الاسئلة اللي ماعليها جزئية في المحاضرة لا تذاكروها

PRAY 4 US

Name: Pathophysiology lab quiz 1-CVS

Mark (T) for true statement and (F) for false one:

* The heart's rhythmic contractions occur can be changed by nervous or hormonal influence such as exercise or the perception of danger. **F**
* The heart rate can be changed by nervous or hormonal influence such as exercise or the perception of danger. **T**
* 7- The human heart is actually two pumps in one. **T**
* The right side receives oxygen-poor blood from the various regions of the body and delivers it to the lungs. **T**
* 9- The left side receives oxygen-poor blood from the various regions of the body and delivers it to the lungs. **F**
* 10- The left side of the heart receives the oxygen-rich blood from the lungs and delivers it to the rest of the body. **T**
* 11- The right side of the heart receives the oxygen-rich blood from the lungs and delivers it to the rest of the body. **F**
* 12- The right side receives oxygen-rich blood from the various regions of the body and delivers it to the lungs. **F**
* 13- The left side of the heart receives the oxygen-poor blood from the lungs and delivers it to the rest of the body. **F**
* 14- Both atria contract at the same time and that both ventricles contract at the same time. **T**
* 15- Right atria contract first then left atria. **F**
* 16- The right pump pumps the blood to the pulmonary circulation. **T**
* 17- The left pump pumps blood to the systemic circulation. **T**
* 18- The right pump pumps the blood to the systemic circulation while the left pump pumps blood to the pulmonary circulation. **F**
* 19- Venous blood from systemic circulation (deoxygenated) enters the right atrium through the pulmonary veins. **F**
* 20- Venous blood from systemic circulation (deoxygenated) enters the right atrium through the superior and inferior vena cava. **T**
* 21- The right atrium contracts and forces the blood through the mitral (bicuspid) valve and into the right ventricles. **F**
* 22- The right ventricles contract and force the blood through the aortic valve into the pulmonary artery. **F**
* 23- The right ventricles contract and force the blood through the pulmonary valve into the pulmonary artery. **T**
* 24- The new (oxygenated) blood is carried in the pulmonary arteries that take it to the left atrium. **F**
* 25- Blood flow after the heart is in the following orders Aorta- Arterioles Arteries- Capillaries- Veins- Venules -Vena Cava, **F**
* 26- Inside the capillaries, exchange of oxygen and carbon dioxide takes place. **T**
* 27- Inside the arterioles, exchange of oxygen and carbon dioxide takes place. **F**
* 28- The aorta is the largest of the arteries in the pulmonary circuit. **F**
* - Coronary Arteries carries blood away from the heart. **F**
* 31- Aorta is The vessel that supply blood to the myocardial muscles of the heart. **F**
* 32- Heart rate is considered one of the four vital signs **F**
* 33- Cardiac cycle is considered one of the four vital signs **F**
* 34- The cardiac output means the amount of blood ejected by the heart per unit time. **T**
* 35- The contraction of the cardiac muscle tissue in the ventricles is called diastole. **F**
* 36- The increased pressure due to the contraction of the ventricles is called systolic pressure. **T**
* 37- Sino Atrial node is located in the left atrium **F**
* 38- Atrioventricular node is located at the base of right atrium **T**
* Rheumatic fever is preventable with prompt antibiotic therapy. **T**
* Rheumatic heart disease is the major cause of acquired cardiac valve disease. **T**
* Left to right shunt is charachterized by cyanosis. **F**
* Right to left shunt is charachterized by cyanosis. **T**
* Blood pressure =CO x Resistance T
* Blood pressure increases when there is an increase in cardiac output or when the diameter of the blood vessels is decreased. **T**
* Blood pressure increases when the diameter of the blood vessels is decreased. **T**
* Blood pressure increases when the diameter of the blood vessels is increased. **F**
* Malignant hypertension Is Rapidly progressive hypertension **T**
* *Thrombosis in veins* are more common than thrombosis in arteries **T**
* *Thrombosis in arteries* are more common than thrombosis in veins. **F**
* Arterial thrombus is more serious than thrombosis in veins. **T**
* *Thrombosis in veins* are more common than in arteries, but Arterial thrombus is more serious. **T**
* Angina pectoris is severe pain due to an inadequate oxygen supply to the myocardial cells. **T**
* *Stable angina* *occurs during rest or sleep.* **F**
* *Prinzmetal's(variant*) angina occurs during rest or sleep. **T**
* *Stable angina*,occurs when there is i*ncreased work* ,e*xposure to the cold*, and m*ental stress*. **T**
* Increased heart rate and compensatory hypertrophy occur during the Stage of compensation of heart failure. **T**

II-Choose the most appropriate answer:

All are true about Rheumatic fever Except:

1. *It*  is a serious inflammatory disease
2. It may occur in an individual 1 to 4 weeks following an untreated throat infection by the group A beta-hemolytic Streptococcus bacteria.
3. The acute condition is characterized by *fever and*  *inflammation* of the *joints, heart, nervous* system, and *skin.*
4. **Rheumatic fever is unpreventable with prompt antibiotic therapy.**
5. Rheumatic fever can occur at any age, but mainly affects children between the ages of 5 and 15.
6. *It affects mainly the structure and function of the heart, especially the heart valves*.

All are true about  Rheumatic Heart Disease Except:

1. Approximately 10% of individuals who acquire rheumatic fever develop rheumatic heart disease.
2. Rheumatic heart disease is the major cause of acquired cardiac valve disease.
3. The attack against self-antigens is likely related to an antigenic similarity between cardiac valves and antigens of the group A beta-hemolytic streptococcus.
4. Immune attack can occur against any of the four cardiac valves, but is usually seen against *the mitral and aortic* valves.
5. **Immune attack can occur against any of the four cardiac valves, but is usually seen against *the pulmonary and tricuspid* valves.**

All are true about Mitral valve stenosis Except:

1. It is narrowing in the opening of the valve between the left atrium and the left ventricle
2. Clinical manifestations include pulmonary congestion and dyspnea.
3. **Clinical manifestations include Venous distention and swelling of the ankles and feet**
4. Complications include left atrial hypertrophy.
5. Complications include Left ventricular hypertrophy

This is true about aortic valve stenosis;

1. It is narrowing in the opening of the valve between the left atrium and the left ventricle
2. Clinical manifestations include Venous distention and swelling of the ankles and feet
3. Complications include left atrial hypertrophy.
4. **Complications include Left ventricular hypertrophy**

All are true about Aortic Valve Regurgitation except: :

1. **some blood returns to the left atrium as the left ventricle contracts**
2. blood flowing backward into the left ventricle during diastole,
3. Characterized by increase in the pulse pressure
4. **Complicated by left atrial hypertrophy**
* Left-to-Right Shunts They include all except:
	+ *atrial septal defects (ASDs),*
	+ *ventricular septal defects (VSDs)*, and
	+ *patent (persistent) ductus arteriosus (PDA*
	+ ***Tetralogy of Fallot***
	+ *atrial septal defects (ASDs),*
	+ *ventricular septal defects (VSDs)*, and
	+ *patent (persistent) ductus arteriosus (PDA*
	+ *Tetralogy of Fallot*

All these are Factors Affecting BP except:

1. Peripheral resistance: amount of friction encountered by the blood as it flows
2. 2. Age, weight, body position, emotional state
3. 3. Neural factors: autonomic NS- can cause vasoconstriction (narrowing of blood vessels)
4. Renal factors-
5. 5. Temperature
6. **Liver factors.**

All are true about hypertension Except:

1. Systemic hypertension means sustained elevated diastolic pressure greater than 90 mmHg or sustained systolic pressure over 140 mmHg
2. characterized by thickening of the arteriolar wall and narrowing of the lumen.
3. Hypertension is abnormally high blood pressure measured on at least three different occasions from a person who has been at rest at least 5 minutes.
4. **Primary hypertension Caused by a systemic disease**
5. It is one of the most important risk factor in coronary heart disease and cerebrovascular accidents.
* Malignant hypertension
	+ **Diastolic pressure is usually >140 mm Hg**
	+ Systolic pressure usually >140 mm Hg
	+ Diastolic pressure >90 mm Hg
	+ Systolic pressure usually >180 mm Hg

*This is eEffect & complication of ischemic heart disease:*

1. 1-Angina pectoris,
2. 2-Myocardial infarction,
3. 3- Chronic congestive heart failure, and
4. 4- Sudden death.
5. A& B
6. B&C
7. **All of the above.**

All these are Cardiac causes of heart failure Except:

1. myocardial infarct,
2. valvular defects, and
3. congenital malformation.
4. **Long standing pulmonary hypertension**

*All these are Forward Effects of Left Heart Failure Except:*

1. Decreased systemic blood pressure
2. Fatigue
3. Increased heart rate
4. Decreased urine output
5. Decreased blood oxygenation

*Tthis is Forward Effects of rightt Heart Failure :*

1. Decreased systemic blood pressure
2. Fatigue
3. Increased heart rate
4. Decreased urine output
5. Decreased blood oxygenation

edema of the ankles and feet is:

1. *Backward Effects of Right Heart Failure*
2. *Forward Effects of rightt Heart Failure :*
3. *Forward Effects of Left Heart Failure*
4. *Backward Effects of Left Heart Failure*
* The first heart tone, or S1, "Lub"
1. is caused by the closure of the atrioventricular valves, mitral and tricuspid,
2. is caused by the closure of the aortic valve and pulmonary valve
3. at the end of ventricular systole.
4. at the beginning of ventricular contraction, or systole.
5. A&B
6. **A &D** g) B & C

The progression of disease stage is: المحاضر اللي قبل

* 1) Latency or incubation period 2) Exposure or injury 3) Convalescence
* 4) Acute phase 5) Prodromal period
* a) 1-2-3-4-5 b) 2-4-1-3-5
* c) 4-2-3-1 d) 2-1-5-4-3 e) 2-5-1-3-4

1-The following contract together to pump blood

* A) Right atrium with the right ventricle and left atrium with the left ventricle
* **B) Right atrium with left atrium and right ventricles with left ventricle**
* C) Tricuspid valve and mitral valve
* D) Aorta and pulmonary artery
* E) Aorta, pulmonary artery and pulmonary vein

2-This is the primary pacemaker of the heart

* B) Purkinje fibers
* C) AV Bundle
* **D) SA node**
* E) None of these, a pacemaker is surgically inserted

3-Systolic Pressure is

* A) An average of 120 mm Hg
* B) Lowers steadily during ventricle systole
* C) The highest when blood is being pumped out of the left ventricle into the aorta
* D) An average of 80 mm Hg
* E) Both A and C
* F) Both B and D

The heart has how many chambers?

* A) One
* B) Two
* C) Three
* **D) Four**
* E) Five

The audible sounds (referred to as the "lub-dupp" sounds) that can be heard from the heart are made by the heart ...

* a) [Nodes](http://biology.about.com/library/nosearch/blincorrect.htm?4carda)
* b) [Ventricles](http://biology.about.com/library/nosearch/blincorrect.htm?4cardb)
* c) [Atria](http://biology.about.com/library/nosearch/blincorrect.htm?4cardc)
* d) [Valves](http://biology.about.com/library/weekly/blcard4a.htm)

The right ventricle of the heart receives blood from the right atrium and pumps it to the ...

* a) [Coronary Artery](http://biology.about.com/library/nosearch/blincorrect.htm?6carda)
* b) [Vena Cavae](http://biology.about.com/library/nosearch/blincorrect.htm?6cardb)
* **c)** [**Pulmonary Artery**](http://biology.about.com/library/weekly/blcard6a.htm)
* d) [Aorta](http://biology.about.com/library/nosearch/blincorrect.htm?6cardd)

Oxygen, carbon dioxide, nutrients and wastes are exchanged through the thin walls of the...

* a) [Arteries](http://biology.about.com/library/nosearch/blincorrect.htm?7carda)
* **b)** [**Capillaries**](http://biology.about.com/library/weekly/blcard7a.htm)
* c) [Veins](http://biology.about.com/library/nosearch/blincorrect.htm?7cardc)
* d) [Venules](http://biology.about.com/library/nosearch/blincorrect.htm?7cardd)

Which type of blood vessels carries blood away from the heart?

1. Veins
2. **Arteries**
3. Capillaries
4. Arteries, veins and capillaries

What is the function of the blood vessels and capillaries?

1. They pump blood to the heart.
2. They filter impurities from the blood.
3. **They carry blood to all parts of the body.**
4. They carry messages from the brain to the muscles.

The valve between the right atrium and the right ventricle is called the \_\_\_\_\_ valve.

1. Mitral
2. Pulmonary
3. Coronary
4. **Tricuspid**

In a blood pressure measurement reading 120\80. The number in the denominator is which reading?

1. Systolic pressure.
2. **Diastolic pressure.**
3. Hemoglobin pressure.
4. Coronary pressure.

Which chamber receives the deoxygenated blood from the systemic system first?

1. Left Atrium
2. Left Ventricle
3. Right Ventricle
4. **Right Atrium**

A small mass of specialized muscle on the back wall of the right atrium, also known as the pacemaker, is medically known as what?

1. Atrioventricular node
2. Bundle of his
3. **Sinoatrial node**
4. Cardiopulmonary node

The system of arteries that supply the heart with its own, separate supply of blood is called?

1. Endocarterial arteries
2. Ventricular arteries
3. **Coronary arteries**
4. Hepatic arteries
* The internal pacemaker that sets biological rhythms
	1. is located in the brain.
	2. **is located in the heart.**
	3. does not function in the absence of light or other environmental cues.
	4. A and C.
	5. none of the above.
* A blood vessel that transports blood out of a capillary bed is a(n)
A. vein.
B. artery.
C. **venule**.
D. arteriole.
* The path followed by blood on one circuit through the heart is
A. ventricle, atrioventricular valve, semilunar valve, atrium.
**B. atrium, atrioventricular valve, ventricle, semilunar valve.**
C. atrium, ventricle, atrioventricular valve, semilunar valve.
D. atrium, semilunar valve,ventricle, atrioventricular valve.
* Which of the following is a characteristic of pulmonary circulation?
A. Blood leaves the heart via the aorta.
**B. Blood in the arteries is deoxygenated.**
C. Blood in the veins is travelling to the lungs.
D. Blood in capillaries absorbs high levels of carbon dioxide.
* The blood vessel that carries blood from the lungs to the heart is the
A. coronary vein.
B. coronary artery.
**C. pulmonary vein.**
D. pulmonary artery.
* Which of the following is a characteristic of systemic circulation?
**A. Highly oxygenated arterial blood.**
B. Highly oxygenated venous blood.
C.Increased blood pressure in the veins.
D. Decreased blood pressure in the arteries.
* Which of the following would describe the path of the blood in the pulmonary circuit?
**A. Right ventricle à pulmonary trunk à pulmonary vein à left atrium.**
B. Left ventricle à pulmonary vein à pulmonary trunk à right atrium.
C. Right ventricle à pulmonary vein à pulmonary artery àleft atrium.
D. Right atrium à pulmonary trunk à aorta à vena cava à right atrium.

The correct path of blood from the heart to the head and back to the heart again is
A. right ventricle, vena cava, carotid artery, jugular vein, left atrium.
B. left ventricle, aorta, jugular vein, vena cava, carotid artery, right atrium.
**C. left ventricle, aorta, carotid artery, jugular vein, vena cava, right atrium.**
D. right atrium, carotid artery, aorta, jugular vein, vena cava, left ventricle.

* Based on its function, the heart is often referred to as a “double pump”. Which of the following would explain this?
A. The heart has two sets of valves.
B. The heart is controlled by both nerves and hormones.
**C. The heart moves blood through two circulatory pathways.**
D. The heart moves blood containing both nutrients and wastes.
* Blood leaves the right ventricle via the
A. aorta.
**B. pulmonary trunk.**
C. coronary arteries.
D. anterior vena cava.
* An irregular heartbeat where contraction of the atria does not always result in contraction of the ventricles, likely indicates a problem with the
**A.SA node.**
B. AV node.
C. AV valve.
D. semi-lunar valve.
* What happens during atrial diastole?
**A. Atria fill with blood.**B. Semi-lunar valves close.
C. Ventricles fill with blood.
D. Atrioventricular valves open.
* Use the following information to answer the question. 1. Systole of the ventricles. 2. Opening of the
atrio-ventricular valves. 3. Electrical impulse sent from the SA node. 4. Atria fill with blood. The order in which the events above occur during one heartbeat (the cardiac cycle) is
A.2, 1, 3, 4
B. 2, 3, 4, 1
C. 4, 1, 3, 2
**D. 4, 3, 2, 1**

Match the following:

|  |  |
| --- | --- |
| * Pathophysiology
 | * The study of the biological and physical manifestations of disease as they correlate with the underlying abnormalities and physiological disturbances."
 |
| * Health

محذوفين اللي بالصفر | * “state of complete physical, mental, and social well-being and not merely the absence of disease and infirmity.”
 |
| * Disease
 | * occurs when homeostasis isn't maintained.
 |
| * Illness.
 | * occurs when a person is no longer in a state of perceived “normal” health
 |
| * etiologic factors
 | * cause of disease
 |
| * *idiopathic*.
 | * Diseases that have no known cause are called
 |
| * *often are referred to as risk factors..*
 | * *The multiple factors that predispose to a particular disease*
 |
| * *A symptom*
 | * *is a subjective complaint that is noted by the person with a disorder,*
 |
| * *a sign*
 | * *is a manifestation that is noted by an observer.*
 |
| * *A syndrome*
 | * *is a compilation (group) of signs and symptoms that are characteristic of a specific disease state.*
 |
| * *pathogenesis.*
 | * *A disease's development*
 |
| * *Exacerbation*
 | * *refers to an increase in the severity of a disease or its signs and symptoms.*
 |
| * *Remission*
 | * *is the state of absence of disease activity in patients with known chronic illness that cannot be cured.*
 |
| * *Cardiac output:*
 | * *amount of blood pumped out by each side of the heart*
 |
| * *Stroke volume:*
 | * *volume of blood pumped out by a ventricle with each heartbeat*
 |
| * *Cyanosis*
 | * *apearance of a blue or purple coloration of the*[*skin*](http://en.wikipedia.org/wiki/Skin)*or*[*mucous membranes*](http://en.wikipedia.org/wiki/Mucous_membrane)*due to the tissues near the skin surface being low on oxygen.*
 |
| * *Arteriosclerosis*
 | * *Abnormal thickening and hardening of the vessel walls with loss of elasticity*
 |
| * *Atherosclerosis*
 | * *Thickening and hardening is caused by accumulation of lipid-laden macrophages in the arterial wall*
 |

|  |  |
| --- | --- |
| * Exposure or injury
 | * Target tissue is exposed to a causative agent or is injured.
 |
| * Latency or incubation period —
 | * No signs or symptoms are evident.
 |
| * Prodromal period —

محذوفين اللي بالصفر | * Signs and symptoms are usually mild and nonspecific.
 |
| * Acute phase —
 | * the disease reaches its full intensity, possibly resulting in complications.
 |
| * Remission —
 | * this second latent phase occurs in some diseases and is often followed by another acute phase.
 |
| * 6 Convalescence —
 | * the patient progresses toward recovery after the termination of a disease.
 |
| * 7 Recovery —
 | * the patient regains health or normal functioning. No signs or symptoms of disease remain.
 |
| * pulse pressure =
 | * the difference between the measured systolic and diastolic pressures.
 |
| * An aneurysm
 | * is localized abnormal dilatation of a blood vessel wall or cardiac wall.
 |
| * THROMBOSIS
 | * Formation of a compact mass composed of the elements of the circulating blood inside a vessel or a heart cavity during life.
 |
| * Embolism

  | * is the process of impaction of insoluble solid, liquid or gaseous mass in a blood vessel.
 |
| * Varicose veins
 | * abnormally dilated tortuous veins produced by prolonged increased intraluminal pressure & to lesser extent by loss of support of the vessel wall.
 |
| * Angina pectoris
 | * A symptom of ischemic heart disease, characterized by attacks of retrosternal pain radiating to neck, jaw and left arm.
 |
| * Myocardial infarction (MI)
 | * is the death of myocardial cells that occurs following prolonged oxygen deprivation.
 |
| * Heart failure
 | * Is term applied when the heart is unable to pump enough blood out to meet the oxygen and nutrient demands of the body.
 |

*Tests of Cardiovascular Functioning*

|  |  |
| --- | --- |
| * The electrocardiogram (ECG)
 | * is the measurement of the electrical currents of the heart.
 |
| * *2-Measurement of Cardiac Enzymes*
 | * This allows one to accurately diagnose the *existence* and frequently the *extent* and the *timing* of the infarct .
* include myocardial creatine kinase (CK), lactic acid dehydrogenase (LDH), and serum glutamic oxaloacetic transaminase (SGOT).
 |
| * *3-Stress Testing*
 | * In this test, the patient is asked to either walk on a treadmill or ride an exercise bike and the pattern of the ECG is observed for alterations in rhythm.
 |
| * *4-Nuclear Stress Testing*
 | * *In this test, an intravenous infusion of a radiolabeled isotope that has specific cardiac affinity is given during the exercise to monitor myocardial perfusion.*
 |
| * *Echocardiography*
 | * *involves ultrasound waves directed at the chest wall that are analyzed by a computer as they bounce back from the chest.*
 |
| * *In cardiac catheterization,*
 | * *also called coronary angiogram, a flexible tube is inserted through a peripheral vein (femoral or brachial) into the right side of the heart, or through a peripheral artery (femoral or brachial) into the left side of the heart.*
 |
| * *7-Computed Tomography Scan*
 | * *Patients are given a radiolabeled dye to highlight the blood vessels, and then are exposed to a series of x-rays that create images of the heart in slices.*
 |
| * *8-Magnetic Resonance Imaging(MRI)*
 | * *utilizes a powerful magnet that sets the nuclei of atoms in the heart cells vibrating at specific, recognized frequencies.*
 |

|  |  |
| --- | --- |
| * An atrial septal defect (ASD)
 | * is an abnormal opening between the left and right atria.
 |
| * *Ventricular Septal Defect(VSD)*
 | * Is an abnormal opening between the left and right ventricles that occurs when the wall between the ventricles fails to close properly during gestation.
 |
| * *Patent Ductus Arteriosus(PDA)*
 | * *Occurs when the connection between the pulmonary artery and the aorta, remains open after birth.*
 |
| * *Tetralogy of Fallot*
 | * *characterized by four presenting abnormalities: ventricular septal defect, pulmonary artery stenosis, right ventricular hypertrophy, and a shifting of the position of the aorta so that it opens into the right ventricle (an overriding aorta).*
 |
| * *Coarctation of the Aorta*
 | * *results in the narrowing of the aorta as it leaves the left ventricle.*
 |