- Heart—physiology

Do you know your heart rate?

This number reflects how hard your heart is working to pump out blood to the rest of your body.

The Star Malaysia · 5 Mar 2024 · 11 · Maximising cardio

YOUR heart rate, or pulse, is the number of times your heart beats per minute.



Your resting heart rate is when the heart is pumping the lowest amount of blood you need when you're not exercising or exerting yourself.

If you're sitting or lying down — and you're calm, relaxed and aren't sick — your heart rate is typically between 60 and 100 beats per minute.

Other factors that can affect your heart rate include:

> Air temperature

When temperatures or humidity increases, the heart pumps more blood, so your pulse or heart rate may increase.

> Body position

Sometimes, when going from sitting to standing, your pulse may go up a little.

After a few minutes, it should return to a typical rate. > Emotions

If you're stressed, anxious or incredibly happy, your emotions can raise your heart rate.

> Body size

Body size usually does not increase your heart rate.

However, if you're obese, you may have a higher resting heart rate.

Medication use

Medications that block adrenaline tend to slow your heart rate. Thyroid medication may raise it.

Cardiovascular exercise, also called cardio or aerobic exercise, keeps you and your heart healthy.

This specific type of exercise gets your heart rate up and your heart beating faster for several minutes.

Cardiovascular exercise helps strengthen your heart, allowing it to pump blood more efficiently and improving blood flow to all parts of your body.

It also boosts your high-density lipoprotein (HDL) or "good" cholesterol, and lowers your low-density lipoprotein (LDL) or "bad" cholesterol.

This may result in less buildup of plaque in your arteries.

Your target heart rate is the minimum heart rate you need to maintain in a given amount of time to reach the energy level necessary to give your heart a good workout.

To find your target heart rate to maximise your cardiovascular exercise, the first step is determining your maximum heart rate.

Your maximum heart rate is 220 minus your age.

Your target heart rate for moderate to vigorous exercise is about 50-85% of your maximum heart rate.

Averages by age as a general guide are:

> 20: 100–170 beats per minute > 30: 95–162 beats per minute > 35: 93–157 beats per minute > 40: 90–153 beats per minute > 45: 88–149 beats per minute > 50: 85–145 beats per minute > 55: 83–140 beats per minute > 60: 80–136 beats per minute > 65: 78–132 beats per minute > 70: 75–128 beats per minute

Here are some suggestions when it comes to achieving your target heart rate with exercise: > Start slow

If you are beginning an exercise programme, aim for the lower end of your target heart rate zone and then gradually build up intensity.

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Try interval training

Interval training, which includes short bursts – 15-60 seconds – of higher-intensity exercise, alternated with longer, less strenuous exercise, effectively increases cardiovascular fitness.

Talk with your healthcare team before trying interval training, but it is typically safe for even those with existing heart disease and type 2 diabetes.

Take the "talk test"

If you can carry on a conversation in brief sentences while exercising, you're probably in the moderate intensity range.

You'll be breathing faster, developing a light sweat and feeling some muscle strain.

If you're working at a vigorous intensity, you won't be able to say more than a few words without catching your breath.

If you can sing while working out, you're probably in the low-intensity range, so step it up. Monitoring your heart rate

Many wearable activity trackers can monitor your heart rate when you exercise and periodically throughout the day.

If you don't have an activity tracker, you can use the radial artery in your wrist or the carotid artery in your neck.

If you have heart disease or long-standing diabetes, it's best to use the artery on your wrist.

To find your heart rate manually:

- > Locate the artery you plan to use to find your heart rate. > Using the tips of your first two fingers, press lightly over the artery.
- > Count your heartbeats for 30 seconds and multiply by two to find your total beats per minute.

If your heart rate is too high, take it easier.

If it's too low, add some intensity and push yourself to get your heart rate closer to your target.

If you experience irregular heartbeats, including a racing heartbeat, slow heartbeat or a feeling of fluttering in your chest, you may be experiencing a heart arrhythmia.

Heart rhythm or heartbeat problems can occur when the electrical impulses that coordinate your heartbeats don't work properly, causing your heart to beat too fast, too slow or irregularly.

Talk with your healthcare team if you have any concerns about your heart rhythm. – Mayo Clinic News Network/ Tribune News Service