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Physiology

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Lab 11

Title: 11B: Demonstration of a Measurem of physical fitness

Introduction: Fitness may be measured in a number of standardized tests, however we will be measuring the changes in heart rate as it relates to activity and participant's age. We will monitor the change in pulse rate that occurs when a resting student exercises and, then, attempts to return to a resting pulse rate.

Procedure:

1. Select threestudents who exercise regularly and threestudents who do not. Each student will take his/her resting pulse rate for one minute and record this value.
2. Each student will then run the track twice at a fast but comfortable pace.
3. Immediately upon returning to the laboratory, each student will record his/her pulse after exercise.
4. Each student will take his/her pulse at one minute intervals until the resting pulse is reestablished. (NOTE: The best method to employ is to take the pulse rate for 15 seconds and multiply by 4.)
5. These results will be recorded on the chalkboard for discussion. Is there a difference between the exercisers and the non-exercisers? Which student(s) do you consider to be in better physical condition? Why?

6. Determine the target heart rate range for each student (if the ages are available) and for yourself. The target heart rate range determines the heart rate that should be maintained for 20-30 minutes, at least 3 times per week for cardiovascular fitness. To determine your target heart rate range do the following calculations for the Karvonen formula (only use numbers rounded off to whole numbers)
7. Lastly, measure the BP three minutes after standing. Record these values for your use and on the chalkboard.
8. Discuss the orthostatic response in terms of the receptors used and the effects of postural change. Include any limitations to obtaining reliable results.

Discussion: It was interesting to hear about the individuals who don't exercise as often measure their bp after the exercise. Many people who don't exercise daily have a difference in completely certain activities in a certain amount of time compared to those who do. The body has to work faster to bump up the blood and oxygen they need to get through.

Conclusion: Individuals who don't exercise regularly have a higher blood pressure than those who do.

Results:



