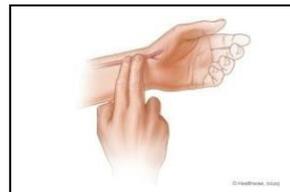


HOW CAN YOU KNOW YOUR HEART RATE?

It's My Pulse!

Even though your heart is inside you, there is a way to know how it's working: It's your pulse. You can find your pulse by lightly pressing on the skin anywhere there's a large artery running just beneath your skin. Two good places to find it are on the side of your neck and the inside of your wrist, just below the thumb.

You'll know that you've found your pulse when you can feel a small beat under your skin. Each beat is caused by the contraction (squeezing) of your heart.



If you want to find out what your heart rate is, use a watch with a second hand and count how many beats you feel.

When you run around a lot, your body needs a lot more oxygen-filled blood. Your heart pumps faster to supply the oxygen-filled blood that your body needs. You may even feel your heart pounding in your chest. Now take your pulse rate: **(Exercise 1)**

If you are stopped

- In 1 minute: _____ beats per minute

If you are doing exercise and you want to know your pulse in thos moment:

- In 15'' and multiplied by 4: _____ X 4 = _____ b/m

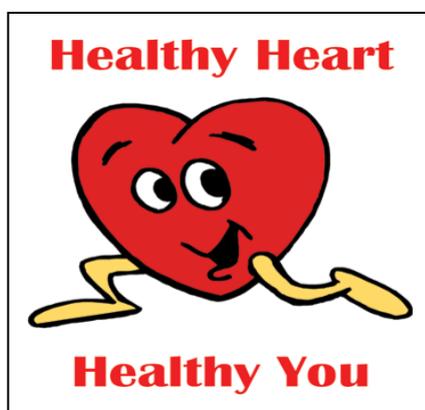
Exercise 2: Take the pulse rate of 2 classmates: Person 1: HR = _____
Person 2: HR = _____

Exercise 3: Try doing these exercises for a few minutes and take your pulse again in 6'', now how many beats do you count? AFTER EACH EXERCISE YOU MUST REST UNTIL YOUR PULSE GOES BACK TO THE REST LEVEL.

1 (walk fast) 15'' x 4 = _____ b/m

(sprint) 15'' x 4 = _____ b/m

10 jumps 15'' x 4 = _____ b/m



LEARNING HOW TO CONTROL OUR EFFORT

Heart rate or pulse

Our heart rate or pulse is very useful to know how our heart works. It's also useful to know the intensity of our exercise, and that is why we should observe/monitor our heart rate time to time.

What is your maximum Heart rate? Your maximum, the one that you should be close to is your Maximum Heart Rate (MHR). Above your MHR your health might be at risk. Remember that **your maximum heart rate is the 100% of intensity**.



To know your MHR, you just need to subtract your age from 220:

$$\text{MHR} = 220 - \text{age}.$$

If you are 13 years old. $\text{MHR} = 220 - 13 = 207$

Maximum is not recommended

The different **exercise zones** depend on the intensity of the exercise you do. How can you know where your **exercise zone** is? It is recommended that people exercise between 60-80% of their maximum heart rate; it is the most effective zone for improving your fitness.

Karvonen Formula

The Karvonen Formula is a mathematical formula that helps you determine your target heart rate (HR) training zone. The formula uses maximum and resting heart rate with the desired training intensity to get a target heart rate.

Target Heart Rate = ((max HR – resting HR) × %Intensity) + resting HR example

Ideally, you should measure your resting and maximum heart rate for more accurate results. If the maximum heart rate cannot be measured directly, it can be roughly estimated using the traditional formula 220 minus your age).

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Example Training Heart Rate Zone

For example, for a 25 yr old who has a resting heart rate of 65, wanting to know his training heart rate for the intensity level 60% - 70%.

His Minimum Training Heart Rate:

$$220 - 25 (\text{Age}) = 195$$

$$195 - 65 (\text{Rest. HR}) = 130$$

$$130 \times .60 (\text{Min. Intensity}) + 65 (\text{Rest. HR}) = 143 \text{ Beats/Minute}$$

His Maximum Training Heart Rate:

$$220 - 25 (\text{Age}) = 195$$

$$195 - 65 (\text{Rest. HR}) = 130$$

$$130 \times .70 (\text{Max. Intensity}) + 65 (\text{Rest. HR}) = 156 \text{ Beats/Minute}$$

His training heart rate zone will therefore be 143-156 beats per minute.