

CVS-Physiology

Archive

Lecture 9

THE MICROCIRCULATION

Corrected by:

Sara farajat

1. Continuous capillaries one is true :

- a. Narrow lumen
- b. Blood thymus barrier is an example

Ans :a

2. Precapillary sphincter would open and shut based on ?

- a . **O₂ availability**

3. True about Starling force in capillary bed :

- A . hydrostatic capillary pressure is absorbing force
- B . interstitial fluid pressure increases about 1 mmHg
- C . interstitial colloid osmotic pressure outwards force towards the capillary
- D . arteriolar end the filtering force exceeds 22 mmHg
- E . in venous side the reabsorbing force exceeds 1 mmHg

Answer : B

4. Which of the following is not true ?

- a . As you start to move from arterioles to capillaries the cross-sectional area and velocity are going to start rising
- b . Increase the preload would increase the stroke volume and thus the perfusion blood pressure
- c . Turbulent blood flow observed in both pathological and physiological conditions
- d . Hypertension would increase afterload and thus decrease stroke volume
- e -Polycythemia would decrease perfusion blood pressure

Ans :a

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Lecture 10

**Regulation of the
diameter of arteriole**

Corrected by:

Raneem Bashtawi

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Lecture 10

Which of the following decreases in active muscle?

- A. Temperature
- B. Blood pressure (BP)
- C. Heart rate (HR)
- D. Blood vessel diameter

answer: D

Which of the following regulates the fine control of ABP? Select one:

- a. Medulla oblongata
- b. Midbrain
- c. Hypothalamus
- d. Pons
- e. Cerebellum.

answer: A

All the following produces coronary Vasodilatation. Except?

Select one:

- a. Renal ischemia
- b. Adenosine.
- C. EDRF.
- d. Histamine.
- e. Hypoxia.

answer: A

What is primary regulator of blood flow to muscles during rest?

- a. Sympathetic vasoconstriction tone
- b. Metabolic demand

answer: A

All about baroreceptors is true, EXCEPT:

- A. Found in carotid sinus
- B. Aortic arch
- C. Normally firing at late systole
- D. Monitor arterial pressure
- E. Innervated by glossopharyngeal nerve

answer: c

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Lecture 11

Arterial Blood Pressure

Corrected by:

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Lecture 11

1- One of the following is NOT true about mean arterial blood pressure:

- A- It maintains tissue perfusion throughout various tissues.
- B- It produces capillary hydrostatic pressure.
- C- Equals the the average pressure in the systemic arteries throughout the cardiac cycle.
- D- It represents the force that drives the blood to the tissues.
- E- Equals systolic pressure minus diastolic pressure.

Answer: E. Equals systolic pressure minus diastolic pressure.

2- A female patient came to hospital with pressure of 160/ 72 mmHg. After some investigations, the doctors found aortic regurgitation. One of the following is TURE:

- A- High systolic pressure, low diastolic pressure and high pulse pressure.
- B- High systolic pressure, high diastolic pressure and low pulse pressure.
- C- Low systolic pressure, high diastolic pressure and low pulse pressure.
- D- Low systolic pressure, low diastolic pressure and high pulse pressure.
- E- High systolic pressure, high diastolic pressure and high pulse pressure.

Answer: A- High systolic pressure, low diastolic pressure and high pulse pressure.

3- Pulse pressure increases when _____ decreases. Choose the best:

- A- Systolic pressure.
- B- SV.
- C- Arterial compliance.
- D- Plasma volume.
- E- VR.

C) The difference between systolic pressure and diastolic pressure is called the pulse pressure. The two main factors that affect pulse pressure are stroke volume and arterial compliance. Pulse pressure is directly proportional to the stroke volume and inversely proportional to the arterial compliance. Thus, a decrease in arterial compliance would tend to increase pulse pressure.

4- One of the following is NOT true:

- A- Perfusion pressure equals mean arterial pressure minus central venous pressure.
- B- Systolic blood pressure on average is 120 mmHg.
- C- Diastolic blood pressure on average is 80 mmHg.
- D- If a patient's blood pressure is 83/50 mmHg. Their MAP would be a 50 mmHg.
- E- Mean arterial blood pressure determines the actual pressure by which the substances will be propelled out of the capillary beds into the tissues.

Answer: D- If a patient's blood pressure is 80/50 mmHg. Their MAP would be a 50 mmHg.

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Lecture 11

Aortic regurgitation ,B.P=150/75

Low diastolic high systolic high pulse pressure



ical card .
ame _____ Surname _____
Gender _____ Date of birth _____
Address _____
Date of call _____
Sign _____

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Lecture 11

Supplementary Questions: Guyton's Book:

1- A 35-year-old woman visits her family practitioner for an examination. She has a blood pressure of 160/75 mm Hg and a heart rate of 74 beats/min. Further tests by a cardiologist reveal that the patient has moderate aortic regurgitation. Which set of changes would be expected in this patient?

	Pulse Pressure	Systolic Pressure	Stroke Volume
A)	↑	↑	↑
B)	↑	↓	↑
C)	↑	↓	↓
D)	↑	↑	↓
E)	↓	↓	↓
F)	↓	↑	↓
G)	↓	↑	↑
H)	↓	↓	↑

Answer: A) The difference between systolic pressure and diastolic pressure is the pulse pressure. The two major factors that affect pulse pressure are the stroke volume output of the heart and the compliance of the arterial tree. In patients with moderate aortic regurgitation (due to incomplete closure of aortic valve), the blood that is pumped into the aorta immediately flows back into the left ventricle. The backflow of blood into the left ventricle increases stroke volume and systolic pressure. The rapid backflow of blood also results in a decrease in diastolic pressure. Thus, patients with moderate aortic regurgitation have high systolic pressure, low diastolic pressure, and high pulse pressure.

2- Under control conditions, flow through a blood vessel is 100 ml/min with a pressure gradient of 50 mm Hg. What would be the approximate flow through the vessel after increasing the vessel diameter by 50%, assuming that the pressure gradient is maintained at 100 mm Hg?

- A- 100 ml/min
- B- 150 ml/min
- C- 300 ml/min
- D- 500 ml/min
- E- 700 ml/min

D) Blood flow in a vessel is directly proportional to the fourth power of the vessel radius. Increasing vessel diameter by 50% ($1.5 \times$ control) would increase blood flow 1.5 to the fourth power \times normal blood flow (100 ml/min). Thus, blood flow would increase to $100 \text{ ml/min} \times 5.06$, or approximately 500 ml/min.

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Supplementary Questions: Guyton's Book:

3- A 60-year-old man visits his family practitioner for an annual examination. He has a mean blood pressure of 130 mm Hg and a heart rate of 78 beats/min. His plasma cholesterol level is in the upper 25th percentile, and he is diagnosed as having atherosclerosis. Which set of changes would be expected in this patient?

	Pulse Pressure	Arterial Compliance	Systolic Pressure
A)	↑	↑	↑
B)	↑	↓	↑
C)	↑	↓	↓
D)	↑	↑	↓
E)	↓	↓	↓
F)	↓	↑	↓
G)	↓	↑	↑
H)	↓	↓	↑

Answer: B) A person with atherosclerosis would be expected to have decreased arterial compliance. The decrease in arterial compliance would lead to an increase in systolic pressure and pulse pressure.

4-In control conditions, flow through a blood vessel is 100 ml/min under a pressure gradient of 50 mm Hg. What would be the approximate flow through the vessel after increasing the vessel diameter to four times normal, assuming that the pressure gradient was maintained at 50 mm Hg?

- A- 300 ml/min
- B- 1600 ml/min
- C- 1000 ml/min
- D- 16000 ml/min
- E- 25600 ml/min

Answer: E) According to Poiseuille's law, flow through a vessel increases in proportion to the fourth power of the radius. A fourfold increase in vessel diameter (or radius) would increase 4 to the fourth power, or 256 times normal. Thus, flow through the vessel after increasing the vessel 4

Supplementary Questions: Guyton's Book:

5- An increase in which of the following would be expected to decrease blood flow in a vessel?

- A- Pressure gradient across the vessel.
- B- Radius of the vessel.
- C- Plasma colloid osmotic pressure.
- D- Viscosity of the blood.
- E- Plasma sodium concentration.

Answer: D) The rate of blood flow is directly proportional to the fourth power of the vessel radius and to the pressure gradient across the vessel. In contrast, the rate of blood flow is inversely proportional to the viscosity of the blood. Thus, an increase in blood viscosity would decrease blood flow in a vessel.

6- Assuming that vessels A to D are the same length, which one has the greatest flow?

	Pressure Gradient	Radius	Viscosity
A)	100	1	10
B)	50	2	5
C)	25	4	2
D)	10	6	1

Answer: D) The flow in a vessel is directly proportional to the pressure gradient across the vessel and to the fourth power of the radius of the vessel. In contrast, blood flow is inversely proportional to the viscosity of the blood. Because blood flow is proportional to the fourth power of the vessel radius, the vessel with the largest radius (vessel D) would have the greatest flow.

7- What would tend to increase a person's pulse pressure?

- A- Decreased SV
- B- Increased arterial compliance
- C- Hemorrhage
- D- Patent ductus
- E- Decreased VR

Answer: A) The two main factors that affect pulse pressure are stroke volume and arterial compliance. Increases in stroke volume increase pulse pressure, whereas an increase in arterial compliance decreases pulse pressure. Hemorrhage and decreased venous return would decrease stroke volume and pulse pressure. In patients with patent ductus, stroke volume and pulse pressure are increased as a result of shunting of blood from the aorta to the pulmonary artery.

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Lecture 12

Regulation Of Blood
Pressure

Corrected by:

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Lecture 12

1- If blood pressure in the carotid artery falls, the changes that will occur:

- A- Carotid baroreceptors will increase their stimulatory impulses.
- B- Carotid baroreceptors will decrease their inhibitory impulses.
- C- Arteriolar dilatation will occur causing a decrease in peripheral resistance.
- D- Depressor center gives more inhibitory impulses to pressor.
- E- Bradycardia is one result.

Answer: B- Carotid baroreceptors will decrease their inhibitory impulses.

2- One of the following is NOT an effect of renin- angiotensin system:

- A- Strong arteriolar VC.
- B- Stimulation of aldosterone release.
- C- Stimulation of vasopressin release.
- D- Stimulation of NA release.
- E- Stimulation of salt and water excretion.

Answer: E- Stimulation of salt and water excretion.

3- Immediately after hemorrhage:

- A. There is increase in the muscle tone of abdominal wall muscles.
- B. There is increase in the central venous pressure.
- C. There is conversion of tissue proteins into plasma proteins.
- D. There is Increase in sympathetic discharge to the heart due to increase the firing of baroreceptors.
- E. Anemic hypoxia stimulates release of erythropoietin from the kidney to stimulate erythropoiesis.

Answer: D (archive's answer, not sure though).

4- One of the following regulates the fine control of ABP:

- A- Medulla oblongata.
- B- Midbrain.
- C- Hypothalamus.
- D- Pons.
- E- Cerebellum.

Answer: A- Medulla Oblongata.

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Lecture 12

5- All about baroreceptors are true, EXCEPT:

- A- Could be found in carotid sinus.
- B- Could be found in aortic arch.
- C- Normally firing at late systole.
- D- Monitor arterial blood pressure.
- E- Some are innervated by glossopharyngeal nerve.

Answer: C- Normally firing at late systole

6- One of the following inhibits VMC:

- A- Mild hypercapnia.
- B- Moderate hypoxia.
- C- Left ventricular baroreceptors.
- D- Peripheral chemo receptors.
- E- Central chemoreceptors.

Answer: C- Left ventricular baroreceptors.

Supplementary Questions: Guyton's Book:

1- A healthy 60-year-old woman with a 10-year history of hypertension stands up from a supine position. Which set of cardiovascular changes is most likely to occur in response to standing up from a supine position?

	Sympathetic Nerve Activity	Parasympathetic Nerve Activity	Heart Rate
A)	↑	↑	↑
B)	↑	↑	↓
C)	↑	↓	↓
D)	↑	↓	↑
E)	↓	↓	↓
F)	↓	↓	↑
G)	↓	↑	↑
H)	↓	↑	↓

Answer: D) Moving from a supine to a standing position causes an acute fall in arterial pressure that is sensed by arterial baroreceptors located in the carotid bifurcation and aortic arch. Activation of the arterial baroreceptors leads to an increase in sympathetic outflow to the heart and peripheral vasculature and a decrease in parasympathetic outflow to the heart. The increase in sympathetic activity to peripheral vessels results in an increase in total peripheral resistance. The increase in sympathetic activity and decrease in parasympathetic outflow to the heart result in an increase in heart rate.

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2- A 60-year-old woman has experienced dizziness for the past 6 months when getting out of bed in the morning and when standing up. Her mean arterial pressure is 130/90 mm Hg while lying down and 95/60 while sitting. Which set of physiological changes would be expected in response to moving from a supine to an upright position?

	Parasympathetic Nerve Activity	Plasma Renin Activity	Sympathetic Activity
A)	↑	↑	↑
B)	↑	↓	↑
C)	↑	↓	↓
D)	↑	↑	↓
E)	↓	↓	↓
F)	↓	↑	↓
G)	↓	↑	↑
H)	↓	↓	↑

Answer: G) Moving from a supine to a standing position causes an acute fall in arterial pressure that is sensed by arterial baroreceptors located in the carotid sinuses and aortic arch. Activation of the baroreceptors results in a decrease in parasympathetic activity (or vagal tone) and an increase in sympathetic activity, which leads to an increase in plasma renin activity (or renin release).

3- A 65-year-old man with a 10-year history of essential hypertension is being treated with an angiotensin converting enzyme (ACE) inhibitor. Which set of changes would be expected to occur in response to the ACE inhibitor drug therapy?

	Plasma Renin Concentration	Total Peripheral Resistance	Renal Sodium Excretory Function
A)	↑	↑	↑
B)	↑	↑	↓
C)	↑	↓	↓
D)	↑	↓	↑
E)	↓	↓	↓
F)	↓	↓	↑
G)	↓	↑	↑
H)	↓	↑	↓

Answer: D) Angiotensin I is formed by an enzyme (renin) acting on a substrate called angiotensinogen. Angiotensin I is converted to angiotensin II by a converting enzyme. Angiotensin II also has a negative feedback effect on juxtaglomerular cells to inhibit renin secretion. Angiotensin II is a powerful vasoconstrictor and sodium retaining hormone that increases arterial pressure. Administration of an ACE inhibitor would increase plasma renin concentration, decrease angiotensin II formation, enhance renal sodium excretory function, and decrease total peripheral resistance and arterial pressure.

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4- A 55-year-old man with a history of normal health visits his physician for a checkup. The physical examination reveals that his blood pressure is 170/98 mm Hg. Further tests indicate that he has renovascular hypertension as a result of stenosis in the left kidney. Which set of findings would be expected in this man with renovascular hypertension?

	Total Peripheral Resistance	Plasma Renin Activity	Plasma Aldosterone Concentration
A)	↑	↑	↑
B)	↑	↓	↑
C)	↑	↓	↓
D)	↑	↑	↓
E)	↓	↓	↓
F)	↓	↑	↓
G)	↓	↑	↑
H)	↓	↓	↑

Answer: A) Stenosis of one kidney results in the release of renin and the formation of angiotensin II from the affected kidney. Angiotensin II stimulates aldosterone production and increases total peripheral resistance by constricting most of the blood vessels in the body.

5- While participating in a cardiovascular physiology laboratory, a medical student isolates an animal's carotid artery proximal to the carotid bifurcation and partially constricts the artery with a tie around the vessel. Which set of changes would be expected to occur in response to constriction of the carotid artery?

	Heart Rate	Sympathetic Nerve Activity	Total Peripheral Resistance
A)	↑	↑	↑
B)	↑	↑	↓
C)	↑	↓	↓
D)	↑	↓	↑
E)	↓	↓	↓
F)	↓	↓	↑
G)	↓	↑	↑
H)	↓	↑	↓

Answer: A) Constriction of the carotid artery decreases blood pressure at the level of the carotid sinus. A decrease in carotid sinus pressure leads to a decrease in carotid sinus nerve impulses to the vasomotor center, which in turn leads to enhanced sympathetic nervous activity and decreased parasympathetic nerve activity. The increase in sympathetic nerve activity results in peripheral vasoconstriction and an increase in total peripheral resistance and heart rate.

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6- While participating in a cardiovascular physiology laboratory, a medical student isolates the carotid artery of an animal and partially constricts the artery with a tie around the vessel. Which set of changes would be expected to occur in response to constriction of the carotid artery?

	Sympathetic Nerve Activity	Renal Blood Flow	Total Peripheral Resistance
A)	↑	↑	↑
B)	↑	↓	↑
C)	↑	↓	↓
D)	↑	↑	↓
E)	↓	↓	↓
F)	↓	↑	↓
G)	↓	↑	↑
H)	↓	↓	↑

Answer: B) Constriction of the carotid artery reduces blood pressure at the carotid bifurcation where the arterial baroreceptors are located. The decrease in arterial pressure activates baroreceptors, which in turn leads to an increase in sympathetic activity and a decrease in parasympathetic activity (or vagal tone). The enhanced sympathetic activity results in constriction of peripheral blood vessels, including the kidneys. The enhanced sympathetic activity leads to an increase in total peripheral resistance and a decrease in renal blood flow. The combination of enhanced sympathetic activity and decreased vagal tone also leads to an increase in heart rate.

7- A 22-year-old man enters the hospital emergency department after severing a major artery in a motorcycle accident. It is estimated that he has lost approximately 700 milliliters of blood. His blood pressure is 90/55 mm Hg. Which set of changes would be expected in response to hemorrhage in this man?

	Heart Rate	Sympathetic Nerve Activity	Total Peripheral Resistance
A)	↑	↑	↑
B)	↑	↓	↑
C)	↑	↓	↓
D)	↑	↑	↓
E)	↓	↓	↓
F)	↓	↑	↓
G)	↓	↑	↑
H)	↓	↓	↑

Answer: A) The arterial baroreceptors are activated in response to a fall in arterial pressure. During hemorrhage, the fall in arterial pressure at the level of the baroreceptors results in enhanced sympathetic outflow from the vasomotor center and a decrease in parasympathetic nerve activity. The increase in sympathetic nerve activity leads to constriction of peripheral blood vessels, increased total peripheral resistance, and a return of blood pressure toward normal. The decrease in parasympathetic nerve activity and sympathetic outflow would result in an increase in heart rate.

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8- A healthy 28-year-old woman stands up from a supine position. Moving from a supine to a standing position results in a transient decrease in arterial pressure that is detected by arterial baroreceptors located in the aortic arch and carotid sinuses. Which set of cardiovascular changes is most likely to occur in response to activation of the baroreceptors?

	Mean Circulatory Filling Pressure	Strength of Cardiac Contraction	Sympathetic Nerve Activity
A)	↑	↑	↑
B)	↑	↓	↑
C)	↑	↓	↓
D)	↑	↑	↓
E)	↓	↓	↓
F)	↓	↑	↓
G)	↓	↑	↑
H)	↓	↓	↑

Answer: A) Activation of the baroreceptors leads to an increase in sympathetic activity, which in turn increases heart rate, strength of cardiac contraction, and constriction of arterioles and veins. The increase in venous constriction results in an increase in mean circulatory filling pressure, venous return, and cardiac output.

9- An ACE inhibitor is administered to a 65-year-old man with a 20-year history of hypertension. The drug lowered his arterial pressure and increased his plasma levels of renin and bradykinin. Which mechanism would best explain the decrease in arterial pressure?

- A- Inhibition of angiotensin I
- B- Decreased conversion of angiotensinogen to angiotensin I
- C- Increased plasma levels of bradykinin
- D- Increased plasma levels of renin
- E- Decreased formation of angiotensin II

Answer: E) The conversion of angiotensin I to angiotensin II is catalyzed by a converting enzyme that is present in the endothelium of the lung vessels and in the kidneys. The converting enzyme also serves as a kininase that degrades bradykinin. Thus, a converting enzyme inhibitor not only decreases the formation of angiotensin II but also inhibits kininases and the breakdown of bradykinin. Angiotensin II is a vasoconstrictor and a powerful sodium-retaining hormone. The major cause for the decrease in arterial pressure in response to an ACE inhibitor is the decrease in formation of angiotensin II.

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10- A 25-year-old man enters the hospital emergency department after severing a major artery during a farm accident. It is estimated that the patient has lost approximately 800 milliliters of blood. His mean blood pressure is 65 mm Hg, and his heart rate is elevated as a result of activation of the chemoreceptor reflex. Which set of changes in plasma concentration would be expected to cause the greatest activation of the chemoreceptor reflex?

	Oxygen	Carbon Dioxide	Hydrogen
A)	↑	↑	↑
B)	↑	↓	↑
C)	↑	↓	↓
D)	↑	↑	↓
E)	↓	↓	↓
F)	↓	↑	↓
G)	↓	↑	↑
H)	↓	↓	↑

Answer: G) When blood pressure falls below 80 mm Hg, carotid and aortic chemoreceptors are activated to elicit a neural reflex to minimize the fall in blood pressure. The chemoreceptors are chemosensitive cells that are sensitive to oxygen lack, carbon dioxide excess, or hydrogen ion excess (or fall in pH). The signals transmitted from the chemoreceptors into the vasomotor center excite the vasomotor center to increase arterial pressure.

11- A balloon catheter is advanced from the superior vena cava into the heart and inflated to increase atrial pressure by 5 mm Hg. An increase in which of the following would be expected to occur in response to the elevated atrial pressure?

- A- ANP
- B- Angiotensin II
- C- Aldosterone
- D- Renal sympathetic nerve activity

Answer: A) Atrial natriuretic peptide is released from myocytes in the atria in response to increases in atrial pressure.

12- An increase in atrial pressure results in which of the following?

- A- Decrease in plasma ANP
- B- Increase in plasma angiotensin II concentration
- C- Increase in plasma aldosterone concentration
- D- Increase in sodium excretion

Answer: D) An increase in atrial pressure would also increase plasma levels of atrial natriuretic peptide, which in turn would decrease plasma levels of angiotensin II and aldosterone and increase sodium excretion.

13- Which set of changes would be expected to occur 2 weeks after a 50% reduction in renal artery pressure?

	Plasma Renin	Plasma Aldosterone Concentration	Glomerular Filtration Rate
A)	↑	↑	↑
B)	↑	↑	↓
C)	↑	↓	↓
D)	↑	↓	↑
E)	↓	↓	↓
F)	↓	↓	↑
G)	↓	↑	↑
H)	↓	↑	↓

Answer: B) Constriction of the renal artery increases release of renin, formation of angiotensin II and aldosterone, and arterial pressure. A 50% reduction in renal artery pressure would be below the range of renal autoregulation and would result in a decrease in the glomerular filtration rate.

14- An increase in which of the following would be expected to occur in a person 2 weeks after an increase in sodium intake?

- A- Angiotensin II
- B- Aldosterone
- C- Potassium excretion
- D- ANP

Answer: D) An increase in sodium intake would result in an increase in sodium excretion to maintain sodium balance. Conversely, potassium excretion would only transiently increase after an increase in sodium intake. Angiotensin II and aldosterone would decrease in response to a chronic elevation in sodium intake, whereas plasma atrial natriuretic peptide levels would increase.

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Lecture 13

Pathophysiology of
Shock

Collected by:

Mohammad Mousa

1. What is the primary cause of hypovolemic shock ?

- A) Excessive blood loss
- B) Cardiac pump failure
- C) Severe allergic reaction
- D) Neurological dysfunction

Answer: A

2. Which of the following is not a cause of low resistance shock?

- A) Insect bites
- B) Vomiting
- C) Septic shock
- D) Severe Emotions

Answer: B



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Lecture 14

Special Circulation

Collected by:

Mohammad Mousa

1. Coronary blood flow occurs mainly in? Select one:

- a. Isometric contraction phase.
- b. Isometric relaxation phase.
- c. Maximum filling phase.
- d. Reduced filling phase.
- e. Atrial contraction phase.

Answer: B

2. The cerebral blood flow (ml/minute) is? Select one:

- a. 250
- b. 500
- c. 1200
- d. 750
- e. 1500

Answer: D

3. Which of the following statements about cerebral blood flow is false?

- A) Decreases due to venous obstruction
- B) Decreases during sleep
- C) Accounts for about 15% of cardiac output
- D) Increases with hypercapnia

Answer: B

4. All the following produces coronary Vasodilatation. Except? Select one:

- a. Renal ischemia
- b. Adenosine
- c. EDRF
- d. Histamine
- e. Hypoxia.

Answer: A

5. Which of the following is NOT correctly matched regarding autoregulation mechanisms?

- a. Increased metabolic demand → increased resistance
- b. Increased perfusion pressure → increased vascular resistance
- c. Decreased oxygen → vasodilation
- d. Accumulation of CO₂ → vasodilation
- e. High arterial pressure → vessel constriction

Answer: A

6. What is the main factor affecting coronary circulation?

- a. Adenosine
- b. Neural regulation
- c. Hypoxia
- d. Perfusion pressure

Answer: C

7. Cardiac output is decreased physiologically in? Select one:

- a. Marked increase in HR
- b. Marked decrease in HR
- c. Low temperature
- d. Sudden standing from lying down
- e. Severe hemorrhage.

Answer: D

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Lecture 15

X

Corrected by:

X

1- Which of the following decreases during aerobic exercise?

- A- Renal blood flow
- B- Mean arterial blood pressure
- C- Cerebral blood flow
- D- Blood temperature
- E- Heart rate

Answer: A. Renal blood flow

2- Which of the following decreases in active muscle:

- A- Temperature
- B- BP
- C- HR
- D- Blood vessel diameter

Answer: B. BP

3- The blood flow increase in exercise in all the following except?

- A- muscles
- B- Heart
- C- Lungs
- D- Kidneys
- E- None of the above

Answer: D. Kidneys

4- All of the following are correct about what occurred during exercise, except?

- A- vasoconstriction
- B- vasodilation
- C- constant O₂ in gut

Answer: C. constant O₂ in gut

5- Decrease total peripheral resistance?

Muscular exercise

6- Exercise increases which of the following?

A- Skin blood flow

B- Cerebral vascular resistance

C- Renal vascular

Answer: A. Skin blood flow

