

FASTER, STRONGER, BETTER

WHAT WOULD IT TAKE TO REACH YOUR TRUE ATHLETIC POTENTIAL? ONE WEEKEND WARRIOR HEADS TO THE U.S. OLYMPIC TRAINING CENTER TO FIND OUT. BY JAYME MOYE

I'm running as fast as I can on a treadmill in a bright white room at the U.S. Olympic Training Center in Colorado Springs. A touchscreen by the door controls the climate and altitude effects, simulating the conditions of Mount Everest's Base Camp II at 21,300 feet or the 90-degree heat and 75 percent humidity of the Peruvian Amazon. Every three minutes, I hop off the belt so a sport physiologist can prick my finger to extract a drop of blood. A long glass wall allows tourists and sports scientists a view

of the sweaty human lab experiment inside.

The High Altitude Training Center, as this space is called, is one of only a few in the world. Access is reserved for Team USA athletes, many of whom compete in the World Cup and the Olympics. The center itself—a 35-acre complex that houses more than 500 athletes and coaches, with a state-of-the-art sports medicine clinic and facilities for fencing, gymnastics, triathlon and wrestling, among others—is closed to the public except for tours and special events. And me.

PHOTOGRAPHED BY NIGEL COX

JUMP-START YOUR FITNESS

Great athletes are born—and also made. To get there, you have to find your "optimal push."

SNEAKERS APL, \$150; APLRunning.com



Not that I have anything in common with these Olympians. I regularly jog the scenic trails around my home in Boulder, Colorado, and at 39, I've run my share of road races. But I've often wondered what kind of speed I could dial up if I *really* pushed myself and adopted, say, the workout of four-time gold-medal sprinter Allyson Felix. Now, I'm about to find out. For eight blistering weeks, I'll have access to tools and training techniques not available to most ordinary mortals. This lactate threshold test, administered by Lindsay Hyman (the aforementioned sport physiologist), is a key part of my program. LT is used to gauge fitness by measuring the intensity at which muscle-paralyzing lactate starts to accumulate in the bloodstream—and is performed on Team USA's runners and triathletes before each season. In two months, we'll check my results again, before I put my newfound fitness to the test in a 5K. I may never earn a spot on a podium, much less a cereal box, but I'm going for my own gold: a personal best.

BUILT TO WIN

During my first visit to the center, Team USA Swimming is here for a three-week camp. Some wrestlers, boxers and track athletes are here, too, and in the sports medicine clinic I spot Brigetta Barrett—an Olympic silver medalist in the high jump. She's unmistakable, standing a rosy 6 feet tall with a mass of long braids. Surrounded by these amazing specimens of human performance, the fittest of the fit, I'm reminded that more than just their training sets them apart from the rest of us.

Genetics, or innate ability, plays a significant part in performance, though no single known gene

raise our intensity level and find our "optimal push."

Looks like I'll be pushing extra hard: Hyman reads my blood test and says that my LT reflects roughly a 9-minute-mile pace—any faster and too much lactic acid would build up in my muscles to keep going. But I'm hoping to break 25 minutes in my 5K, which means running 8-minute miles. To get there, I'll need to improve my efficiency with a running coach. I'll also follow a strength and conditioning program, critical to all high-performance sports, according to physiologist Amanda Wittenmyer.

Wittenmyer and I traverse the mammoth new 37,000-square-foot training space, whose floor-to-ceiling windows tint automatically to manage solar heat and glare throughout the day. The turf that separates the equipment from the 125-meter, three-lane running track simulates the feel of natural grass. The track is made of Mondo Super X, the same surface that's been used at the Olympics. At the west end of the building on "the hill"—a 19-meter sprint incline set at a 30-degree angle—Team USA Boxing is making a ruckus. I watch them do a series of sprints up the steep ramp, heckling and laughing. 2012 Olympic gold medalist Claressa Shields cheers them from the top. When she spies me, she shouts, "How you doing?!" and I walk a little taller. Maybe I've just passed for an actual athlete.

We reach the weight area, containing a reported 19,200 pounds of barbells, weight plates and dumbbells. I spot 11-time Olympic medalist Ryan Lochte at the squat rack doing dead lifts. ("Swimmers are pec- and lat-dominant, so we work on strengthening their backs," Wittenmyer notes.) My fantasies that he, too, has noticed the new girl on the floor fade fast as he completes his set and racks the weight without so much as a glance in my direction.

Wittenmyer says she takes a hyperpersonalized approach to designing strength programs based on each person's sport, and also on barely perceptible weaknesses that could hold an athlete back. When I do single-leg vertical jumps, she spots an imbalance—my right leg is stronger than my left. Watching me do a deep squat, she notes that I have good hip, ankle and thoracic spine mobility (thank you, yoga), but my single-leg squats reveal that I am quad-dominant, meaning the fronts of my thighs are more developed than my hamstrings and glutes. Last, I do the "beep test," which involves sprinting back and forth between two cones when a timer goes off. The beeps start coming rapidly, and soon I can't shuttle between the cones fast enough to keep up. I excuse myself to the restroom, where I barely make it before burping up vomit into the sink.

Wittenmyer's conditioning program calls for three workouts a week, to be completed at my (decidedly unelite) local gym. These will help strengthen my core, a runner's source of stability,

and correct imbalances—for instance, drills like lateral squats can complement the forward motion of the running stride.

Stride, also known as gait, is key to running efficiency, and the center has some sophisticated tools for analysis, including the Noraxon treadmill. In yet another gleaming lab, a biomechanics grad student affixes three sensors to my legs and along my spine. Within seconds, my skeleton avatar appears on a big screen. I hop on the treadmill and watch my skeleton running from three angles, *Trom*-like. Under the platform, thousands of sensors generate a pressure map of my foot strike.

Dustin Nabhan, United States Olympic Committee associate director of clinical research and multidisciplinary care, reviews my results in a 21-page report. It details key gait parameters, including side-to-side force output and joint range of motion while running. Nabhan says he's looking for symmetry and gait consistency. "We had the world's best miler in here, and her pressure readout was perfect," he tells me. While my form isn't perfect (I overpronate), I don't have any glaring asymmetries that would set me up for injury. If I focus on form drills with my running coach, Nabhan says, I'll be able to run faster without using more energy. Physiologists alluringly call this phenomenon "free speed," and I'm ready to collect on it.

CHASING GLORY

I need a coach, but I can't find a USA Track & Field pro in Boulder. I turn instead to Melody Fairchild, the first female high school athlete to break 10 minutes for 2 miles (9:55.9), who has coached several

junior champions. Straight up, she pronounces my 25-minute goal a stretch, but not impossible.

To get there, Fairchild creates four weekly running workouts. She notes that most amateurs train at an unproductive pace. By that she means a pace that improves neither the aerobic system (endurance) nor the anaerobic system (top-end speed). Instead, most of us run at a pace that's challenging enough to stay fit, but not so hard that we're really pushing ourselves. It's a dead zone, physiologically speaking. You build an aerobic base by running slowly over a period of time, while anaerobic improvements come from running fast. Distance runners need both. "You can't run fast without running slow," she says.

Fairchild structures my program to spend time in each zone, so I'm usually running either very fast or very slow. My Wednesday run, for example, starts with a gentle 10-minute warm-up, followed by 20 minutes of alternating fast and slow running for 1 minute at a time, then finishing with a 10-minute cooldown.

We also work on my form, as Nabhan had suggested, fixing imbalances and building efficiencies, like learning to bend at the ankle and "fall" into my stride. She teaches me to unlock my whole rib cage to catch a deeper breath. I imagine lifting my chest and a line of energy radiating from my back, like wings.

The first two weeks of training are the toughest. Doing three days of strength and conditioning on top of four days of running is brutal—try doing a split squat on legs shredded from overuse. I feel tired all the time and sore all over. And hungry.

So hungry, in fact, that I return to the center to meet with senior sport dietitian Alicia Kendig. She says I need to boost

FASTER, STRONGER, BETTER > 108

AFTER EIGHT BLISTERING WEEKS, I'LL GO FOR MY OWN GOLD: A PERSONAL BEST.

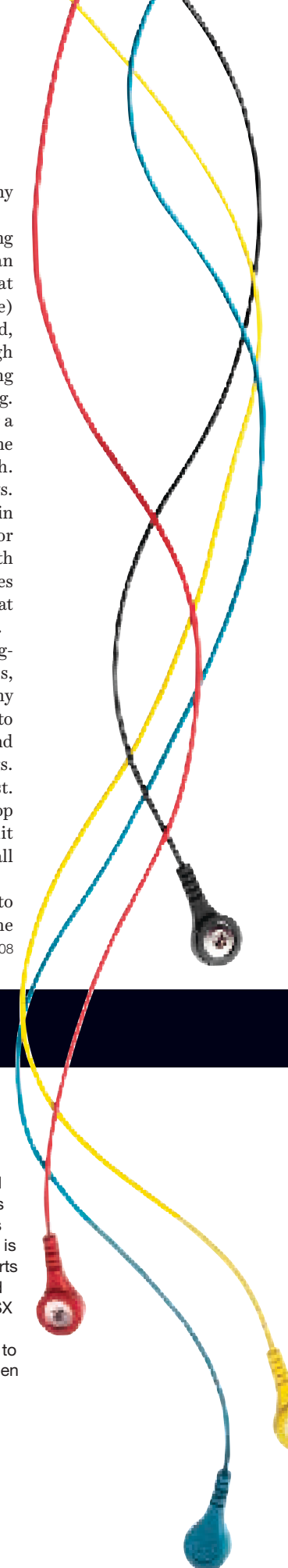
makes someone a brilliant athlete, according to David Epstein, author of *The Sports Gene*. Barrett's long legs and lean physique are perfect for catapulting her vertically, just as swimmers' long torsos help them power through water and sprinters' fast-twitch muscles give them explosive speed. Beyond body type, though, athletes can have other innate advantages, such as aerobic capacity (the oxygen your body uses at top effort, called VO₂Max, key in endurance sports). "In the thousands of VO₂Max tests I've conducted here, most endurance athletes had values above or highly above average," Hyman tells me. But aerobic capacity—like many other traits, from speed to learning the cues to hit a ball—is trainable, even for the average athlete. In fact, studies show VO₂Max can be boosted by up to 50 percent, according to Epstein. To improve any of these traits, he says, we need to

TRAIN LIKE AN OLYMPIAN

FOUR TOOLS AND TESTS TO HELP YOU REACH YOUR PERSONAL BEST

- 1 Gait analysis**
This is a treadmill test that offers a video snapshot of your running form to help reduce injury risk and increase speed. Many specialized running stores now offer it, as do performance gyms like New York City's Mile High Run Club. \$199; MileHighRunClub.com
- 2 Body composition**
A better gauge of fitness gains than weight alone, a body-composition test offers a peek into your lean muscle mass ratio. These evaluations are available at some high-end gyms and spas, like the Vail Vitality Center in Colorado. \$45; VailVitalityCenter.com
- 3 Muscle balance**
Ongoing muscle imbalances can set you up for injury. Keep yours in check with Athos's new tanks and capris, which use built-in muscle-analyzing sensors that link to a Bluetooth-enabled device to monitor your effort. \$149 to \$348; LiveAthos.com
- 4 Lactate threshold**
This aerobic fitness test usually requires drawing blood and is offered at most sports med facilities. Avoid needles with the BSX Insight, a sock with embedded sensors to monitor blood-oxygen levels so you can train in the zone for that next marathon or mudder. \$300; BSXInsight.com

PROP STYLING: JAFED LAWTON AT APOSTROPHE.



SHE'S THE ONE

CONTINUED FROM 80



she says. But she has grown to love her industry—the travel, the chance to meet and learn from so many people at the top of their game. As it turns out, modeling is the perfect career for someone with Kloss's appetite for learning. "Every spare minute I have, I'm diving into other projects," she says. "It's been fulfilling to build things while simultaneously walking runways."

This fall, Kloss will enroll in NYU's Gallatin School of Individualized Study, which appeals to her because she can design her own curriculum. "My ambition is really just to study things that I'm curious about," she says. "I want to study computer science. I want to study psychology. I'm fascinated by space. I

want to study art history."

Also on her to-do list: expanding the Karlie's Kookies brand. When I suggest she sell them to Whole Foods, she morphs into the pragmatic CEO of Karlie Inc. "In order to do that, we'd have to find a good manufacturing facility. Trust me, I've already mapped it all out in my brain. I actually had students at Harvard Business School do a field study."

Kloss's boundless energy and ambition are legendary among those who know her. Friend and writer Derek Blasberg offers a story about a night earlier this year: He and Kloss were in Paris, and a snowstorm headed for New York caused most flights home to be canceled. Kloss was booked on a *Vogue* shoot the next morning in New York City but still had to walk the Versace couture show that night. "After the show, Donatella hosted a dinner, and then we went dancing," says Blasberg. "And then Karlie went straight to the airport, with her makeup still on, to get the last seat on the last plane to reach New York before the blizzard." Needless to say, Kloss made it to her shoot.

Her spring-into-summer will end up being a blur of activity. She'll attend the White House Correspondents' Dinner as Katie Couric's date, gleefully updating her Instagram followers on the #NerdProm. She'll light up Cannes in a slinky, sequined Versace number, then jet home to St. Louis for a weekend with her family, then visit Montauk, New York, with Kushner. Kristine says she still gets an occasional 3 A.M. call from Kloss, alone in a hotel room somewhere, feeling homesick. But for the most part, she lives happily in motion, a person determined to squeeze every last ounce of experience from the opportunities she's been given.

It's getting late, and Kloss is scheduled to Skype with her sisters, after which she'll fit in a quick run before her SELF shoot tomorrow. "It really is such a release for me mentally," she says. "That's why I'm so passionate about health and fitness." She swings her sneakers over her shoulder—and then, flashing one last irresistible smile, she's off. You are rooting for her, wherever she's going. ●

FASTER, STRONGER, BETTER

CONTINUED FROM 97



my daily protein intake now that I'm exercising at endurance-athlete levels. That is, 1.2 to 1.4 grams of protein per kilogram of body weight, or 63 to 74 grams a day. (I'd been getting just half of that.) She urges me to add a daily protein bar and more fish to my diet.

While I'm there, Lindsay Hyman lets me try the AlterG Anti-Gravity Treadmill, which is used to prevent injury when a runner increases her mileage quickly. The AlterG resembles some kind of space pod with a chamber for the lower body;

Hyman zips me into the pod, and the chamber fills with air. I slowly start to jog when she presses a button that removes 10 percent of my body weight. Suddenly, my sore legs move faster. For kicks, she cranks it up to 80 percent weightlessness, and it's like I'm running on the moon. I feel like I could go on forever.

Back at home, past the halfway point of my training, my body is adapting. I'm no longer sore or tired. While my diet has improved, I find I've simply stopped drinking wine—as if my body just knows what it needs to be a high-performance machine.

I can tell I look more toned—and a final body-composition test confirms that my body fat has decreased by 2 percent. My LT improves by 10 seconds, and my heart rate is five beats lower at LT. The numbers show I'm getting fitter. But will it be enough to reach my goal?

On race morning, I arrive an hour early, as instructed. I start my warm-up at

8:20, finish at 8:40 to hit the toilet, then get to the start at 8:50. I bounce from one leg to the other to keep my heart rate up.

The race starts fast, as Fairchild said it would, and I settle into an 8-minute-mile pace. I clock mile 1 at 8:02. Problem is, I have 2.1 miles to go. Apparently the LT test doesn't lie. I can't get my heart rate under control; my legs and lungs burn, and I finish mile 2 in 8:22. I dig deep to find that reservoir of free speed in mile 3—focusing on my form, keeping my chest open, imagining wings behind me. I fly across the finish line in 25:54.

Technically, it's a fail. (Any true Olympian would regard it that way.) But I'm far from bummed. I'm in the best shape of my life. I just set a personal record. My finish also put me in the top 10 of the 313 women in my age group after just eight weeks of training.

That podium is almost within reach. Just give me eight more weeks. ●