



Breaking Barriers

AMPUTEE AMY PALMIERO-WINTERS TAKES ON WESTERN STATES 100-MILE ENDURANCE RUN

At last May's The North Face Endurance Challenge 50-miler at Bear Mountain, New York, 37-year-old Amy Palmiero-Winters cautiously picked her way over the loose boulders. Stepping onto a round rock with her right foot, she drew her other leg forward and placed the wedge of rubber serving as her left foot atop another rock, flexing her knee as jarring forces shot up her carbon-fiber prosthesis and through her left side.

The \$26,000 prosthesis' componentry may be state of the art, but still can't provide the intuitive proprioception of a flesh-and-blood ankle joint and calf muscles that flex and twist. "Amputees exert far more energy because of their missing joints," says her prosthetist, Erik Schaffer. "The abuse running places on Amy's body is mind boggling. It's like she's running a race and half."

When she registered for Bear Mountain—her first trail race—the organizers told her, "There's no way an amputee can do this race." Such skepticism only amplified her determination.

And while the uneven terrain, exposed traverses and rocky stream beds were much harder than she'd anticipated, Palmiero-Winters finished in 12 hours 59 minutes, nearly four hours after women's winner, Nikki Kimball. "She is a tough, smart racer," says Kimball. "And truly, aren't those the characteristics that make a successful ultrarunner?"

Proving "it" could be done has been the theme of Palmiero-Winters's running career, since a 1994 motorcycle accident mangled her left foot, requiring the removal of several bones in her foot and ankle. Anxious to resume running (she

had run a 3:16 at Boston before the accident), Palmiero-Winters crammed her now size 4.5 foot (she was normally a size 7.5) into a tiny shoe and finished Ohio's Columbus Marathon in 4:05.

Over the next several years, Palmiero-Winters endured 27 surgeries attempting to improve the fused ankle and atrophying foot before doctors finally suggested below-the-knee amputation. "When they initially talked about amputating it, my reaction was, 'No! I'm a runner. You can't do that!'" she says.

Stepping Ahead

After conceding to the amputation in 1997, Palmiero-Winters received a prosthesis designed for walking. It didn't stop her from running, even though it felt "like running on a stick."

Then in 2006, she found Schaffer's company, A Step Ahead Prosthetics, in Hicksville, New York, and was fitted with a curved, flexible carbon-fiber running prosthesis. With it, she started training 60 to 70 miles a week and a few months later, set a P.R. of 3:04 at the Chicago Marathon. Since then, she has set 12 amputee world records from the 5K to the Ironman Triathlon.

At A Step Ahead, Palmiero-Winters had found the supportive "family" and can-do attitude she had been seeking. "I was surrounded by active people with goals, whether they had prosthetics or not," she says. Profoundly affected by the company's commitment to help clients "live life without limitations," the single mom quit her job as a welder and moved with her children Carson, 6, and Madilynn, 4, to Hicksville to become the program director for Team A Step Ahead, whose members of all ages pursue sports—from martial arts to skiing to rock climbing—up to an elite level.

While her accomplishments prompt able-bodied people to rethink amputees' capabilities, her passion lies in demonstrating to fellow amputees what is possible. "I'm just an athlete and a mom with goals like everyone else, but I face different obstacles," she says. "I want to show that amputation is not an excuse for not doing something."

Palmiero-Winters' increasingly ambitious goals and race results earned her an ESPY nomination (awarded to outstanding athletes by cable network ESPN) and *Runner's World* Hero of Running dis-

inction in 2007, she was named USATF Runner of the Week last October, and the *Washington Post* listed her among the Runners of the Decade, along with ultrarunner Scott Jurek and 24-time world-record-holder, Haile Gebrselassie.

While it's easy to measure her success by her race results, far more impressive is her mental toughness.

For example, last July, in California's Death Valley, Palmiero-Winters paced her friend Dave Balsley during a solo Badwater Crossing a week after the official 135-mile Badwater Ultramarathon had taken place. Running well despite the 127-degree heat, she was unaware that inside the socket, her residual limb was literally "baking." After 67 miles, when she finally paused on the roadside to address the discomfort, "We pulled the suction liner off and my skin basically went with it," she reported on her blog.

Palmiero-Winters continued to mile 94 before finally heading to the hospital to have her second- and third-degree burns treated at the hospital, some of which have yet to heal. Nevertheless, she registered for this July's Badwater Ultramarathon. "Amy has more gut and drive than anyone I've met," says Schaffer. "She has an ability to remove pain from her mind and focus on going forward no matter what."

But Palmiero-Winters remains modest. "I hurt, I bleed, I fall. I am not superhuman. Nor am I disabled," she says.

Unfair Advantage?

After Bear Mountain, Palmiero-Winters competed in the remaining four Endurance Challenge 50-milers, finishing as high as fourth woman at the Madison, Wisconsin, event. But more important than her place, she was thrilled to score the sub-12-hour finishing time she needed to qualify for June's Western States 100-Mile Endurance Run in California.

To prepare for Western States, last October, Palmiero-Winters entered her first 100-mile trail race, the Heartland Spirit of the Prairie 100-miler in Cassoday, Kansas. She won in 18 hours 54 minutes.

Such performances prompt some people to question whether the lightweight prosthesis gives her an advantage. "I don't see them running on their kneecap," she says, explaining that her patellar tendon, which connects the patella to the tibia, is her left leg's only (and insufficient) impact-absorb-

ing mechanism apart from the carbon fiber's slight give.

Over the years, the stress of running (amplified by the prosthesis, which essentially acts like a tuning fork sending forces throughout the body) has caused nagging lower-back pain. "I come down harder on my right side, so I started trail running to reduce the pounding," she says.

But her off-road ambition has presented new challenges. With her current foot design, Palmiero-Winters must sidestep downhills because she lacks a heel. And, as she learned at January's Race to the Future 24-hour ultramarathon in Glendale, Arizona, held on a tight loop measuring just six-tenths of a mile, the rigid prosthetic foot doesn't "corner" well, further jarring her gait.

Amazingly, Palmiero-Winters completed 217 laps to cover 130.4 miles—14 miles more than the top male and 36.5 miles more than the next woman. That head-turning victory earned her a spot on the able-bodied U.S. national 24-hour ultramarathon team that competed at the world championships in Breve, France, in May.

For the world championships and other upcoming races, Schaffer has developed custom prosthetics for each. In the lab, he and her coach, Bob Otto, a professor of human-performance sciences at Adelphi University, have Palmiero-Winters run with the prototypes on a treadmill as much as 20 to 30 miles a day to determine the most efficient designs. Her Western States prosthesis is the heaviest by a half pound (weighing 3.5 pounds) to handle the forces of downhill running.

While Palmiero-Winters will always be at a physical disadvantage, her team of experts aim to reduce those disadvantages, no matter how ambitious her goals become. "We created the beast, now we have to keep up with it," says Schaffer.

And then, of course there's her unbreakable spirit. "Some of her competition may be in better condition and have the advantage of two limbs, but when it comes to mental fortitude, I put my money on Amy," says Otto.

When asked about her goal for the highly competitive Western States, she responds, "At the end of the day, I have two little kids at home who think I'm the world's fastest mommy. As long as I do my best that day, that's all I want." ■



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