

This is why Kipchoge smiles when he runs (and why you should be doing it too)

Runner's World



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Last year, top-ranked marathon runner Eliud Kipchoge ran 26.2 miles in just two hours and 25 seconds in Monza, Italy, as part of Nike's Breaking2 project. His time, although not record-eligible, is the fastest marathon time ever recorded, and the effort required to clock it was undoubtedly grueling. This year, the man himself went on to [set a new marathon world record at the Berlin Marathon](#), crossing the line in 2:01:39. Yet in both marathons, Kipchoge never let the pain show on his face. In fact, it appeared as if he was actually grinning at times.

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No, he was not trying to mock his competitors: Kipchoge later told reporters he was smiling to relax and work through the pain, employing a strategy some runners have long believed to be true: that smiling while running can help you to run more efficiently.

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Considering the time and effort we dedicate to training and focusing on running form, it's hard to believe that something as simple as a grin could have that much of an effect on our performance, but science backs it up. Studies have shown that when we enrich our workout with a smile, we feel that our perceived effort is far less than the effort we exert when we frown while exercising. But no research had

seriously looked into the effect manipulating our facial expressions – by smiling or frowning – has on our running economy or perceived effort while running – until now.

Why runners should smile more

Researchers at Ulster University and Swansea University asked a group of 24 runners to wear a breathing mask to measure oxygen consumption and then complete four six-minute running blocks on a treadmill while smiling or frowning. The study, which was recently published in *Psychology of Sport and Exercise*, found that runners who smiled used less oxygen, ran more economically and had a lower perceived rate of exertion than those who frowned and those in the control group.



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“They were 2.8 per cent more economical when smiling than when frowning,” says Noel Brick, lecturer in sport and exercise psychology at the University of Ulster and coauthor of the study. The reason for this difference has to do with facial feedback. “When we make a facial expression, we may experience the emotional state we associate with the expression,” says Brick. “We associate smiling with happiness or enjoyment, states that make us more relaxed, so when we smile, we are consciously trying to relax. By adopting the facial expression of frowning, however, we are experiencing an emotional state of feeling tense or less relaxed.”

While a 2.8 per cent improvement may sound inconsequential, it can translate to an improvement of roughly two per cent in performance time, says Brick. That means if you run a marathon in 4:20 or 4:45 (the average marathon times for men and women, respectively), you’ll cross the finish line about five minutes faster, while if you run a 10K in 55-64 minutes, you can shave a full minute off your race time. And if you’re clocking under 25 minutes for a 5K, just smiling can help you cover the same distance 30 seconds faster, a meaningful result for very little effort and, frankly, plenty to smile about. “Improvements in your running economy will be initially small, but a relaxed runner is an efficient runner,” adds Brick.

How to relax your jaw when you're running

This little trick becomes especially useful for runners who need to conserve as much energy as possible over the course of a long-distance run. “Runners tend to tense up when holding higher paces, specifically by tightening their jaw, which, in turn, can prevent the runner from benefiting from a nice, relaxed and open airway,” says running coach Meghan Takacs. “When a runner is super-stiff, they will tire out a lot quicker.” Takacs says her experience with runners has shown her that smiling is key because it brings on a positive mentality, and running is as much a mental game as it is a physical one.



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And it turns out that the smile does not even have to be particularly genuine. Omar Sultan Haque, a psychiatrist and social scientist at Harvard Medical School, US, who studies how biological, psychological and social forces interact in health and healing, suggests you can fake it till you make it. “The concern about ‘faking it’ has within it the assumption that emotions always occur before facial expressions,” says Haque. “But if the muscular expression of smiling can influence or even cause the feeling of relaxation, then planning to smile so that one feels relaxed is no more fake than smiling as a result of first feeling relaxed.”

Takacs reminds runners she works with to chill out: keep the muscles in their faces relaxed, stop gritting their teeth – and smile. “Think of it like throwing your brain an endorphin party when it needs it,” she says. “A smile instantly boosts positivity, relaxes the body and, in turn, makes you more self-aware. And when it comes to running, mentality and self-awareness will take you a long way – literally.”

Although this study is small, previous research supports the notion of smiling to make efforts seem easier. A study by the School of Sport, Health and Exercise Sciences at Bangor University in Wales found that the activation of smiling or frowning is a good predictor of how hard an effort is.

So if a hard effort makes you frown, then the opposite will also be true: frowning makes an effort feel harder, but smiling makes the effort feel noticeably easier. In

the end, managing a smile even when you don't feel like it is simply a matter of training, like cultivating any other running habit, and could even be easier than pushing your legs to run through a cramp, says Haque. He suggests that we ought to simply reconsider our assumptions about the one-way relationship between feeling and smiling. Instead of believing we need to channel an emotion like happiness before smiling, we should remember that the act of smiling itself can cause an emotion or feeling. Therefore, no channeling is needed, because the facial-feedback hypothesis holds true. Besides, there's not much to lose by giving grinning a shot. If nothing else, at least you'll end up with better race-day photos.

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