

WELLNESSMONTHLY

Monitoring Your Heart Rate | February 2020



Heart rate monitors help take the guess work out of determining whether a strenuous activity is being performed at a safe level.

Monitoring Your Heart Rate

In recognition of American Heart Month, we explain how to monitor your heart rate and stay in your target zone during physical exertion.

Heart-rate monitoring is considered an important part of cardiovascular fitness assessment and training programs because it can be used to measure intensity of effort in comparison to physiological adaptation over time.

Physical fitness programs typically incorporate four elements: intensity, frequency, duration and type of activity. Before using a monitoring device to track your heart rate, you will want to take into consideration factors including your gender, age, fitness level and health status, and weight management and exercise goals. If you are starting a new exercise program or

being treated for a medical condition and will be exerting yourself, ask your personal care provider for guidance.

Target Zone

To use a monitoring device you need to know your maximum heart rate. It is commonly calculated by subtracting your age from 220, the fastest rate at which your heart should beat in one minute. An alternative formula based on a meta-analysis published in the [*Journal of the American College of Cardiology*](#) found the equation $208 - 0.7 \times \text{age}$ to be more accurate, especially for people over 40 years old.

Other ways to establish your maximum heart rate include getting a stress test in a medical facility, or doing it yourself by taking your pulse between running intervals. According to the [*Harvard Heart Letter*](#), you can also use a heart rate monitor to find your maximum heart rate. However, monitors are not independently tested for accuracy.

A healthy resting heart rate for adults is 60 to 80 beats per minute (BPM). You can get your resting rate by taking your pulse in your wrist or neck when you wake up. Some experts believe an ideal resting heart rate is 50 to 70 BPM. Research shows that a resting heart rate above 80 BPM may indicate higher risk for cardiovascular conditions, metabolic syndrome and all-cause mortality.

You can use a math formula or an age-based heart rate table to determine your exertion zones. (Tables 1 and 2.) A target heart rate during moderate-intensity activity is about 50-70 percent of maximum heart rate; vigorous physical activity is about 70-85 percent of maximum.

Exercise Zones	
Healthy	50-60%
Fitness	60-70%
Aerobic	70-80%
Anaerobic	80-90%
Red line	90-100%

Table 1: Recommended exercise zones in comparison to maximum heart rate.

Table 2: American Heart Association target zones based on 220 maximum heart rate minus your age.

Target Heart Rate Zone Ranges 50-85% of Maximum		Average Heart Rate Maximum 100%
Age	Beats/minute	Beats/minute
20	100–170	200
30	95–162	190
35	93–157	185
40	90–153	180
45	88–149	175
50	85–145	170
55	83–140	165
60	80–136	160
65	78–132	155
70	75–128	150

Benefits

Moderate-intensity exercise such as brisk walking helps decrease body fat, blood pressure and cholesterol levels, while higher intensity exercise burns more calories per minute and has greater cardiorespiratory benefits. Exercise in the 60 -70 percent zone for 20 to 60 minutes is believed to be the best way to build endurance. Short spurts of exertion that make you breathless promote oxygen absorption and help maximize performance.

A monitor may also be used to detect and take action in response to changes in heart rate caused by dehydration, stress, coming down with an illness, high or low blood pressure, or an abnormal rhythm.

Selecting a Monitor

There are two basic types of heart rate monitors:

- Monitors worn on a chest strap detect your pulse and wirelessly transmit data to a wrist device or a mobile app that you can check during your workout. These are considered more accurate than wrist models.
- Wrist-based monitors without a strap use an optical sensor built into the watchband or case back to detect your pulse.

Basic models time your workout and give you continuous, average, high and low heart rate data. Many people use their monitor to stay within target zones. Depending on your goals, you may want to look for features such as:

- Heart rate zone alarm
- Recovery rate tracker
- Clock, split timer and stopwatch
- Calories burned
- Computer/smartphone app interface
- Pre-programmed workouts
- Distance covered or steps taken
- Cadence or speed tracker

Varying the length and intensity of physical activity based on your fitness level and exercise goals – and allowing for a recovery day between intense workouts – is recommended.

How to Get Fit and Stay There

The American Heart Association recommends the following for adults:

- 1. Fit in 150+: Get at least 150 minutes per week of moderate-intensity aerobic activity or 75 minutes per week of vigorous aerobic activity (or a combination of both).**
- 2. Move More, Sit Less: Even light-intensity activity can offset health risks associated with being sedentary.**
- 3. Add Intensity: Gradually increase time and/or intensity to get more benefits.**
- 4. Build Muscle: Do moderate- to high-intensity muscle-strengthening activity.**
- 5. Be Well: Physical activity is linked with better sleep, memory, balance and cognitive ability. It helps control weight and chronic disease symptoms, and it reduces stress and risk of depression**