



# Science Pulse Experiment Report



## 1. Learning Outcomes:

- Students are able to count their heart rate (pulse) in resting heart beats per minute (BPM).
- Students are able to mention what factors that can effect the heartbeat (pulse) in BPM.

## 2. Questions

- Is the pulse of resting heart is the same with the pulse after exercise?
- Is the pulse will beats differently when people do different types of exercise?
- Is the pulse will beats differently when people do exercise with different duration (length of time) of exercise?
- Is the pulse will beats differentlyt when people do exercise with different distance?

## 3. Hypothesis (Prediction)

- The rest heart beat before or after exercise are the same.
- The different types of exercise cannot effect the pulses.
- The different lenght of exercise cannot effect the pulses.

## 4. Preparations

- Your resting heart race.
- Stopwatch (you may use your mobile phone's Stopwatch and set it at 60 seconds or you may set it 10 seconds x 6)
- Calulator
- Record pulse report.

## 5. Steps

### A. To find out the pulse of resting heart.

- Count your resting heart race in 60 seconds.
- (If you count in 10 seconds, ask your parents to help you to multiply by 6)
- (Check the video how to find the pulse and how to count).
- Fill the result on the table given (table 1.1)

### B. To find out can types of exercise effect the pulses.

- Do exercise (walk fast in the place ) for 20 seconds.
- Count your pulse.
- Fill the result on the table given. (table 1.2)

- Rest your body until the pulse back to normal.
- Do exercise (run fast in the place ) for 20 seconds.
- Count your pulse.
- Fill the result on the table given. (table 1.2)

**C. To find out can length of exercise effect the pulses.**

- Do exercise (Run in the place ) for 20 seconds.
- Count your pulse.
- Fill the result on the table given. (table 1.3)
- Rest your body until the pulse back to normal.
- Do exercise (Run in the place ) for 40 seconds.
- Count your pulse.
- Fill the result on the table given. (table 1.3)

**D. To find out can the distance of exercise effect the pulses.**

- Do running exercise for 4 meter (2 meter back and forth) distance.
- Count your pulse.
- Fill the result on the table given. (table 1.4)
- Rest your body until the pulse back to normal.
- Do exercise for 8 meter (4 meter back and forth) distance .
- Count your pulse.
- Fill the result on the table given. (table 1.4)

## Let's do the experiment

**A. To find out the pulse of resting heart.**

Name of Students	Resting heart pulse (BPM)

Table 1.1

**B. To find out can types of exercise effect the pulses.**

Resting Heart pulse in BPM	Pulse after walking 20 seconds in (BPM)	Pulse after running 20 seconds in (BPM)

Table 1.2

C. To find out can length of exercise effect the pulses.

Resting Heart pulse in BPM	Pulse after running 20 seconds in BPM	Pulse after running 40 seconds in BPM

Table 1.3

D. To find out can the distance of exercise effect the pulses.

Resting Heart pulse in BPM	Pulse after running 4 meter	Pulse after running 4 meter

Table 1.4

**Answer these questions below based on the experiment above**

**A. Pulse resting heart experiment.**

- What is your resting heart rate beats per minute (BPM)?

**B. Type of exercise effect the experiment.**

- Which actions (running or walking) resulted in the highest heart rate?

**C. The Duration (length) effect the experiment.**

- Which length of exercise (20 seconds or 40 seconds) resulted in the highest heart rate?

**D. The distance of exercise effect the pulses.**

- Which distance of exercise (4 meter or 8 meter) resulted in the highest heart rate?

Now, after the experiment try to answer these questions below.

a. Is there any different about the pulse of resting heart beat and pulse after exercising?

b. Can the type of exercise effect the pulse?

c. Can the duration (length) of doing activities effect the pulse before and after the exercise?

#### 6. Conclusion.

1. The resting heartbeat is when the pulse normally beats.

2. The heart can move  if it needs to.

3. By doing exercise we can make the heartbeat, beat

4. Type of exercise, the length of time (duration) of exercise and the distance when we do exercise can make the pulse beats

#### Going further

5. Aisyah does some exercise. Saleh does some exercise. They want to compare their pulse rates. What two things must they do to make this a fair test? Click two answer.

Same length of time

Different length of time

Same distance

Different distance

Alhamdulillah