



ACTIVITY 20-1

Taking Blood Pressure

LAB PREVIEW

1. What is blood pressure? _____
2. Why is it important to know your blood pressure? _____

Problem: How can you measure arterial pressure?

Materials

- sphygmomanometer
- stethoscope
- table
- chairs (2)
- alcohol
- cotton balls

Procedure

1. Your partner should sit down on a chair with his or her arm on the table. One hand should face up as in the illustration.
2. Sit and face your partner. Place the cuff of the sphygmomanometer on your partner's arm above the elbow. Align the arrows on the cuff. Close the cuff snugly.
3. Close the valve on the pump. Place the ear pieces of the stethoscope in your ears. Place the round stethoscope head on your partner's brachial artery. Squeeze the pump until the needle reaches 160 on the gauge. No blood flow through this constricted area.
4. *Slowly* open the valve of the pump. *Do not open the valve quickly.* Watch the gauge. The needle will drop at a constant rate. Note the number on the gauge when you first hear the heartbeat. This is the top or systolic number.
5. Keep listening to the heartbeat. Watch the needle on the gauge. Note the number on your gauge when you no longer hear the heart beating. This is the bottom, or diastolic, number. At this point, blood pressure has dropped; blood flow has returned to normal.

6. Take the cuff off your partner's arm. Record your partner's blood pressure. Clean ear pieces with alcohol. Trade places with your partner. **CAUTION:** *Do not do this activity on the same person more than one time per class period.*
7. Fill in the table below.

Data and Observations

Blood Pressure	Example	Yours	Partner's
Systolic	120		
Diastolic	80		



Activity 20-1 (continued)

Analyze

1. Describe what happened in your brachial artery during this activity. _____

2. As you listened to your partner's blood pressure, what did you notice about the needle on the gauge when you first heard the heartbeat rate and later when it stopped? _____

Conclude and Apply

3. How was your blood pressure different from your partner's? _____

4. What can you conclude about a person who has low blood pressure? _____

