Should You Run by Minutes or Miles?

- *By Jason R. Karp, Ph.D.*
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Ever notice how fast time moves, with each year seeming to go faster than the previous year? Time spent running is also interesting—the second half of a run always seems to go faster than the first, and some runs seem to fly by while others seem to drag on. This changing perception of time when running may be partly explained by its relationship to effort, as Dr. George Sheehan once noted: "The faster we run, the longer it takes."

Runners tend to think a lot about mileage. Indeed, it's the number of miles you run each week that often defines your status as a runner. The more miles you run, the more you're validated. Other runners will ask you how much mileage you run and make judgments about you based on the answer you give.

The amount of time spent running, however, is more important than the number of miles—it's the duration of effort that represents the amount of training stress. A faster runner will cover the same amount of distance in less time than a slower runner or, to put it another way, will cover more miles in the same amount of time.

For example, a runner who averages a 7-minute mile pace for 40 miles per week is running the same amount of time as a runner who averages a 10-minute mile pace for 28 miles per week (280 minutes per week), and therefore is experiencing the same amount of stress. And that's what matters—the stress. If a slower runner tries to run as many miles per week as a faster runner, the extra time it will take increases the amount of stress and therefore puts the slower runner at a greater risk for injury.

The same is true for long runs—time is more important than miles. However, since races are a specific distance rather than a specific time, a faster runner doing a 22-mile run is getting more specific training toward a marathon than a slower runner going 17 miles in the same time. Since a marathon is 26.2 miles for everyone, regardless of ability, the race is more stressful for a 4-hour marathoner than it is for a 2:10 marathoner (assuming that both are running at the same percentage of maximum effort).

Therefore, a 4-hour marathoner needs to get used to running for a longer time than does a 2:10 marathoner to specifically prepare for the race. But this need to run for more time must be balanced by the amount of recovery time needed. In other words, if you focus solely on the number of miles, your long runs can get so long that the recovery time you'll need will increase dramatically and will negatively affect your next week of training.

The reason why time is more important than miles is because your body has no comprehension of what a mile is; it only knows how hard it's working and how long it's working (effort over time). The duration of effort is one of the key factors that arouses the biological signals that induce physiological adaptations that will ultimately lead to improvements in your running performance.

This concept of training by time should also be applied to individuals training in a group. This is the biggest flaw of group training, during which everyone in the group runs the same workout. A slower runner should not attempt the same number of repetitions of the same distance in an interval workout as a faster runner; otherwise he or she will experience more stress because he or she will spend more time running at the same relative intensity.

For example, an 18:00 5K runner who runs 5 x 1,000 meters at 5K race pace will experience more stress than a 15:30 5K runner who does the same workout. The corresponding times of the two workouts would be 3:37 per 1,000 meters (5:48 mile pace) and 3:07 per 1,000 meters (5:00 mile pace), respectively. For this workout, the slower runner would be running 30 seconds (or 16 percent) longer at the same relative

intensity as the faster runner. To make these two workouts more comparable, and therefore to equate the stress experienced by both runners, the 18:00 5K runner should modify the workout by running 850 meters (which would take 3:04) rather than running 1,000 meters. If 850 meters is too awkward of a distance to determine, you can run either 800 or 900 meters. The point is to make the two workouts more comparable by shortening the distance for the slower runner (or, conversely, by increasing the distance for the faster one).

There are a couple of other ways to make these two workouts comparable—the 18:00 5K runner can decrease the number of repetitions or increase the recovery period. For example, if both runners run the same distance (1,000 meters) and the 15:30 5K runner does five repetitions (for a total running time of 15:35 at 5K race pace), the 18:00 5K runner should do four repetitions (for a total running time of 14:28 at 5K race pace).

Alternatively, if the 15:30 5K runner takes 3 minutes of recovery between repetitions, giving a work-to-rest ratio of 1-to-1, the 18:00 5K runner should take 3? minutes of recovery to make the ratio the same. While manipulating the number of repetitions or the recovery periods will make the two workouts more comparable between runners, the best way to equate the stress between these two workouts is to shorten the length of the work periods, since the time spent running at a specific intensity represents the greatest aspect of the training stress. If the 18:00 5K runner runs 1,000-meter repetitions like the 15:30 5K runner, but takes more recovery to keep the work-to-rest ratio the same, it's still a harder workout for the 18:00 runner.

In an effort to equate the stress of workouts between runners of different abilities, here's a hierarchy of strategies:

1) Decrease the length of each work period for slower runners (or increase the length of each work period for faster runners) to make the duration of each work period the same between runners.

2) Decrease the number of repetitions for slower runners (or increase the number of repetitions for faster runners) to make the total time spent running at a specific intensity the same.

3) Increase the duration of the recovery period for slower runners (or decrease the duration of the recovery period for faster runners) to make the work-to-rest ratio the same.

If you stop training by mileage and start training by time, not only will you do the amount of training that's right for you, you may even change your perception of time.

About the Author

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Dr. Jason Karp is one of the foremost running experts in America, 2011 IDEA Personal Trainer of the Year, 2014 recipient of the President's Council on Fitness, Sports & Nutrition Community Leadership award, and creator of the Run-Fit Specialist certification. He holds a Ph.D. in exercise physiology. A prolific writer, he has more than 200 articles published in international running, coaching, and fitness magazines, is the author of five books, including *Running for Women*, *Running a Marathon For Dummies*, *101 Developmental Concepts & Workouts for Cross Country Runners*, and *101 Winning Racing Strategies for Runners*, and is a frequent speaker at international fitness and coaching conferences. Follow Jason on Twitter @drjasonkarp and Facebook at DrJasonKarpRunFit.