

Running a Marathon in hot weather

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In the light of our experience of the very hot weather in Hungary at the 2010 European Masters championships, Walter and I thought it might be worth passing some tips on to fellow road runners, when they face extreme heat and humidity racing abroad.

I'll divide the advice into race preparation and race execution, and end with some reflections on the results statistics from EVACS 2010.

Race Preparation

Research the course and the weather conditions

The five day forecast for Nyireghaza showed maximum temperatures of 35 degrees with 62% humidity, but with a start time of 8am the first hour would be cooler. The course was an out and back 14 km to be covered 3 times. There was very little shade. The early EVACS track results showed several DNFs in the 10,000 metres.

Adjust your target time to the conditions

The 10,000 metre results were around 7% slower than recent best performances. Translating this to a marathon indicated around 3 hours 15 minutes for a 3:03 runner (Walter Hill) and around 3 hours 30 for a 3:15 runner (myself). Setting off at normal pace would be unlikely to succeed, and might well cause a DNF. If you feel warm at the start of a marathon, you will not perform to your best recent time.

Attempt to simulate race conditions if possible in training.

I ran several sessions at noon in the UK, though the maximum temperature was only 25 degrees. Arriving in Hungary 2 days before the race ruled out "acclimatisation" sessions, though I saw a few competitors out "training" the day before the race.

Know your own perspiration rate

Each individual has different rates of sweating in hot conditions. Weigh yourself before and after a long training run in the heat – if you consume drinks, remember 500ml of water weighs about 500 grams, when calculating weight lost.

Plan your drinks

We prepared personal drinks as follows:

Walter Hill had 6 x 500 ml of water, and wore a belt containing energy gels. I had 6 x 500ml of isotonic/ carbohydrate drink, and took 2 gels in the race. In addition, there were small cups of isotonic sports drink and 250ml bottles of water available each 7 kms, i.e. 5 opportunities during the race.

Pre-race hydration

Walter Hill makes a point of "super-hydrating" in the 24 hours prior to a marathon. I believe I should have taken more fluid prior to the race. At Championships, we often sit in a hot stand cheering on fellow athletes, and become mildly dehydrated during the pre-race day. My sweat rate is quite high in hot weather, and I consumed some salted crisps before the start, and immediately after the race, both to guard against sodium losses and to encourage more drinking.

Race Execution

Monitor and feedback

In the early miles, stick to your own target pace, try to ignore competitors moving past you, and stay relaxed. Ask yourself if you can maintain this pace for the full distance – better a minute too slow than a minute too fast in the first 10km.

Get your drinks as planned, and monitor how you react to them. In training I sip from a bottle until it is empty, and I stuck to this through the race, though many competitors drank half their bottle and ditched the rest. In the heat, isotonic drinks are needed as much as carbohydrate drinks – I grabbed the small cups available.

Temperature, effort and pace

These are key interdependent variables. With an 8 am start, the temperature was rising throughout the race. Maintaining an even pace involves a steep increase in perceived effort as the temperature rises. Maintaining even effort involves accepting a decline in pace as the temperature rises. Make your own decision and develop an intelligent plan – those who hope to win a medal may adopt a high risk strategy and set off at a pace which may cause a "crash and burn" scenario. Those who seek to run to their potential in the conditions may prefer a "controlled slowdown" race plan. Do you normally run well in the heat or not? Challenge yourself but be realistic.

Remember it is a Championship

In major championships the winning time is usually slower than recent performances, with surges in pace and other tactics in play. Some athletes set off too fast, fuelled by adrenaline, and others may try to hang on to a promising group. Those with no medal chance often perform relatively well because they run at a more even

pace. In the major championships, there are often underperformances and DNFs in hot conditions from athletes who have been tipped for medals.

Stay cool

Stay in the shade until you are called to the start. Cut down your warm-up to the minimum. Water evaporating from your body surface is a great cooling mechanism, so wet your hair, neck and shoulders. Wearing a cap is optional – only a few chose to do this at EVACS. I wetted a neckerchief and kept it damp through the race – I had tried this out in training. Beware mid-race showers – a spray in the face is refreshing, but soaking shoes and socks can cause blisters.

Lies, damned lies, and statistics...

The number of starters and DNFs in the EVACS 2010 Marathon were as follows:

	Started	DNF	DNF %
Men	160	38	24%
Women	34	6	18%

The average pace in kilometres per hour, taken from the chip timing for all finishers at each 7 km. point, dropped significantly as the temperature climbed: The women, on average, maintained a more even pace than the men. Walter and I managed a controlled slowdown, and were satisfied that we ran to our potential in the conditions.

The slower runners naturally slowed more, as they suffered the hotter conditions for longer. Times were typically up to 30 minutes slower than their recent best times. The medal winners performed closer to their best, and maintained a more even pace. Wolfgang Ahrens, V60 gold medallist, averaged such an even pace that on the graph below he would be represented by an almost horizontal line.

I hope this has been helpful in highlighting the importance of careful planning and attention to hydration strategies when running a marathon in hot weather.

