

New York

runner

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Listen to Your Heart

Your heart rate is a built-in coach that can gauge fitness, measure effort, and monitor recovery. To get the most out of your workouts, listen to it.

by Mindy Solkin

Whether you're training for competition, fitness, or weight control, your workouts have three variables: frequency, intensity, and time. It's easy to track the frequency of your workouts—just write them on a calendar—and for time, you need only a watch. But intensity is harder: You must pay careful attention to your body, especially to your heart rate. With practice, you can “read” your heart rate and know precisely how hard you are working out, how well you are recovering, and whether you are improving your fitness.

You can measure heart rate by taking your pulse with two fingers either on the thumb side of your wrist or on the carotid artery that runs up the side of your neck. That's a fine way to measure your resting heart rate (RHR) in the morning, but it's very difficult to get an accurate measurement during a workout.

The easiest and most accurate way to measure heart rate while training is with a heart rate monitor, a chest strap that transmits a signal electromagnetically to a wristwatch-type receiver. A heart rate monitor takes the guesswork out of the process, and can help you better understand how to equate pace with heart rate and how to set training intensities for your individual goals.

KNOW YOUR NUMBERS

Resting Heart Rate (RHR): Your RHR is an excellent barometer of your current fitness level. Take your RHR before you get out of bed in the morning—keep the monitor by your bedside and strap it on upon awakening. Record your RHR on three different days the first week to determine an average, then periodically check it again. As you gain fitness your RHR will decline because your heart is getting stronger and more efficient at pumping more blood with each beat. For example, while recreational and competitive distance runners may find their numbers in the 40s and 50s,

world-class marathoners can see numbers as low as 28.

An elevated RHR may be a sign of overtraining, dehydration, the onset of illness, or additional stress in your life. If your RHR is higher than normal one morning, reduce the intensity or duration of your workout that day. If it remains high on subsequent mornings, talk to your doctor.

Maximum Heart Rate (MHR): Coaches and runners used to calculate MHR using age-graded formulas, such as 220 minus age or 205 minus half of age. But these formulas assume everyone of a particular age is at the same fitness level. I once tested two 28-year-old women runners; according to the 220-minus-age formula, their MHR should have been the same—192. But tests with heart rate monitors showed that one woman's MHR was 161 and the other's was 202. A heart rate-based training program based on an age formula alone would have been too hard for the first woman and too easy for the second.

Keep in mind that heat, humidity, wind, altitude, and hilly terrain can alter your numbers.

It is important to note that MHR is a genetic number and not an indicator of athletic ability. A sedentary person may have a MHR of 180, while a competitive runner's maximum might only be 165.

TEST YOURSELF

There are several ways to determine your maximum heart rate. For each, you'll have to withstand a strenuous workout on a measured course. Read the descriptions, then make your choice. Begin both tests with a warm-up of one-half to one mile of easy running followed by stretching. The number you see on your heart rate monitor at the end of the test is your MHR.

The One Mile Test: Start out a little faster than you would during your daily run and keep picking up the pace every quarter-mile until you are running at top speed for at least the last 200 meters.

The Half-Mile Times Two Test: Run one half-mile at close to top speed. Run easy or walk for one minute. Then run a second half-mile at top speed.

Continued on next page

Mindy Solkin is the owner and head coach of The Running Center.

The 5K Race Test: During a hard 5K race, check your heart rate at the end of the second mile and add 5 percent.

TRAINING BY THE NUMBERS

Once you know your RHR and MHR, you can determine your heart rate at particular training intensities. I use the Karvonen Formula to determine the target heart rate for various training intensities. The formula itself is quite simple:

MHR minus RHR equals heart rate reserve (HRR).

Training heart rates for different workout intensities are determined by multiplying the HRR by a particular intensity, and then adding in your resting heart rate.

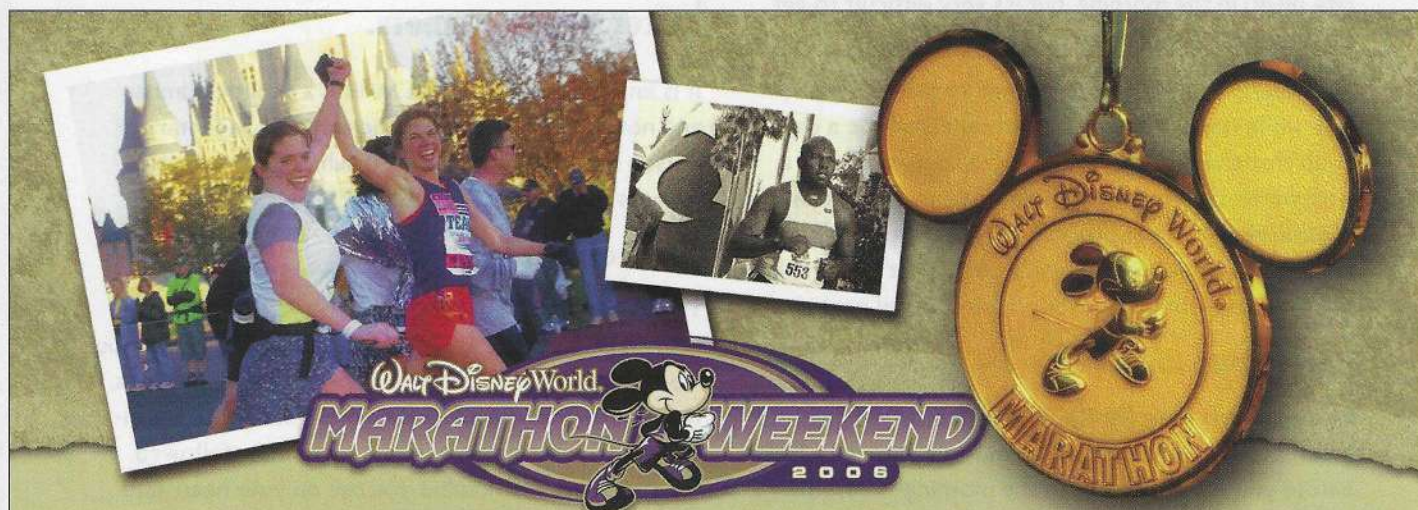
Keep in mind that environmental and course conditions such as heat, humidity, wind, altitude, and hilly terrain can alter your numbers. Dehydration will also hinder performance. ■

As an example: If your MHR is: 185
 And your RHR is: 52
 Then your HRR is: 133
 (185 - 52 = 133)

To find your training heart rate (THR) at different intensities, use this formula:

$$\text{HRR} \times (75\% \text{ to } 95\%) + \text{RHR} = \text{THR}$$

Type of Run	Training Intensity	THR
Endurance run	75%	151
Stamina run	85%	165
Interval run or 5K race	95%	178



Make it a tradition. Get together with friends, family and fellow runners for an entire weekend celebration that you'll never forget. Whether it's your first marathon or your fiftieth, this is a weekend with something for everyone. You'll run a fast, flat course through Walt Disney World Theme Parks with Disney entertainment along the way. And with an average starting temperature of 48° the only reason you'll want this run to end is to collect your world-famous finisher medal. Vacation packages are available and include race weekend event transportation.

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 • Health & Fitness Expo (January 5-7) • Post-Race Celebration and Awards Ceremony (January 8)

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