



Principles of Biomedical Science

Virtual Learning

9-12 / PLTW[®] PBS

April 24, 2020



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Lesson: April 24 2020

Objective/Learning Target:

Students will be able to: Students will describe and explain what Heart Disease (Coronary Artery Disease) is and how it can produce a myocardial infarction (heart attack). *(Reference: PLTW[®] 4.4 Heart Intervention)*



Let's Get Started (Bell Ringer):

Watch the following Video: Detailed description of what is going on with Heart Disease and How that can cause a Heart Attack. [Heart disease and heart attacks / Miscellaneous / Health & Medicine / Khan Academy](#)

Read the following Article: [CDC Heart Disease Facts](#) Mind blowing facts about Heart Disease in the United States



Lesson/Activity:

Read the following article: [MedicalNewsToday](#) [*Everything you need to know about heart disease*](#) and answer the question. What are all the types of heart disease? Do this in your notebook or on a blank piece of paper.



Answers:

1. Congenital heart disease
2. Arrhythmia
3. Coronary artery disease
4. Dilated cardiomyopathy
5. Myocardial infarction
6. Heart failure
7. Hypertrophic cardiomyopathy
8. Mitral regurgitation
9. Mitral valve prolapse
10. Pulmonary stenosis



Lesson/Activity continued:

Read the following article: [MAYO CLINIC *Heart Disease*](#) and answer the question. What are symptoms of heart disease? Do this in your notebook or on a blank piece of paper.



Answers:

Answers may vary but here is a pretty good list: Chest pain, chest tightness, chest pressure, chest discomfort (angina), shortness of breath, pain, numbness, weakness or coldness in your legs or arms if the blood vessels in those parts of your body are narrowed, Pain in the neck, jaw, throat, upper abdomen or back, fluttering in your chest, racing heartbeat (tachycardia), slow heartbeat (bradycardia), chest pain or discomfort, shortness of breath, lightheadedness, dizziness, fainting (syncope) or near fainting, Pale gray or blue skin color (cyanosis), swelling in the legs, abdomen or areas around the eyes, in an infant, shortness of breath during feedings, leading to poor weight gain, easily getting short of breath during exercise or activity, easily tiring during exercise or activity, swelling in the hands, ankles or feet, breathlessness with exertion or at rest, fatigue, irregular heartbeats that feel rapid, pounding or fluttering, fever, weakness or fatigue, changes in your heart rhythm, dry or persistent cough, skin rashes or unusual spots.



Practice:

Do YouTube/Video search to find the 3 videos that do a good job in explaining to you what is happening to the heart during a myocardial infarction (heart attack), make you list of links in you notebook or on a speperate piece of paper so you can later share them with your teacher.



Answers:

Answers will completely depend on student research, and what they find interesting in the finding about heat attacks.



Practice:

Go to The University of ROCHESTER Medical Center and take the 14 question quiz on [What Do You Know About Heart Disease Risk?](#) Find out what you know and still don't know.



Answers:

Answers will be revealed at end of test, along with explanations for why the answer was wrong or right.