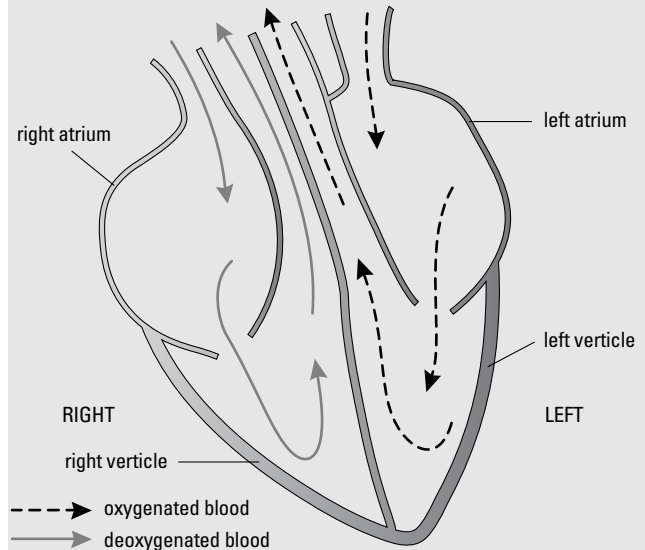


left ventricles. The diagram should show deoxygenated blood (blue) flowing into the right atrium through the venae cavae and flowing out of the right ventricle through the right and left pulmonary arteries. Oxygenated blood (red) should be shown flowing into the left atrium through the pulmonary veins and flowing out the left ventricle through the aorta.



2. An artery has highly elastic walls. This elasticity allows the artery to first expand as a wave of blood surges through it during the contraction of the ventricles, and then snap back again during the relaxation of the ventricles. This movement keeps the blood flowing in the right direction and provides an additional pumping motion to help force the blood through the blood vessels.

The veins are not as elastic, and cannot contract to help the blood move back to the heart, so the contraction of skeletal muscles keeps the blood flowing toward the heart. Veins also have one-way valves that prevent the blood from flowing backwards.

3. No, not all arteries carry oxygen-rich blood, and not all veins carry oxygen-poor blood. The pulmonary artery carries oxygen-poor blood from the right side of the heart to the lungs.

The pulmonary vein carries oxygen-rich blood from the lungs to the left side of the heart.

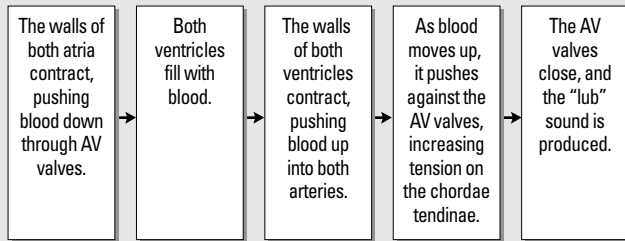
4. pulmonary artery → pulmonary vein → left atrium → left ventricle → aorta → superior vena cava → right atrium → right ventricle

Section 8.1: Review Answers

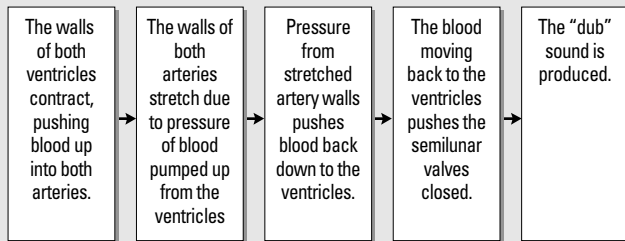
Student Textbook page 281

1. Students' diagrams should resemble Figure 8.2 (B) Internal View of the heart found on page 269. Labels should include the right and left atria and the right and

5. The first heart sound, known as “lub,” is created as follows:



The second heart sound, known as “dub,” is created as follows:



6. The labels are as follows: 1. SA node; 2. AV node; 3. branches of the atrioventricular bundle; 4. Purkinje fibres.

7. There are multiple factors that can lead to high blood pressure, including those that the individual can control. Students should identify any two of these factors and include how the approach they might take to lower high blood pressure:

- **Overweight (obesity):** Obesity is defined as being 30% or more over your healthy body weight. It is very closely related to high blood pressure. Medical professionals strongly recommend that all obese people with high blood pressure lose weight until they are within 15% of their healthy body weight. Your health-care provider can help you calculate your healthy range of body weight.
- **Sodium (salt) sensitivity:** Some people have high sensitivity to sodium (salt), and their blood pressure goes up if they use salt. Reducing sodium intake tends to lower their blood pressure. North Americans consume 10–15 times more sodium than they need. Fast foods and processed foods contain particularly high amounts of sodium. Many over-the-counter medicines, such as painkillers, also contain large amounts of sodium. Read labels to find out how much sodium is contained in food items. Avoid those with high sodium levels.
- **Alcohol use:** Drinking more than 1–2 drinks of alcohol per day tends to raise blood pressure in those who are sensitive to alcohol.
- **Birth control pills (oral contraceptive use):** Some women who take birth control pills develop high blood pressure.

- **Lack of exercise (physical inactivity):** A sedentary lifestyle contributes to the development of obesity and high blood pressure.
- **Drugs:** Certain drugs, such as amphetamines (stimulants), diet pills, and some pills used for cold and allergy symptoms, tend to raise blood pressure.