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7th grade Science
Science Fair Logbook

Logbook

Title:

- How Does Exercise Affect Your BPM

Objective:

- In this experiment I will be testing my heart rate to find the differences in walking, running, and sprinting.

Statement of the Problem:

- What is the problem in this experiment? The problem in this experiment is testing the different heart rates I have while walking, running, and sprinting. I want to do this experiment because I enjoy running after school. I think this experiment will help people in my community because it might inspire more people to track their own heart rate and they might detect a heart condition.

Dependent and Independent Variable:

- Independent-Speed
- Dependent- BPM
- Control-The amount of time,same environment,same time

Hypothesis:

If I sprint for 3 minutes, then my heartbeat will increase by 20 BPM from walking and running because the faster my body moves the more my BPM will increase.

Materials:

- 1 heart rate monitor watch
- 1 notebook
- 1 pencil
- 1 timer

Procedures:

1. Turn on the heart rate monitor.
2. Turn on the 3 min timer and start walking.
3. Once the timer ends, stop walking.
4. Get your notebook and pencil.
5. Open your notebook to a blank page
6. Record your bpm on the paper
7. Repeat steps 2-5 but instead of walking, run.
8. Take a 5 min break so your heat can slow down.
9. Repeat steps 2-5 but instead of running, sprint.
10. Observe all of your data to make sure it is correct.

Results:

My results showed that walking makes my heart rate go 118 beats per minute. While I was running it rose up to 150 beats per minute. Then while I was sprinting it spiked up to 187 beats per minute. The results told me that while I sprint my heart beats faster than if I was running or walking.

Conclusion:

The objective of this experiment is to test my heart rate to find the differences in walking, running, and sprinting. I accomplished my objective by recording my heart rate after walking, running, and sprinting. The results showed me sprinting had a large increase of my heart rate from running and walking.

My hypothesis was supported by my experiment. I predicted

that while I am sprinting my heat rate will increase by 20 bpm from walking and running.

My results showed me that sprinting makes your heart beat faster than if you were to run or walk. This is because the more your body moves the faster your heart rate will spike up. While I was sprinting I had an average heart rate of 187bpm. While I was running I had an average heart rate of 150bpm. While I was walking I had an average heart rate of 118bpm.

From this lab I learned that your heart rate can determine a lot about your health. I also learned that an average kid's heart rate is 70-100bpm while resting.

If I were to repeat this experiment I would change a few things. First, instead of walking I could just rest. Second, I would test my heart rate while I'm walking, running, and sprinting as soon as I wake up to see if there is a difference. Lastly, I would drink an energy drink and see if it impacts my heartbeat.

Pictures:

- All pictures/captions should be added to the slide presentation only.

References:

- https://www.slideshare.net/slideshow/lab-report-heart-beat/7608859