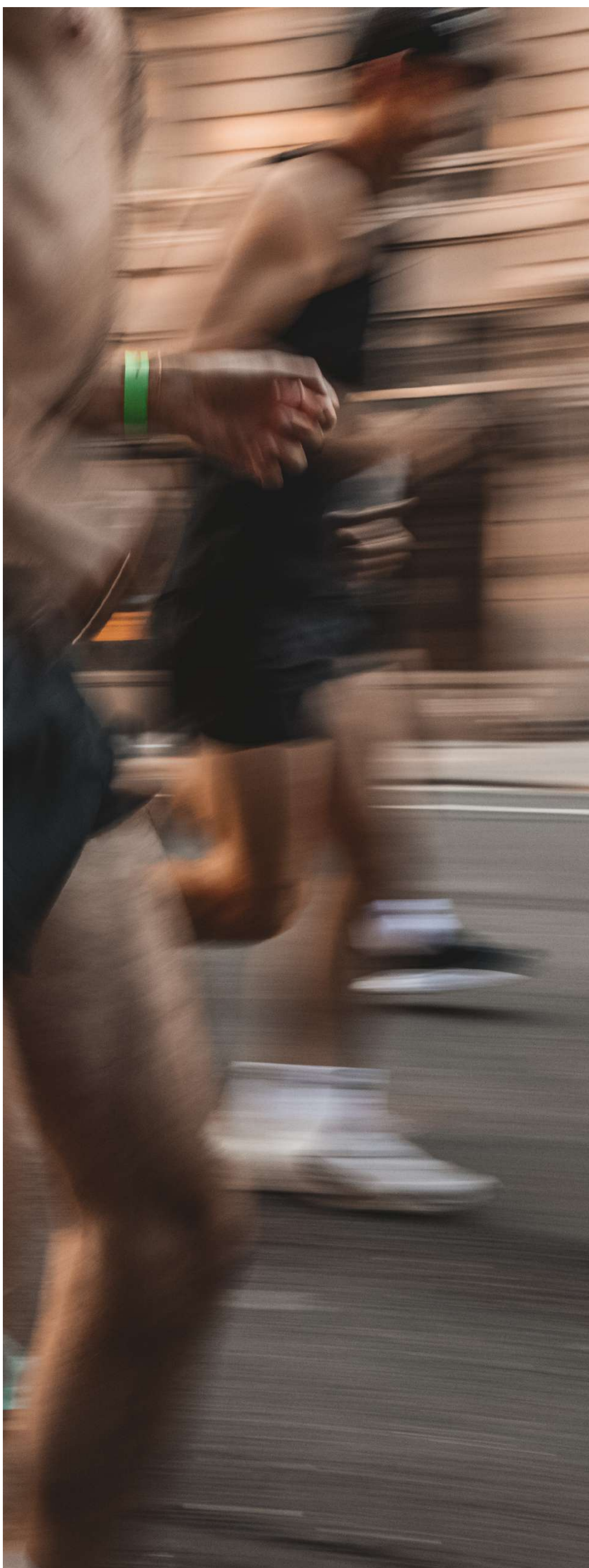


As mileage & intensity increase, you have to look at how you are also increasing rest and recovery; running load and rest should be building together, not getting further apart

THE POINT OF A TAPER

The taper period is the 10-14 days before a race in which you significantly peel back your running mileage. Why do we do this? For the last few months, you have been piling physical and mental stress onto your body, and increasing that stress week by week in order to prepare yourself for the stress of the race.

Taper week is to completely reset your body's "mileage" back to zero, in the sense that the energy stored in your muscles replenishes, your sleep debt is erased, etc. But while tapering requires a sharp decrease in running, it does not mean you should put yourself on bedrest either. The goals of your taper week are as follows:



MAX OUT NUTRITION, HYDRATION, AND SLEEP

You want to arrive at race day with as much energy as you can possibly have. Recovery is a multi-day process, so you want to be aware of what you are putting into your body all week, so that your last carb-loading meal pre-race can be a "top off" rather than the whole 9 yards. Expect to not get any sleep the night before the race; you'll be too excited and nervous. Therefore, plan to sleep fully the few nights before to compensate for that last night.

STAY MOBILE WITHOUT EXPENDING EXCESS ENERGY

During taper, you may feel your body get restless, tight, and achy. This is all normal! You are used to running a million miles, and your body will certainly respond physically when you stop doing that. This week is a great time to practice yoga, pilates, or any other light movement that will keep your joints and muscles moving without exhausting you. Recovery sessions in a sauna or Normatec compression boots can be helpful too!

Remember, nothing new on race day applies to this week as well – don't try yoga if you've never done it before – stick to something you're familiar with. If you want a massage, try to go somewhere you've been before, and do not get one less than 48 hours before the race in case it causes soreness.

BE DELIBERATE ABOUT CARING FOR YOUR MENTAL HEALTH

This one is huge, but also specific to each person. Nerves are normal. Excitement is great! But mental stress also translates to physical stress responses, and so you want to mitigate that effect by being proactive about calming your mind.

Breathwork, meditation, journaling, building your race day playlist: these are all ways to set intentions for peace around this event. But a manicure or a date night with a close friend may be just as powerful – you have to make sure to do you here.

RACE DAY CHECKLIST

This is by no means an exhaustive list of things to do before your race, but certainly includes some of the more important ones.

- **Plan out your Saturday**

- What are your meals going to be?
- When are you going to go to bed?
- What is the last thing you want to do before bed? (Some Hurdlers mentioned taking a phone/social media break in the evening; others spend time journaling about their marathon journey.)

- **Plan out your Sunday**

- Whether you are traveling with a team or not, make sure to give yourself extra time in the morning to travel. Make sure to check out possible road closures.
- Count backwards from the time you plan to leave to figure out when you should eat breakfast, when to drink coffee, etc.
- Plan to wear extra layers to the start; there will be donation bins to discard them in before you start running.

- **Set your intentions**

- Reflect on why you decided to apply for this team.
- Set a mantra for the race (Examples include: a line of encouragement, a motto from your previous long runs, names of loved ones to whom you're dedicating this race.)

- **Convey your race plan to your family and friends**

- Send your bib number out.
- Tell them where you want them to be instead of going off of their convenience.
- Do you want them to text you while you're running?
- Do you want them to bring anything? Bottles of water are highly recommended.
- Plan out a post-race meeting spot and have them bring shoes/food/clothes.

- **Random things to not forget:**

- Write your name on your bib so that strangers can cheer for you.
- COUNT your gels and electrolytes and bring extra if you can.
- Trim your toenails at least a few days before the race, not the night before. Do not get a pedicure - you'll need those callouses!

- **Study the course map**

- Mantras and strategy notes can be written on your arm.
- Note where gels are offered, and which stations will NOT have electrolyte drinks.

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UNLOCK YOUR RUNNING POTENTIAL

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