

NAME _____

PERIOD _____

HEALTH LAB 1

INTRODUCTION: In this experiment, you will compare the strength and endurance of two types of muscle.

OBJECTIVES:

Work with a partner to determine your pulse rate, which will show the rate at which the cardiac muscle extends and contracts.

Test a skeletal muscle to determine whether it has the same strength and endurance as the cardiac muscle.

MATERIALS:

A watch with second hand (or stop watch).

A small rubber ball or tennis ball.

PROCEDURE:

PART A - Measuring your pulse

1. Use figure 1 on the back to record your pulse conditions (2 points).
2. Count and record your pulse for 15 seconds. Multiply this by 4 to get your pulse rate per minute. Use the carotid pulse in your throat.
3. Ask your partner to walk briskly around the perimeter of the room and sit down again. Measure his/her pulse again for 15 seconds (multiplying by 4 to get beats per minute). Record your findings in the *After Walking* box.
4. Ask your partner to run in place for 2 minutes and then sit down. Measure the pulse rate for the third time. Record your findings in the *After Exercising* box.
5. Calculate your partner's average resting heart rate by adding the three rates together and dividing by three. Record this average at the bottom of your chart.
6. Switch positions and repeat steps 1 - 5, as your partner measures and records your results.

PART B - Test a skeletal muscle

7. Use figure 2 on the back.
8. Give the ball to your partner. She/He should squeeze the ball in his/her hand at her/his average pulse rate. (For example, 72 times per minute.) Your partner should continue until he/she feels too tired to go on. Time and record the results. (2 points)
9. Switch positions and repeat step 8.

Analysis:

Answer the questions on the back.