

**Investigation 8.B: Factors Affecting
Heart Rate and Blood Pressure**

Question: How can you isolate factors that affect blood pressure and heart rate?

Hypothesis

Make and record a hypothesis about the effects of at least two different factors on heart rate and blood pressure.

Safety Precautions

Do not over-inflate the blood pressure cuff. Students with circulatory or blood pressure problems should not be test subjects.

Materials

- blood pressure cuff
- watch with a second hand or a digital display of seconds

Experimental Plan

1. Working in a group, prepare a list of ideas for testing your hypothesis, using the materials available in your classroom.
2. Decide on one idea you can use to design an experiment that can be conducted in your classroom.
3. What will be your manipulated variable? What will be your responding variable(s)? What will be your control variable(s)? How many trials will you run? Remember that you should test one variable at a time. Plan to collect quantitative data.
4. Outline, step-by-step, a procedure for your experiment. Assemble the materials you will require.
5. Design a table for collecting your data.
6. Obtain your teacher's approval before starting your experiment.

Data and Observations

7. Conduct your experiment, and record your results. Prepare a graph or chart to help you communicate your findings to other groups in the class.

Analysis

1. What was the resting blood pressure and heart rate for each test subject?

