Regulation of Human Heart Rate

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Hypothesis

Your heart rate will increase after 20 squats

Hypothesis support

Physical exercise will increase your heart rate. Exercise requires more oxygen in your muscles, making your heart pump blood at a faster rate.

Experiment

Steps

- Test subject sits in chair for 30 seconds.
- Test heart rate of subject while standing up using the procedure on pg. 2.
- Record data on chart.
- Subject completes 20 squats.
- Test heart rate of subject while standing after 20 squats using the procedure on pg. 2
- Record data on chart.

Data

	Squats	BPM before exercise	BPM after exercise	% increase
Alvaro	20	71 BPM	122 BPM	+71%
Luke	20	77 BPM	118	+53%
Deanna	20	65 bpm	114	+75%
Miriam	20	76	118	+55%
Avgs:		72.25	118	63%

- Other variables:
  - other group being rowdy
  - chewing gum
  - didn't find heart rate right away after squats

Conclusion

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Physical exercise increases heart rate, although the percent change of BPM varies amongst subjects. The reason being is the fact that physical activities require the use of energy, aka ATP. We get ATP through the circulatory system, so the increased intake of oxygen is required. As we have learned, the increase of oxygen means that the heart rate will increase as well.

We also found that the average BPM increase is 63%. The average resting rate 72 BPM and the average exercise rate is 118.