

PHYSICAL ACTIVITY AFFECT ON PULSE AND BREATHING

laboratory work

Situation description:

One of a person's health indicators is the pulse. Normally a person's pulse while being calm is 60-80 beats per minute, breathing frequency - 16 times per minute. Physical activity affects these indicators.

Write down the research problem and hypothesis!

Research problem:

Hypothesis:

Work equipment:

Stopwatch

Course of work

1st part

First read all the instructions carefully!

I. Pulse detection

1. Count your pulse in a sitting position for 15 seconds then times it by 4. Write the result in the tables 1st aisle
2. ride a bike for 3 minutes.
3. Immediately after riding the bike count your pulse for 15 seconds then times it by 4. Write the result in the tables 2nd aisle.
4. Sit calmly for 15 seconds then again count your pulse for 15 seconds and calculate the result as before. Write the result in the tables 3rd aisle
5. Sit calmly for 30 seconds then again count your pulse for 15 seconds and calculate the result as before. Write the result in the tables 4th aisle
6. Sit calmly for 1 minute then again count your pulse for 15 seconds and calculate the result as before. Write the result in the tables 5th aisle
7. Sit calmly for 2 minutes then again count your pulse for 15 seconds and calculate the result as before. Write the result in the tables 6th aisle

Change of pulse after physical activity.

Pulse					
Before the experiment (sitting)	Right after physical activity	15 seconds after activity	30 seconds after activity	1 minute after activity	2 minutes after activity
1	2	3	4	5	6

II. Breathing frequency determination

Before this experiment check if you have regained your normal pulse

1. Repeat the the previous activities, only now in the 15 second time you have to count your breathing frequency
2. Write the results in the second table.

BREATHING FREQUENCY CHANGE AFFECT AFTER PHYSICAL ACTIVITY

Breathing frequency					
Before the experiment (sitting)	Right after physical activity	15 seconds after activity	30 seconds after activity	1 minute after activity	2 minutes after activity
1	2	3	4	5	6

Make a graph about pulse and breathing frequencies change during the experiment.

Result analysis, judging and conclusion

1. Judge pulse and breathing frequencies change during the experiment!
 - a) When was the pulse fastest and what was the biggest breathing frequency?

b) When was the slowest pulse and when was the smallest breathing frequency?

2. How can you explain these differences?

a) Why did the pulse and breathing frequency fasten?

b) Why after a longer time after physical activity breathing frequency and pulse slow down?

3. What else affects pulse and breathing frequency?

4. What inaccuracies were made during the experiment?

a)

b)

What can you do to make the experiment more efficient?

2nd part

Situation description

It's different. You can see the difference between sporty people and physically unactive people.

Research problem:

Hypothesis:

Result analysis: