

How Fast We Slow Down Running Longer Distances

By ANDREW GELMAN Published: March 18, 2013

How fast do we slow down?

215

Us on Social Media

Science Reporters and Editors on Twitter

Twitter.

If running speed were proportional to time, the increase in time for every equal lap would be exactly 2: that is, doubling the distance would correspond to a doubling of time. But of course the number is greater than 2, corresponding to the increased difficulty of longer runs.

You can see this by making a graph, plotting world running times against distance, in races ranging from the

distance races like the 400- and 800-meter and the mile,

Connect With 100-meter dash through middle-@nytimesscience on

up through marathons and ultramarathons. For each doubling of distance, the world record time is multiplied by Like the science desk on Facebook. about 2.15.

More precisely, Sandra Savaglio and Vincenzo Carbone published <u>a paper in the journal Nature in 2000</u> showing two regimes: for sprints of 200 meters to 1,000 meters, a doubling of distance corresponds to an increase of a factor of 2.3 in world record running times; for longer distances from 1,000 meters to the marathon, a doubling of distance increases the time by a factor of 2.1. They found similar patterns for men and women, and for swimming as well as running.

A version of this brief appeared in print on March 19, 2013, on page D7 of the New York edition with the headline: 2.15.

SHARE SAVE E-MAIL

News and commentary with a global voice. Switch to the Global Edition

Get Free E-mail Alerts on These Topics

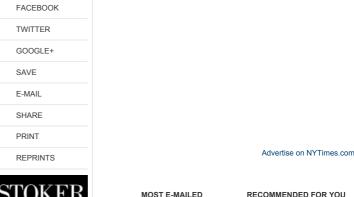
Running

Ads by Google

what's this?

Cholesterol: Free Report

10 Secrets For Healthy Cholesterol



We don't have any personalized recommendations for you at this time. Please try again later.

Log in to discover more articles based on what you've read.





What's This? | Don't Show



