



*Physiology*  
OF THE CARDIOVASCULAR SYSTEM

# Capillary Circulation

1. A patient diagnosed with Filariasis a parasitic disease causing edema to his left leg, What is the mechanism that this parasite work to cause edema.

- A) *This parasite increase the permeability of capillaries.*
- B) *This parasite block the venous system.*
- C) *This parasite block the lymphatic capillaries.*
- D) *The toxins of this parasite cause low proteins levels.*

2. A patient having excess amount of renin released , and he developed an edema in the abdominal wall, The cause for this edema:

- A) *Increasing the protein level in the blood.*
- B) *Retention of the fluid and sodium.*
- C) *Increase the permeability of the capillaries.*
- D) *Decreased arteriolar resistance*

3. A patient with body temperature of 36 which of the following adaptions inside the body will help regulating his temperature?

- A) *Capillaries vasodilatations*
- B) *Decrease workload of heart*
- C) *Capillaries vasoconstriction*
- D) *Increase oxygen consumption*

4. The exchange in continuous capillaries will be through:

- A) *Gaps in the endothelial lining*
- B) *Fenestrated pores in the walls*
- C) *Active channels*
- D) *All of them*

5. Hydrostatic pressure refers to : Exerts of fluids on the walls of blood vessels

- A) *Permeability of plasma protein through endothelial lining*
- B) *Hydrogen concentration in the blood*
- C) *Concentration of fluids in Extracellular Matrix*

6. Oncotic pressure refers to :

- A) Exerts of fluids on the walls of blood vessels
- B) Permeability of plasma protein through endothelial lining
- C) Hydrogen concentration in the blood
- D) Concentration of fluids in Extracellular matrix

7. A patient diagnosed with varicose veins in the medial side of his leg, which of the following factors it will increase and cause edema?

- A) Arteriolar resistance
- B) Capillary pressure
- C) Plasma proteins
- D) Venous pressure

8. Which of the following factors will decrease arteriolar resistance?

- A) Vasoconstrictor drugs
- B) Excess body heat
- C) Vitamin C deficiency
- D) Toxins

9. A patient diagnosed with parasitic infection cause filariasis, which of the following factors will cause edema?

- A) Increased capillary hydrostatic pressure
- B) Decreased plasma oncotic pressure
- C) Lymphatic obstruction
- D) Increased capillary permeability

10. If you know that, the capillaries hydrostatic pressure is 29 mmhg and interstitial hydrostatic pressure is 2 mmhg, while capillaries oncotic pressure is 23 and interstitial oncotic pressure is 0.5. Calculate the net force and what will happen?

- A) 5.5 (filtration)
- B) 4.5 (filtration)
- C) 4.5 (reabsorabtion)

D) -4 (reabsorption)

10. The exchange of gases and nutrients between blood and tissues is a major function of:

- A) Arterioles
- B) Arterioles
- C) Arteries
- D) Capillaries
- E) Veins

11. Which of the following statements best describes arteries?

- A) All arteries carry oxygenated blood towards the heart
- B) All arteries contain valves to prevent the back-flow of blood
- C) All arteries carry blood away from the heart
- D) Only large arteries are lined with endothelium

12. Which tunic of an artery contains endothelium?

- A) Tunica interna/intima
- B) Tunica media
- C) Tunica externa
- D) Tunica adventitia

14. {1. Arterioles 2. Elastic arteries 3. Muscular arteries}

Arrange them in the order an erythrocyte passes through them as it leaves the heart:

- A) 1,2,3
- B) 1,3,2
- C) 2,3,1
- D) 2,1,3
- E) 3,2,1

**Answers:**

Q1: C

Q2: B

Q3: C

Q4: A

Q5: A

Q6: B

Q7: D

Q8: B

Q9: C

Q10: B

Q11: D

Q12: C

Q13: A

Q14: C

**FOR MORE MCQs ABOUT CAPILLARIES:**

<https://highered.mheducation.com/novella/QuizProcessingServlet>