

Sec.: _____ Name: _____

Experiment: EKG and Blood Pressure
(B. Science 10-37-2)

Purpose: To learn what the parts of the EKG stand for and to learn how blood pressure is taken.

Materials: EKG & polygraph
blood pressure cuff

Methods:

Part A: EKG - The electrocardiogram

1. Have a person volunteer to have the EKG done. Observe the pattern on the polygraph and sketch a sample of it.
2. On one of the impulse label the P wave (atrial stimulation), the QRS wave (ventricle stimulation) and the T wave (ventricle repolarization).
3. Record the persons heart rate by using paper speed.

Part B: Blood Pressure Determination by sphygmomanometer

1. The blood pressure cuff works on the principle of applying enough pressure on the vessels to collapse the vessel thus stopping blood flow. This pressure is referred to as systolic which is the result of pressure from when the large ventricles contract.
2. While the diastolic pressure is the lower pressure and is the pressure when the ventricle is relaxed.
3. Record the systolic and diastolic pressure of a volunteer. Then for each pressure describe what that pressure is a result of.

Results:

Part A: EKG - the electrocardiogram

heart rate: _____

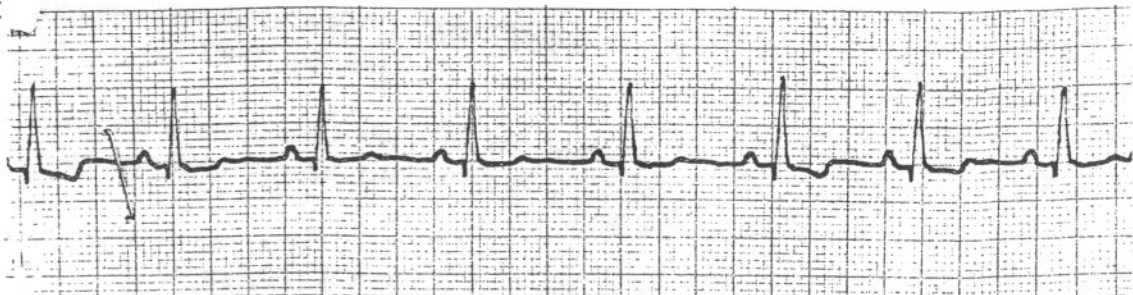
Part B: Blood Pressure Determination by sphygmomanometer

3. Systolic pressure: _____

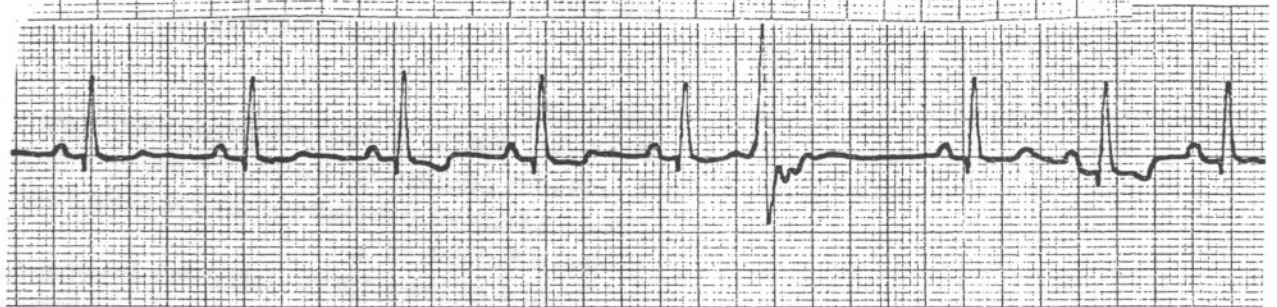
Diastolic pressure: _____

Conclusions:

normal

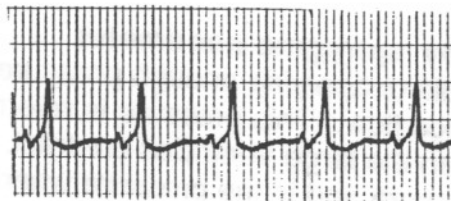


case A



1. Notice the normal EKG pattern labeled "normal." Now observe "case A" EKG. Describe what is wrong with this person's EKG strip.

case B



2. Now observe "case B" EKG. Describe what is wrong with this person's EKG strip.

3. Describe the two things that the body does in response to too high of a blood pressure.

- a.
- b.

4. Describe the two things that the body does in response to too low of a blood pressure.

- a.
- b.

5. What are some problems with a too low of a blood pressure?

6. What are some problems with a too high of a blood pressure?

7. What are some ways of lowering or preventing a high blood pressure?

8a. Luke 21: 26. Explain the physical means of how "men's hearts failing them for fear" may occur?

8b. What events, according to the text, are causing the stressful conditions for the heart failure?