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Pushing Past the Pain of Exertion

By SARAH BOWEN SHEA

LAST November, Kara Goucher ran the ING [New York City Marathon](#), her first 26.2-mile race. Even though she was an Olympian who had placed 10th in the 10,000 meter race in 2008 in Beijing — running the equivalent of 6.2 miles — she felt fear.

“I was really scared I wouldn’t be able to handle the pain for that long,” said Ms. Goucher, 31, who had never run more than 18 miles at a time before training for the marathon. “Now I was asking myself to run eight miles farther, a lot faster. It was daunting.”

The pain hit at about the halfway point, as she was running with the lead pack of women. “It came into my consciousness how hard I was running and how much it hurt,” she said. The extreme discomfort, which she calls “cramping,” made her contemplate dropping out at around mile 17, but she persevered — indeed, she placed third among women.

No matter how fast they run or how much experience they have, most runners can relate to Ms. Goucher’s fear of exertional pain and concern about what to do when it hits during a race. This type of pain causes extreme discomfort, but can be tolerated using mental strategies and training techniques, doctors and athletes say.

To strengthen her resolve, Ms. Goucher repeated a mantra she had developed with her sports psychologist: be courageous. And she broke the race down into blocks, telling herself at mile 20 that she only had a 10K left to run. Then she convinced herself to “survive to each mile marker, knowing I could get another mile out of myself.”

Doctors and athletes emphasize that the type of pain Ms. Goucher endured is entirely different from the acute pain of an injury, which should compel a runner to stop. “If an individual has shin splints, a broken bone or a bad back that pain becomes very different from exertional cues,” said Edmund Acevedo, a professor of health and human performance at [Virginia Commonwealth University](#) who has studied ultramarathoners. “Exertional pain is part of going out there and doing the best you can.”

There are several ways to train for pain. Pete McCall, an exercise physiologist with the American Council on Exercise, recommends that endurance athletes spend 10 to 15 percent of their time training at a vigorous pace known as the lactate threshold zone, which represents the crossover from aerobic to anaerobic exercise (athletes in this zone are unable to speak while exerting themselves). Those who continually train at or slightly below that lactate threshold, Mr. McCall said, can improve it, delaying the onset of pain and teaching the mind to better

handle the burning sensation.

“That’s part of the difference with elite athletes — they can function much, much higher into their lactic threshold than you or I can,” said David J. Berkoff, a doctor at Duke Sports Medicine in Durham, N.C., who has done lactate testing on athletes.

Variable intensity running, also known as intervals, is the most efficient way to nudge your lactate threshold higher. Run faster for a short distance or set time — say, four blocks or five minutes — then jog to recover, experts recommend. “You can really push yourself close to your maximum output, then fall back into a recuperative mode,” said K. Anders Ericsson, a psychology professor at [Florida State University](#) who has done research on this type of “deliberate practice,” as he calls it.

Chrissie Wellington, who has won the Ironman World Championship triathlon in Kailua-Kona, Hawaii, three times, knows all about exerting herself. “I push my body to the limits in training,” she said. “I know I can reach those limits, those thresholds, push beyond them and come out the other side.”

Come race day, Ms. Wellington, 32, said she never thinks, “This is going to be a perfect race, and it isn’t going to be painful.” Her advice? “Expect it will be painful and have faith in yourself that you will overcome those dark times.”

If an athlete’s goal is to simply finish a race instead of winning it or setting a personal best, there are simple pain-relieving steps to take. Hydrate, take in some calories (like an energy gel or an orange slice) and slow down.

“Most of the aches, pain and muscular or respiratory distress respond to change of pace,” said Mark J. Klion, a clinical instructor at the Mount Sinai School of Medicine. “Even if you have to walk for a period of time, that’s what you have to do.”

One way to try to ignore the pain is to focus on something outside the body, such as the spectators lining the course or a runner just slightly ahead.

If external distractions do not help, turn inward. When an athlete hits the wall, the body naturally tightens. “That’s when you really need to stay in the moment and concentrate on your running form,” Ms. Wellington said. She recommended relaxing the shoulders and hands, something she is still trying to work on herself. “Relaxing your hands can relax your whole body.”

She also suggested attempting to grin. “It’s easier to smile than grimace when you’re hurting,” said Ms. Wellington, who is known for wearing a smile throughout an Ironman competition.

When all else fails, Mr. McCall from the American Council on Exercise has some advice: “Exertion pain comes down to three words: ‘Suck it up.’ ”

