



THE OUTER LIMITS

How to handle nature's harshest stuff

HOT

Go for an easy six-mile run in Southern California's Death Valley and you'll overheat as quickly as an air-cooled Volkswagen chugging over Teton Pass in August. Extreme heat compromises your body's ability to cool itself, even to a lethal extent. But that doesn't dissuade approximately 90 racers from competing in the Badwater Ultramarathon, a 135-mile footrace held each July from the depths of Death Valley to the finish line at 8,360 feet on the flanks of Mount Whitney. That's partly because heat, like altitude, can be beaten back with acclimatization. And eight to 14 days usually does the trick. For one to two weeks prior to your trip, train in temperatures similar to those of your destination; your heart rate, core temperature, psychological perception of exertion, and

susceptibility to fainting will all decrease significantly. *Tony Dizinno*

Easier said than done? Perhaps, but at least a few athletes have come up with some inventive solutions to training in the heat. "Beginning six to eight weeks prior to an event," says Marshal Ulrich, four-time Badwater champion, "I go into a sauna three to four times a week, crank the heat, and run in place for an hour and a half." Extreme conditions expert Lawrence Armstrong, however, cautions against such radical workouts. "That can be quite dangerous since the heat can't dissipate into the atmosphere, and it doesn't simulate the right conditions because saunas are generally much hotter." Armstrong offers a more reasonable, though only slightly less uncomfortable, acclimatization strategy: Wear extra clothes during training and monitor your core temperature before and after your workout with a rectal thermometer (sorry, it's the best way to get an accurate core temp reading). You'll want to reach a postworkout range of 101 to 102 degrees Fahrenheit.

Muscle cramps, caused by sodium deficiency, are another hot-weather hurdle. "I'll normally take salt pills every two hours and I add a teaspoon of salt to every water bottle I use," says Lisa Smith, the women's champ in the 1999 Marathon des Sables in Morocco. "The entire time I'm out there, I'm thinking prevention. Once you need salt, it's already too late."
—CHRIS KEYES



Burning ambition: Lisa Smith keeps her cool in the Badwater Ultramarathon