

Marathon des Sables

IT IS POSSIBLY THE MOST deceptively named race on the planet. Over seven days and six stages, participants in the Marathon des Sables run, stumble, burn, stink, hallucinate, cry, and bleed across 155 miles of the Sahara Desert in Morocco. They carry all their gear and food, obey a laundry list of safety rules, sleep in communal tents, and blister their feet down to the fascia. For this privilege, racers sign up two years in advance and pay \$4,150. They crave the challenge: "It boils life down to a balancing act of mind, body, and environment," says Meghan Hicks of Midpines, California, who placed second female in 2009. Simply finishing is an epic achievement. Here's how the race is run. —*Matt Allyn*

1 FOOD TO GO

Runners must carry at least 14,000 calories (about 10 pounds) worth of food and drink mix; however, all but the smallest runners will need much more than that, says Ron Maughan, Ph.D., a sports nutrition professor at Loughborough University in England. For example, a 150-pound racer requires 2,860 calories during a marathon-length stage, on top of the 2,000 to fuel his day, and the 500 to feed his elevated metabolic rate.

2 BIG FEET

Heat edema causes feet to swell, so runners must wear shoes one half to two sizes larger than normal. "The body's natural cooling response dilates your blood vessels and sends more fluid to your extremities," says Ronald Otterstetter, Ph.D., of the University of Akron in Ohio. "But because of gravity, your heart is unable to pump fluid back out of your feet."

3 ROUGH STUFF

To keep sand out, runners often glue or Velcro gaiters to their shoes. Sand sticks to anti-chafing lubes, and the friction can turn thigh skin into sandpaper. Compression shorts eliminate this.



4 SUN SCREENING

Temps can top 120 degrees. Runners don legionnaire hats and sweat-wicking apparel, hydrating regularly to keep their body temp down. Salt tablets balance electrolytes (low levels weaken muscle contractions and cause cramps).

5 WATER FIX

To maintain competitive equality, runners get 1.5 liters in the a.m., and 1.5 to 4.5 liters at checkpoints every five to nine miles during each stage. (You need two to four times the amount of water when running 26.2 in the desert compared with running the Boston Marathon, says Maughan.) At night, racers get 4.5 liters. This ration covers drinking, meals, and washing up.

6 TRAVEL LIGHT

Backpacks must weigh between 14.3 and 33 pounds, including food (but excluding water). This ensures racers carry the caloric minimum and the mandatory desert survival gear (below), while reducing injury risk from too-heavy loads. The day before the race, officials weigh each pack and check for required supplies.



On the Run

Racers cover 13 to 51 miles a day. Michael Wardian, the first American male to podium at the MdS, suffered heatstroke and bloody urine before finishing third this year in 23:01:03 (8:54 pace) three hours behind Moroccan winner Mohamad Ahansal.



CHECK, MATE

Checkpoints dot the course every five to nine miles. Runners enter a chute to check in, get fresh water, and dump trash before heading out again. The medical staff scrutinizes each runner to see who is unfit to carry on. "They look into your eyes as you come through," says Ed Kelly, 57, of Evanston, Illinois, who completed the race in 2006. "If they have any doubt, they pull you until you look ready to continue."

TOUGH GOING

Steep dunes and rocky areas can cause falls and injury. Plus, studies have shown that running ultras like the MdS can weaken your bones, break down muscle, and increase oxidative stress, says William Kraemer, Ph.D., professor of kinesiology at the University of Connecticut. Blame calorie deficits, lack of recovery, and insufficient strength training.



START

STAGE 1
18 miles

STAGE 2
22 miles

STAGE 3
24.9 miles

STAGE 4
51 miles

FINISH LINE

STAGE 6
13.1 miles

STAGE 5
26.2 miles

A MIGHTY WIND

Sandstorms arise when winds up to 50 miles per hour pick up loose dust and sand. They can create zero visibility. Racers stop and await instructions. In 1994, a sandstorm disoriented Italian Mauro Prosperi, who was discovered nine days later more than 100 miles off-course.



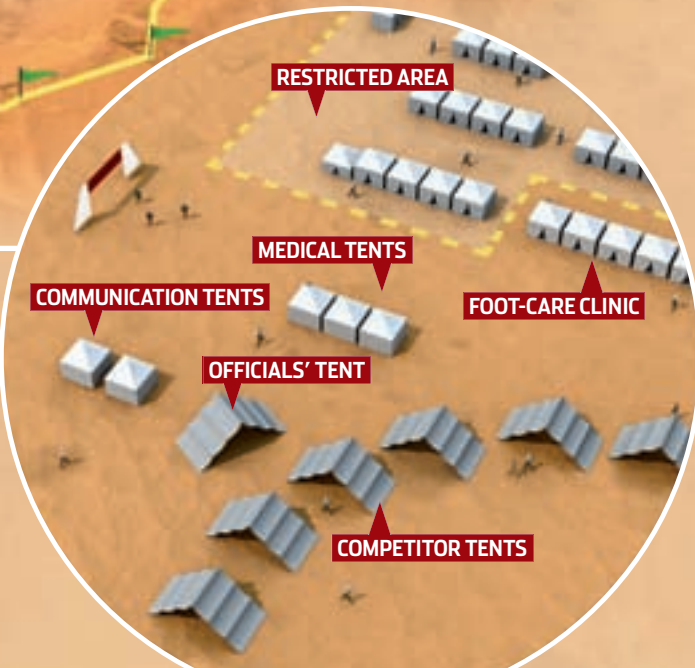
THIS BITES

Morocco is home to 12 species of snakes and 10 types of scorpions—all of which are venomous. Most are nocturnal.



REST HERE

Awaiting runners at the end of each day is a bivouac consisting of a ring of Berber tents, where runners sleep with seven other ripe competitors under open-sided tents lined with rugs. There's also a medical tent for urgent care, and the Doctrotter medical clinic for expert blister care. Unless they drop out, racers are not allowed in the adjacent bivouac, where race and press officials enjoy the plush grandeur of enclosed tents and a cafeteria.



RUNNING THE NUMBERS	1,090 Number of starters in 2010	923 Number of finishers	107 Average high temp
	77 Average low	7:38 Average pace of winner	30:36 Average pace of slowest racer