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Bio 2312 OL57

Lab 3 assignment

Activity 1: The ECG

1. Label the following EKG wave and give the heart activity taking place

A. P wave: atrial depolarization. Stimulus spreads across the atrial surfaces and reaches the AV node.

B. Q wave: beginning of ventricular depolarization. The impulse travels along the interventricular septum within the AV bundle and the bundle branches to the Purkinje fibers and, by the moderator band to the papillary muscles of the right ventricle.

C and D. QRS complex: completion of ventricular depolarization The impulse is distributed by Purkinje fibers and relayed throughout the ventricular myocardium. Atrial contraction is completed, and ventricular contraction begins.

E. T wave: ventricular repolarization occurs ventricle will relax.

2. Using vertical lines show the following segments and intervals and indicate the heart activity taking place for each.

A. P-R interval: From start of atrial depolarization to start of QR complex

B. P-R segment: period of conduction contraction ventricle C. QRS complex:

Depolarization of ventricles begin contracting shortly after R wave

D. S-T segment: ventricular wall relaxes and recovers E. S-T interval: depicts the period ventricles are depolarization F. R-R interval: G. Q-T interval: represents time both depolarization and repolarization of ventricle to occur.

3. What does each of the following distances indicate?

A. One small square _____ 66.66 _____ B. 5 small squares _____ 13.33 _____ C. One large square _____ 66.66 _____ D. 4 large squares _____ 16.66 _____ E. 5 large squares _____ 13.33 _____ F. 15 large squares _____ 4.44 _____

Review exercise

1. Match the term to its correct description. SA, Plateau, AV, Purkinje fibers, bundle of His, AV bundles, Absolute, EKG, IV septum, Autorhythmic, Internodal, Relative, Calcium, Depolarization, Bachmann's bundle

1 Autorhythmic

2 Calcium

3 AV bundles

4 Plateau

5 bundle of His

6 SA

7 Relative

8 Absolute

9 EKG

10 Purkinje fibers

11 Bachmann's bundle

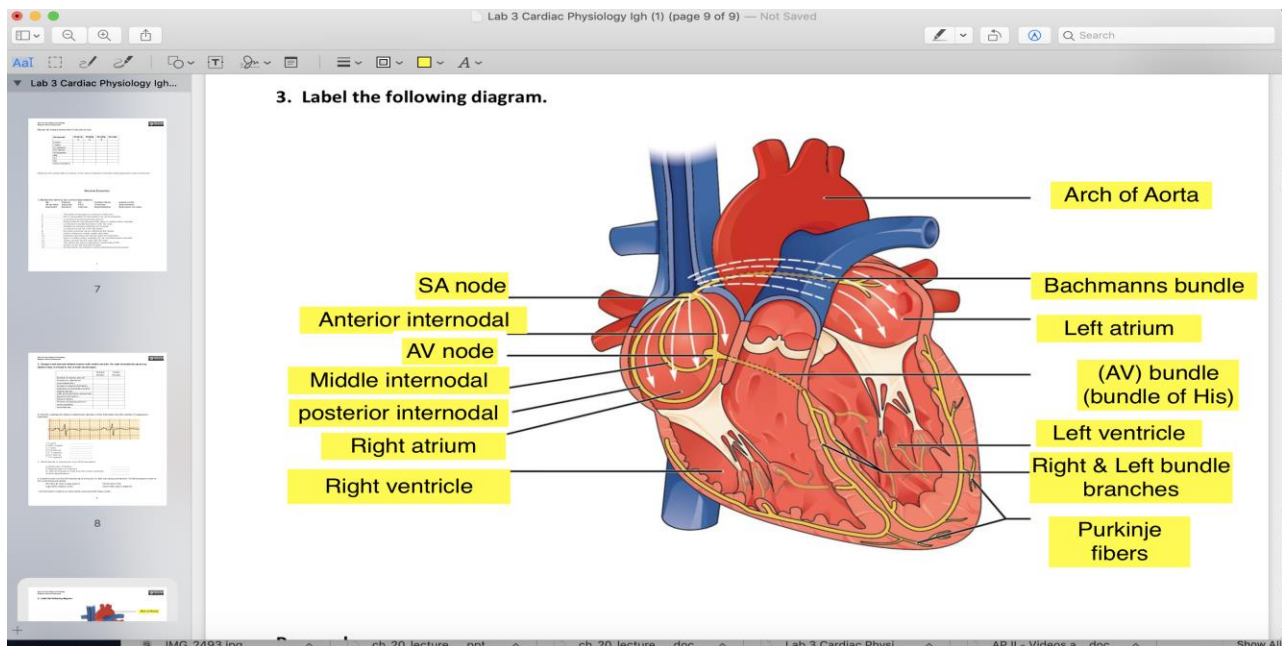
12 Internodal

13 AV

14 IV Septum

15 Depolarization

3. Label the following diagram.



Research

Select one of the common cardiovascular diseases and, in one paragraph, describe causes, sign and symptoms, diagnosis and treatment.

One of the common cardiovascular disease is (VHD) short for Valvular heart disease. This disease is diagnosed when one or more heart valves are damage using EKG or echocardiography. The heart's valves have the functions of allowing blood flow through the heart and the body. However, if the valves are damage this won't allowed for blood to flow properly. Damage valves will most likely struggle to close, causing the blood to flow back, called regurgitation. Also, due to stenosis the valves can't fully open not letting blood flow to occur. This will cause for the person to not receive enough oxygen or the person will end dying from this disease. The causes, are mostly due to developing carditis which is inflammation of the heart; due to virus or infections that have advance. sign or symptoms are shortness of breath chest pain and pain when the heart beats. The treatment is mostly through surgery by replacing or repairing the damages of the valves.