

KEY

The Heart Review

the two
side-by-side
pumps

1. What is the function of the right side of the heart? The left side?

ventricle

- * Right side: pumps blood to lungs, gets rid of CO_2 , picks up O_2
 - pulmonary circuit (heart $\rightarrow$ lungs $\rightarrow$ heart)
- * Left side: pumps blood to body tissues
 - systemic circuit (heart $\rightarrow$ body $\rightarrow$ heart)

2. List the chambers of the heart and their function.

Receiving chambers

- * right atrium: receives blood from systemic circuit
- * left atrium: receives blood from pulmonary circuit

(circuits switch sides for atria)

pumping chambers

- * right ventricle - pumps blood through pulmonary circuit
- * left ventricle - pumps blood through systemic circuit

3. What is the pericardium? What does it consist of?

* double-walled sac that surrounds the heart

- superficial fibrous pericardium
- deep serous pericardium
 - parietal layer
 - visceral layer

4. List the layers of the heart wall.

1. epicardium

2. myocardium

3. endocardium

Outer



inner

5. The superior chambers of the heart are the:

- a. Atria
- b. Ventricles - inferior chambers
- c. Septum
- d. Coronary sulcus

6. What is the interatrial septum? Interventricular septum?

* Interatrial septum: Separates atria

* Interventricular septum: Separates ventricles

"inside / within"

7. What does the right atrium receive? The left atrium?

* right atrium: deoxygenated blood from body
systemic circuit

* left atrium: oxygenated blood from lungs
pulmonary circuit

8. What is the difference between the superior and inferior vena cava?

"above" → * superior vena cava: returns blood from the body above the diaphragm

"below" → * inferior vena cava: returns blood from the body below the diaphragm

9. What does the right ventricle do? Left ventricle?

* right ventricle: pumps blood into pulmonary trunk
pulmonary circuit

* left ventricle: pumps blood into aorta
systemic circuit

{ passage for blood to the lungs }

{ passage for blood to body }

10. What are the functions of heart valves?

* ensure unidirectional blood flow through the heart

* open and close in response to pressure changes

11. List the major types of valves and their location.

* atrioventricular valves: between atria and ventricles

* semilunar valves: between ventricles and major arteries

12. Why is it not a problem that heart valves are not between major veins and atria?

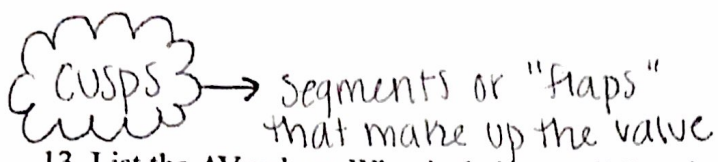
* inertia of incoming blood prevents backflow

↓
"resistance to change in motion" The flow of blood coming in is stronger than any blood that may travel backward

* heart contractions compress venous openings

↓
squeeze / make smaller

smaller opens = less can get through... more difficult



tricuspid → ③ 3 cusps

bicuspid → ② 2 cusps

13. List the AV valves. What is their overall function? Composition? Location?

* tricuspid valve : 3 cusps, is between right atria and ventricle

* bicuspid valve : 2 cusps, is between left atria and ventricle
Function → prevent backflow into atria when ventricles contract

14. List the SL valves. What is their overall function? Composition? Location?

* pulmonary SL valve : 3 cusps, is between right ventricle and pulmonary trunk

* aortic SL valve : 3 cusps, is between left ventricle and aorta

Function → prevent backflow from major arteries back into ventricles

15. What is incompetent valve?

* blood backflow, so heart pumps the same blood over and over again

opposites
problems

16. What is valvular stenosis?

* stiff flaps that constrict opening

* heart needs to exert more force to pump blood

17. What are the two main components of coronary circulation? What are their functions?

"of or relating to the heart"

* coronary arteries : supply arterial blood to heart

* coronary veins : collect blood from capillary beds
(where gas is exchanged)

coronary circulation provides O_2 for the heart

18. What is angina pectoris?

Thoracic pain caused from fleeting deficiency in blood delivery to myocardium (middle layer of heart wall)

19. What is myocardial infarction?

* heart attack

* caused by prolonged coronary blockage

blockage within the circulation that provides O_2 for the heart