



# Lean In for Speed

ONE SIMPLE TWEAK COULD MAKE RUNNING SO MUCH EASIER—AND MORE ENJOYABLE.

BY ASHLEY MATEO

**BEFORE I STARTED RUNNING** a few years ago, the farthest I ever really ran was precisely 13 steps down a vault runway. I was a gymnast for 17 years, and all I cared about was generating enough speed and power to flip over something while still having enough control to stop—if necessary—within a nanosecond of plowing into the vault.

I didn't realize how much my gymnast background affected my running form until I started training for half and full marathons. Some coaches I worked with told me I run tall, others just straight-up told me I run like a gymnast, and I took that as a compliment at the time. I do run tall: chest upright, chin tilted slightly up, spine almost perpendicular to the ground. And it never bothered me; I've finished 12 half marathons and three marathons, generally improving my time with each race.

It wasn't until I was training for speed during a half-marathon block that a friend and running coach said to me, "Wow, you run really tall. Aren't your quads exhausted?" I realized my form might not be a fun quirk, but it might actually be holding me back. This coach suggested I try leaning forward a bit when I run, as shifting my weight could make running a little easier for me. Since I was shooting for a PR, I figured I'd take any advice that could get me to that finish line faster, and in the process, I spoke with some experts on the topic.

## Why You Shouldn't Run Tall

"Run tall" is a common coaching cue, but it's a vague direction that can be easily misconstrued. I always took "run tall" to literally

mean run upright, which is why I never thought my form was that bad. The more upright you are, the taller you are, right?

Here's why that's not doing you any favors: Running is a two-part motion. "You want a little bit of braking force to catch your balance, and then you want to be able to generate force to propel you forward," explains Reed Ferber, Ph.D., professor at the University of Calgary and director of the Running Injury Clinic. If you're running too tall, your feet will hit the ground too far in front of your pelvis and center of mass—also known as overstriding—which generates braking force and slows you down.

"Think of running as a shock wave that's going to travel up your body," Ferber says. "Your foot passes that shock wave on to your knee, then your hips, then your spine. Your spine is supposed to absorb most of that force, but if it's too stiff and upright, it can't absorb enough. So your knee undergoes unnecessary stress, and your hamstrings and glutes have to work overtime to absorb that stress."

Having to create that extra forward propulsion can also beat up your ankle joints, says Danny Mackey, head coach of the middle-distance runners of the Brooks Beasts Track Club. "It's more force than the joint is intended to handle," he explains. Not to mention the unnecessary force this places on your poor quads: "When your leg muscles have to generate more force to propel you further, it fatigues your quads even faster," Ferber says.

### What to Do Instead

Running form is unique to every runner, but as a general rule of thumb, Ferber recommends that you run with a slight forward lean. Imagine you have a string attached to your sternum, and someone is standing in front of you, pulling that string so your chest comes slightly forward. "What that will do is pull your shoulder blades upright

a little bit, out of that hunched posture we get from being on our phones and computers all day," Mackey says. From that stance, your body should appear as one long line from ankle to shoulders, at a slight angle to the ground.

It's almost like a controlled fall; you want to lean forward enough that if you were stop suddenly, you might tip over. "You're putting yourself in a slightly unstable position to maintain forward propulsion," Ferber explains.

What does that look like? When you run, think of your pelvis as your center of mass. To move that mass efficiently, you want your foot to land just under your hip, Mackey says. "That center of mass should be out in front of you so your momentum is going forward, then your feet grab the ground and pull it quickly underneath you with each step versus your feet stretching way out in front of you," he says.

"Our bodies want to be efficient," Mackey adds. "If you start running upright, you've got to create propulsion, and that's really metabolically costly." But if you lean in, you just might save yourself some energy, some pain, and some seconds at the finish line.

### How to Train Yourself to Lean In

Running mechanics isn't something you can relearn overnight, but research shows that you can change the way you run in six to eight weeks, Ferber says. "This is not a dramatic thing; it's really subtle, and it needs to be done gradually."

Simple running drills—A Skips, B Skips, ankle, calf, and knee dribbles, high knees, butt kicks—can reinforce movement patterns. "The name of the game is repetition," Mackey says. Two sets of 20 meters for all of those should take you less than six minutes as a warmup. Then, when you're running,


## 3 Quick Tips on How to Check Your Form

IF YOU'RE NOT RUNNING WITH SOMEONE, IT'S HARD TO KNOW IF YOUR FORM IS OFF. THESE TIPS CAN HELP:

Video yourself:	Check your race photos:	Run downhill:
Record 60 seconds, then watch your posture, arm swing, kick, and where your foot hits the ground to identify weaknesses.	Compare pics from the beginning, the middle, and near the end of the race to see when the fatigue hits and how it affects your stride.	Gravity forces you to naturally lean, so logging extra downhill miles will remind your body how running at a slight angle should feel.

he suggests checking in every time you hear your watch beep at a mile: How's my form doing? What are two things I need to work on? "You pay attention as long as you can, and then you check in again," he says.

Mobility and flexibility work is also key: "If you're restricted, if you have supertight hamstrings or ankles, you're not going to be able to get that lean all the way from your ankles to your shoulders—it's going to break down somewhere," Mackey says. And, of course, any core work that strengthens your gluteus medius, gluteus maximus, and transverse abdominals is going to help strengthen your spine and help your body better handle the force generated by running.

It takes time, but your body does adjust to these changes. As I kept training for that half marathon PR, I started being more aware of my body and where my feet were landing. Every time I caught myself running "too tall," I made minor tweaks and carried on. Soon enough, my speed picked up, and my legs felt less tired on longer runs. On race day a few weeks later, the miles felt easier, and I clocked some of my faster splits toward the end of the race. As I crossed the finish line, I realized I had PRed not by seconds, which was my goal, but by five whole minutes. If that's not proof that one tiny change can have big results, I don't know what is. 

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**YOU'RE PUTTING YOURSELF IN A SLIGHTLY UNSTABLE POSITION TO MAINTAIN FORWARD PROPULSION.**