Heart Rate and Components of Exercise

Resting Heart Rate

What is resting heart rate?

This is a person's heart rate at rest. The best time to find out your resting heart rate is in the morning, after a good night's sleep, and before you get out of bed.

The heart beats about 60 to 80 times a minute when we're at rest. Resting heart rate usually rises with age, and it's generally lower in physically fit people. Resting heart rate is used to determine one's training target heart rate. Athletes sometimes measure their resting heart rate as one way to find out if they're overtrained. The heart rate adapts to changes in the body's need for oxygen, such as during exercise or sleep.

Target Heart Rates

AHA Recommendation

Health professionals know the importance of proper pacing during exercise. To receive the benefits of physical activity, it's important not to tire too quickly. Pacing yourself is especially important if you've been inactive.

Target heart rates let you measure your initial fitness level and monitor your progress in a fitness program. This approach requires measuring your pulse periodically as you exercise and staying within 50 to 85 percent of your maximum heart rate. This range is called your **target heart rate.**

What is an alternative to target heart rates?

Some people can't measure their pulse or don't want to take their pulse when exercising. If this is true for you, try using a "conversational pace" to monitor your efforts during moderate activities like walking. **If you can talk and walk at the same time, you aren't working too hard.** If you can sing and maintain your level of effort, you're probably not working hard enough. If you get out of breath quickly, you're probably working too hard — especially if you have to stop and catch your breath.

When should I use the target heart rate?

If you participate in more-vigorous activities like brisk walking and jogging, the "conversational pace" approach may not work. Then try using the target heart rate. It works for many people, and it's a good way for health professionals to monitor your progress.

The table below shows estimated target heart rates for different ages. Look for the age category closest to yours, then read across to find your target heart rate.

Age	Target HR Zone 50–85 %	Average Maximum Heart Rate 100 %
20 years	100–170 beats per minute	200 beats per minute
25 years	98–166 beats per minute	195 beats per minute
30 years	95–162 beats per minute	190 beats per minute

35 years	93–157 beats per minute	185 beats per minute
40 years	90–153 beats per minute	180 beats per minute
45 years	88–149 beats per minute	175 beats per minute
50 years	85–145 beats per minute	170 beats per minute
55 years	83–140 beats per minute	165 beats per minute
60 years	80–136 beats per minute	160 beats per minute
65 years	78–132 beats per minute	155 beats per minute
70 years	75–128 beats per minute	150 beats per minute

Your maximum heart rate is about 220 minus your age. The figures above are averages, so use them as general guidelines.

Note: A few high blood pressure medications lower the maximum heart rate and thus the target zone rate. If you're taking such medicine, call your physician to find out if you need to use a lower target heart rate.

How should I pace myself?

When starting an exercise program, aim at the lowest part of your target zone (50 percent) during the first few weeks. Gradually build up to the higher part of your target zone (75 percent). After six months or more of regular exercise, you may be able to exercise comfortably at up to 85 percent of your maximum heart rate. However, you don't have to exercise that hard to stay in shape

Components of Exercise

Let's take a look at the five different components of exercise (mode, intensity, duration, frequency, and progression) so that you will better understand how to create a program.

Exercise Components

Components of the exercise plan	Description	Example
Mode	Type of exercise	Walking, golfing, swimming
Intensity	Amount of energy used	Low to moderate level: 60 to 90% of maximum heart rate (HRmax)
Duration	Length of exercise session	30-to 60-minute sessions per day
Frequency	How often exercise sessions occur	4 sessions per week
Progression	An increase or change in the mode, intensity, duration, and frequency over a certain period	Increase intensity from 60% to 80% HRmax; duration from 30 to 60 minutes; frequency from 4 to 6 sessions per week

*American Heart Association