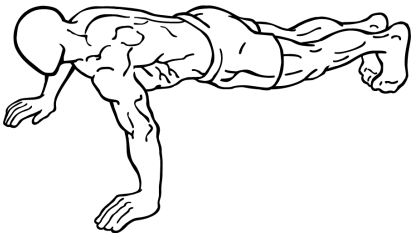
SNC2D0 Lab Activity - How Does Exercise Affect Heart Rate

Objectives

- Develop a hypothesis about the effects of exercise on heart rate
- Compare heart rates of individuals at different activity levels
- Determine the heart's recovery time



Safety considerations: If you have any medical conditions that may prohibit you from
physical activity, abstain from the activity and gather data from your group.

Experimental Questions:

- How does exercise affect heart rate?
- How long does it take for the heart to return to normal?

Step 1: Design the Experiment

As a group, develop a plan to answer the experimental questions, make sure you address all of the questions. As a group, you must consider the following, and write down your ideas. Your instructor will approve your plan before you proceed.
Consider **how many research subjects** you will use and **what types of exercises** they will do and **how you will measure heart rates**.
Describe your plan below.

Step 2: Data Collection

In the space below, record your data in an organized way using **tables, charts, or graphs**. Your data should have all appropriate labels and units so that any person reading the data would be able to understand it. You may also wish to include data collected from other groups.

Step 3: Analysis

1. Using your data, answer the experimental questions by writing a CLAIM that answers both experimental questions.

2. Provide EVIDENCE that supports your claim. This is where you summarize the data you gathered.

3. Suggest REASONS for the claim by connecting your observations to anatomy and physiology and why the body would respond that way. Discuss reasons why individuals may differ in their recovery times.

4. Feedback mechanisms maintain a living system's internal conditions, allowing it to remain alive and functional even as external conditions change. How can feedback mechanisms explain the changes you observed in this activity? How do these mechanisms help an organism maintain HOMEOSTASIS? (Think carefully on this one.)

5. Suggest ways that the experiment could be improved.