

July/August 2016 *Wingfoot* Spotlight: Beat the Heat Like a Pro By Robbie Harms

Six days before the United States Olympic Team Trials for the marathon in mid-February, Sallie Post and Bridget Lyons arrived in Los Angeles.



Post and Lyons, two members of Atlanta Track Club Elite, both live and train in Georgia, where, of course, February temperatures are much milder than those in the sun-soaked West Coast city. The difference between the low temperature in Atlanta when they left and the high temperature in Los Angeles when they arrived was more than 60 degrees.

On their first day in L.A., Coach Andrew Begley had the runners do a three-mile tempo at marathon pace. "It should have been easy," Post said. It was not.

Lyons said she felt parched just from three miles. Post said she felt like she was sprinting. The marathon, always unforgiving, loomed in less than a week. How were they supposed to run 23 more miles, at this pace, in this heat?

Begley called them, "A little bit freaked out."

"He is very correct about that," Post said. "I felt terrible."

Here were two elite marathoners, experienced and near peak physical shape, having significant trouble with a three-mile run. The heat is so cruel.

When Training Gets Tough

"I don't think I've ever really liked the heat," Lyons said, providing a thesis statement of sorts for most runners. It is relentless and draining and frustrating. As we progress through the summer months, it's once again sprung to the front of runners' minds: how to fight it, how to train in it, and, perhaps, how to avoid it completely.

That's what Lyons remembers doing when she was a student and runner at Greenbrier High in Evans, Georgia. The team would meet at the high school at 5 a.m., hours before the first bell rang, to do mile repeats while the sun was still asleep, savoring and exploiting those precious hours of cool darkness.

When she was at the University of Georgia, Lyons said it was more of the same: The Bulldogs would hold practice before 6 a.m. during the hot months and listen to the words of the nutritionist, who urged them to take in enough fluids.

Post, meanwhile, didn't fully grasp the callousness of heat until college, when she stayed to take summer classes one year at William & Mary. She was, at the time, someone who could not get out of bed before 10 a.m. and so ran in the middle of the afternoon in Williamsburg, Virginia.

But one day, she said, she started "itching uncontrollably" during a run. "I had no idea what was happening," Post said, and later learned that she suffered a heat rash. She then started doing her runs at 7 p.m.

Post also used to avoid eating or drinking anything fewer than two hours before running because she feared getting a cramp. The heat, again, changed her ways: She now carries a handheld Nathan water bottle for any run more than four miles.

Getting Acclimated Before Race Day

This brings us to Los Angeles, in the second week of February, when the high temperatures hovered in the upper 80s, according to weather.com.

Begley had taken his runners out almost a week before the race for heat acclimatization, which has several benefits for athletes.

According to a 2015 paper in the *Scandinavian Journal of Medicine and Science in Sports*, heat acclimation causes the body to make certain biological adaptations, like “improved sweating, improved skin blood flow, lowered body temperatures, reduced cardiovascular strain, improved fluid balance, altered metabolism, and enhanced cellular protection.” In other words, training in the heat before racing in the heat can boost performance and mitigate the risk of heat illness.

And not only were the runners in Los Angeles soaking in the heat, they were making themselves even hotter.



“We tried to wear as many layers as possible when we were running,” Post said.

Instead of simply a sports bra and shorts — their normal attire for running in hot weather — they would put on a long sleeve shirt for warm-ups and keep a shirt on during the run “to practice being uncomfortable,” she said. Even just walking around the city, they’d wear a light sweater. “And it was really hot,” Post said.

Meb Keflezighi, who finished second in 2:12:20 in the marathon trials to earn a spot on the U.S. Olympic Team, said he took extra steps to prepare for the heat.

“Growing up in Southern California, you know that February can be unpredictable,” Keflezighi wrote in an email. “During my preparation for this race I included treadmill runs with extra clothing. This isn’t usually part of my preparation.”

Jared Ward, who finished third in 2:13:00 to earn the final spot on the Olympic Team, also said during training he’d throw on a long sleeve shirt when running on a treadmill, or wear extra layers when running on an indoor track.

“It was a hard one,” Ward said of the trials, “because I was training in Utah in the middle of winter getting ready for it.”

The biggest thing Ward said he did to prepare for the heat, though, was “just practice pushing fluids and nutrition during our long runs and long intervals,” so he could get used to the feeling of running with water and glucose in his stomach. During the race, he could drink five to six ounces of fluid and be comfortable running with it bouncing around in his stomach afterwards.

And this was all before the race. By the 10 a.m. start, temperatures were in the 60s. They spiked up to 82 by the time they crossed the finish line.

Changing Strategies

Lyons called it “brutal”; Post called it “grueling.” There were no clouds, the course was mostly asphalt, the sun loomed above. Racing strategies changed.

“I considered shortening my warm-up but stuck to my normal routine,” Keflezighi wrote. “During the early portions of the race my strategy was to conserve as much energy as I could. I like to run out front but stayed in the pack due to the conditions and waited for others to make their moves instead of being the one to make the move.”

“You just play everything a little more conservative in the heat,” Ward said.

“My race plan kind of went out the window,” Post said.

Lyons and Post took their personal bottles of water mixed with electrolytes — and a salt stick to replace the different salts lost in sweat — every three miles. Post said she would grab other, plain bottles of water, unscrew the cap, and pour it over her head. Lyons said her hands were too sweaty to do that, and she saw several full, unopened bottles strewn across the course, presumably from other runners who experienced the same difficulty. USATF rules prevent volunteers from opening the athletes’ bottles.

The race had supplied sponges but soon realized they had soap in them, so it instead supplied cool towels for the runners to help keep their core temperature down. “Once you get overheated,” Ward said, “you’re in trouble.”

Lyons and Post stayed out of trouble, mostly. Though the second half of the race, for Post, was simply trying “to stay upright and not fall over,” she finished in 2:48:37. Lyons finished in 2:45:38.

Still, months after the race, the heat from that February day stuck with them.

“It was just too hot,” Lyons said.

“Like running through a desert,” Post said.

The Humidity Factor

Perhaps the harshest thing about this is that there is an environmental condition worse than the heat, another word that begins with an “h” and induces some combination of shudders and dread when it reaches runners’ ears.



Yes, every runner and coach interviewed for this story said that they would rather deal with heat than *humidity*.

“I would choose heat,” Keflezighi wrote. “There are ways to mitigate vs. the heat (clothing, water, time of day) but there are [fewer] ways to mitigate humidity. I think that racing in humidity is also tougher than racing at altitude. At least I know through practice how to regulate pace at altitude. It is tough to prepare to race in humidity.”

The science is simple: when you train in the heat, your

sweat evaporates, cooling your body. When you run in the humidity, that doesn't happen which leads to, as Post put it, "this bad cycle of not being able to cool down."

"With the heat," Begley said, "if you hydrate properly, you can get through it."

How else can runners — at any level — get through the heat and humidity? Each of the runners interviewed had their own tips for training.

Keflezighi suggested altering your running schedule. "If possible with work and personal schedules, it will help to run in the middle of the day," he wrote. "Most people are morning runners like I am. If that's the case and you can't run at other times of day, then it can help to wear extra clothing during your morning runs."

Begley recommended acclimatizing — however you can — to let your body get used to the racing conditions. Ward, drawing on his own experience training for the trials, suggested taking in fluids while running if you're training for a longer race so your body gets used to the feeling.

Then, of course, there is hydration before race day. Begley advised to start hydrating two to three days before a race and "when you're drinking those fluids, make sure it's not all water." Drinks with electrolytes are essential for runners.

"Drink water even when you're not thirsty," Post said, adding that there is no shame in setting out water stops or carrying water with you during runs.

But perhaps the most important piece of advice is this: "Listen to your body," Post said. If you're dizzy or nauseous, she said, that's "not a good sign. You should probably stop what you're doing."

Because — and Post and Lyons and so many other runners can attest — the heat is so cruel.