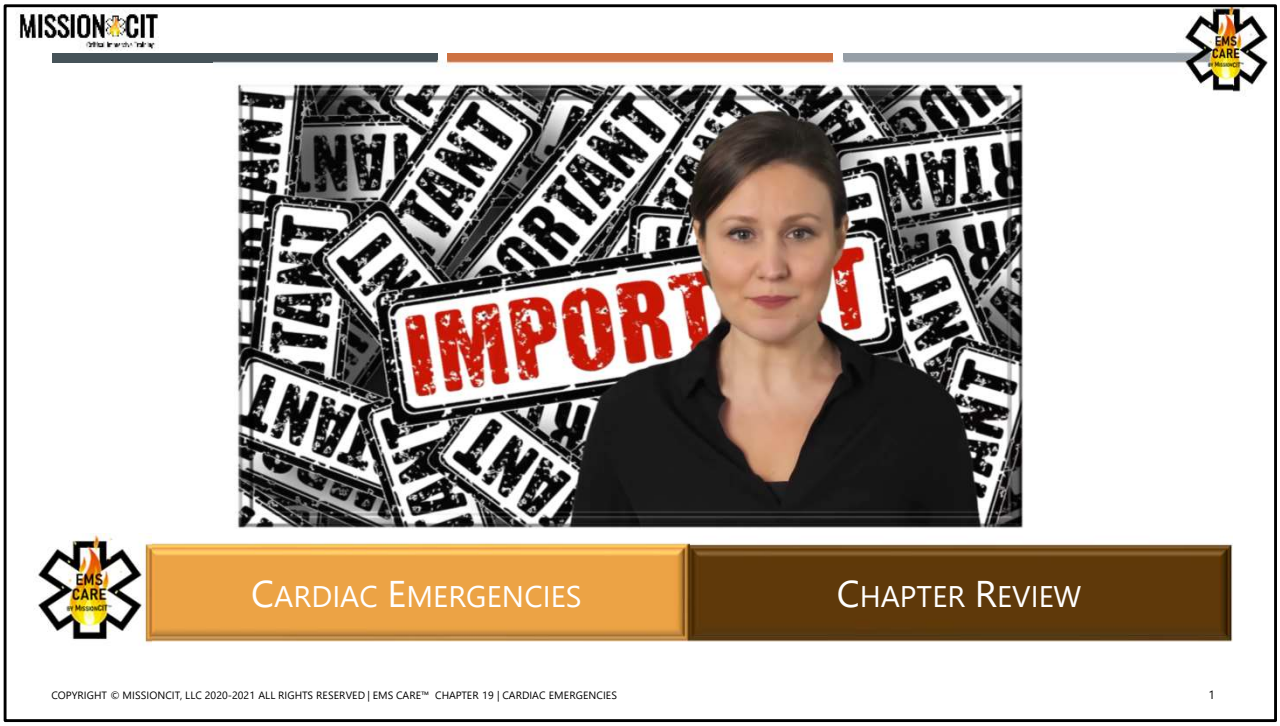


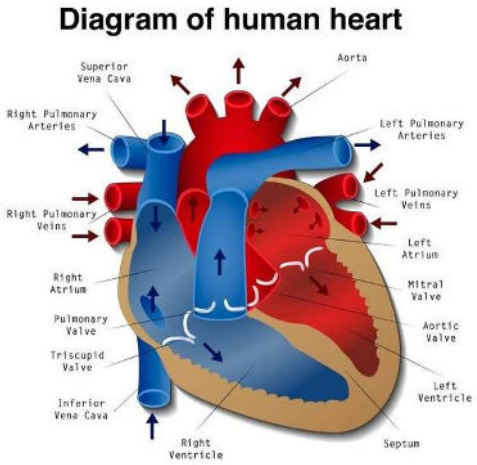
Thank you Justin!

So, it's time for the cardiac emergencies chapter review. I will highlight some of the more important details from each lesson. Remember, a 15 question test follows.

Good studying.

Review – Lesson 1

- Heart consists of 4 chambers – 2 atria and 2 ventricles.
- Oxygen-poor blood: right atrium -> Right ventricle -> lungs
- Oxygen-rich blood: Lungs -> Left Atrium -> Left ventricle
- Electrical conduction system is responsible for heartbeat
- Autonomous nervous system: Sympathetic and parasympathetic
- Blood pressure:Systolic and diastolic



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In the first lesson, we talked about the anatomy of the heart. It consists of four chambers, two aytria, two ventricles, four valves, and a system of arteries and veins to carry blood to, and from the heart.

The right atrium receives oxygen-poor blood, and it pumps it to the right ventricle that sends it to the lungs.

The left atrium receives the oxygen-rich blood, and it sends it to the right ventricle that sends it to the rest of the body.

The electrical conduction system is responsible for the

heartbeat. It starts at the right atrium, and reaches both the ventricles, through the conduction pathways.

Each stimulation is a heartbeat, and it causes the ventricles to pump the blood out.

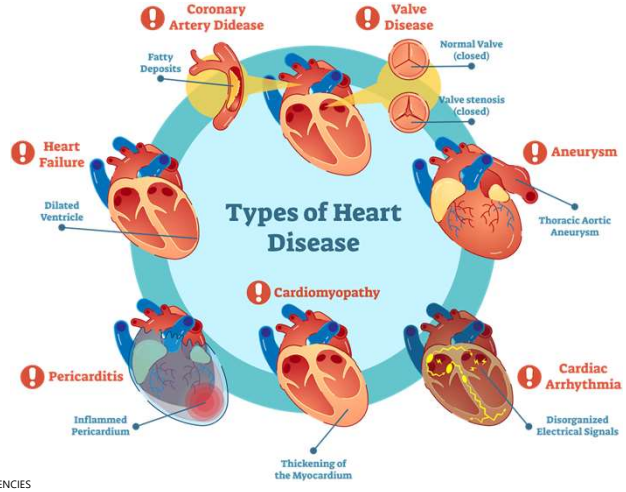
The autonomous nervous system consisting of the sympathetic and parasympathetic systems is responsible for the heart's involuntary movements.

Finally, we talked about blood pressure, which is the pressure exerted by the blood on the arterial walls. The pressure during a heartbeat is called systolic, and when the heart is at rest, it is called diastolic.

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REVIEW – LESSON 2

- Chest pain
- Atherosclerosis
- Thromboembolism
- Coronary artery disease
- Acute coronary syndrome
- Angina pectoris
- Dysrhythmia
- Asystole
- Cardiogenic shock
- Congestive heart failure
- Hypertensive emergencies
- Aortic aneurysm



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The second lesson was all about the heart's pathophysiology. Some of the common diseases and conditions that occur are:

Chest pain: when the heart does not get enough oxygen-rich blood.

Atherosclerosis: the build-up of fat, cholesterol, and plaque in your arterial walls that block the smooth flow of blood through it.

Thromboembolism: a blood clot that originates in the vein and travels to the heart, thereby causing heart

attack and stroke.

Coronary artery disease: the narrowing or blockage of one or more arteries in the heart.

Acute coronary Syndrome: occurs due to sudden changes or blockages of blood flow to the heart.

Angina pectoris: chest pain that occurs due to coronary heart disease.

Dysrhythmia or arrhythmia: the abnormal heartbeat rhythm of your heart.

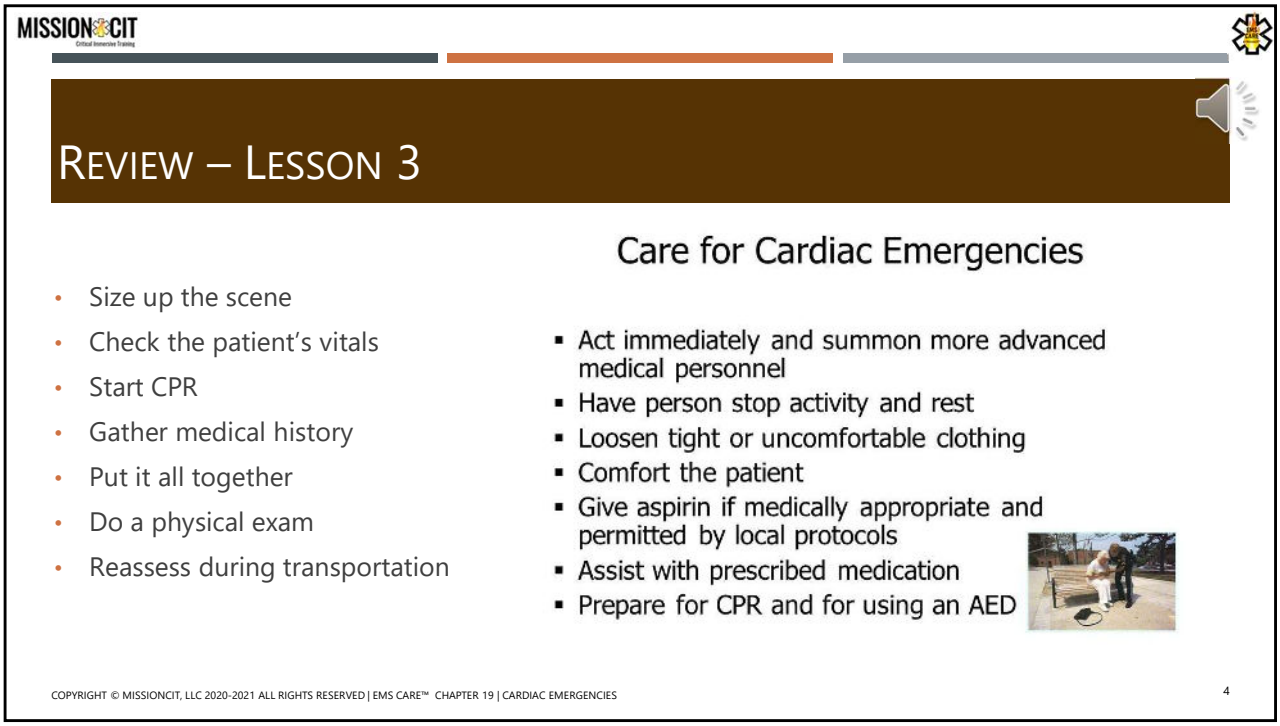
Asystole: the total cessation of electrical activity in the heart.

Cardiogenic shock: a condition in which your heart suddenly can't pump enough blood.

Congestive heart failure: a chronic progressive disease that impacts the ability of your heart to pump blood.

Hypertensive emergencies: a severe increase in blood pressure that can lead to a stroke.

Aortic aneurysm: a bulge in the aorta that can rupture or dissect.



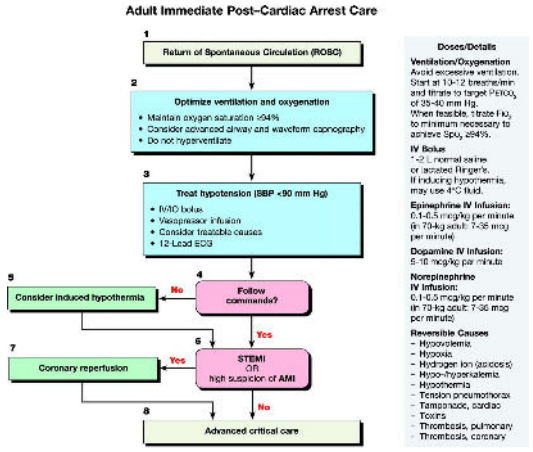
In the third lesson, we talked about how you can provide pre-hospital care during cardiac emergencies. As a first step, size up the scene and note your observations. Next, check the patient's vitals and start CPR if necessary.

Once the patient is stable, gather medical history, symptoms, onset, and other pertinent information. Combine the information, your observation, and the dispatch details to understand the cause of the problem. Do a thorough physical examination as a part of your secondary assessment. Finally, if you're transporting the patient, check the vitals once every five minutes if the

cardiac conditions are changing. Otherwise, once in 15 minutes should be good.

REVIEW – LESSON 4

- Return of spontaneous circulation
- Oxygenation and ventilation
- Hemodynamic instability
- Coronary reperfusion



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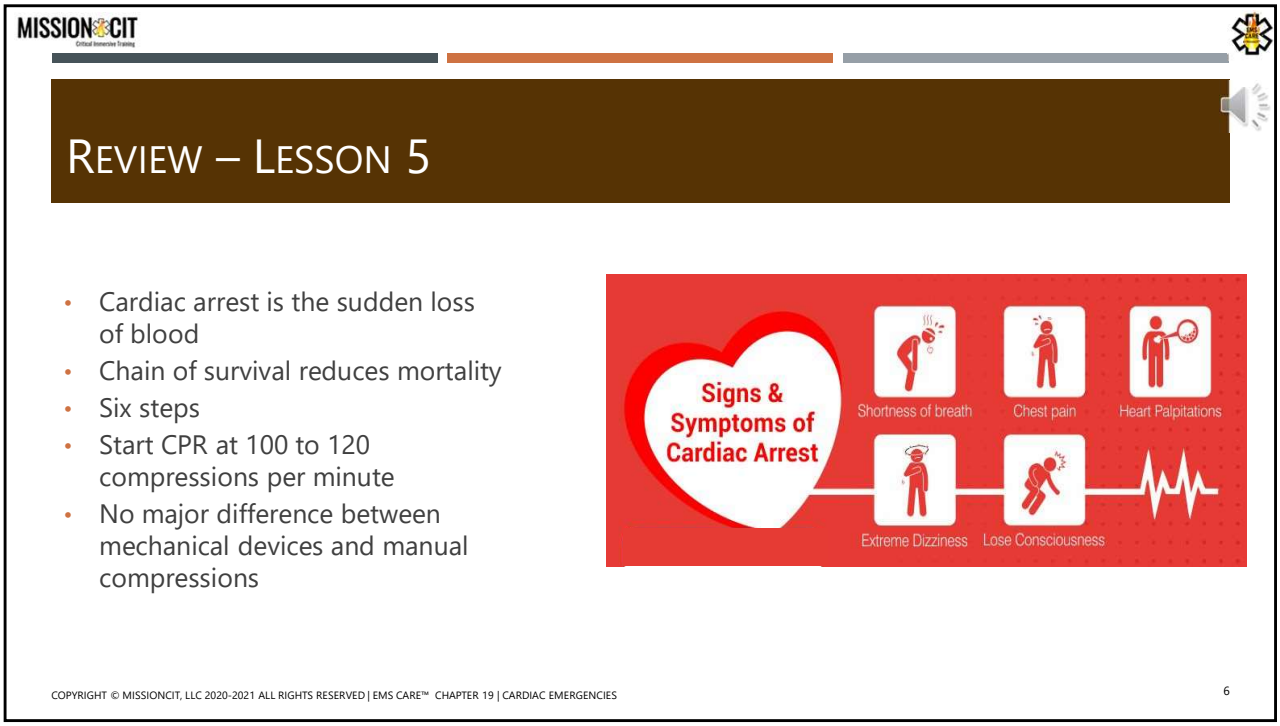
In this lesson, we discussed the return of spontaneous circulation, which is the sign of life after a cardiac arrest, due to external respiratory effort like CPR.

This Rosk is characterized by movement, cough, breathing, palpable pulse, and measurable blood pressure.

Next, provide oxygenation and ventilation, and maintain the levels of oxygen at 94%.

Next, check the hemodynamic instability as the diastolic pressure should not go below 90mm/Hg.

Finally, transport the person to the nearest cardiac center to ensure that the blood flows around the blocked arteries or veins. This is called coronary reperfusion.



The fifth lesson was all about cardiac arrest, which is the sudden loss of blood, resulting from the heart's inability to pump blood effectively.

Since this is a life-threatening situation, a chain of survival can reduce its mortality.

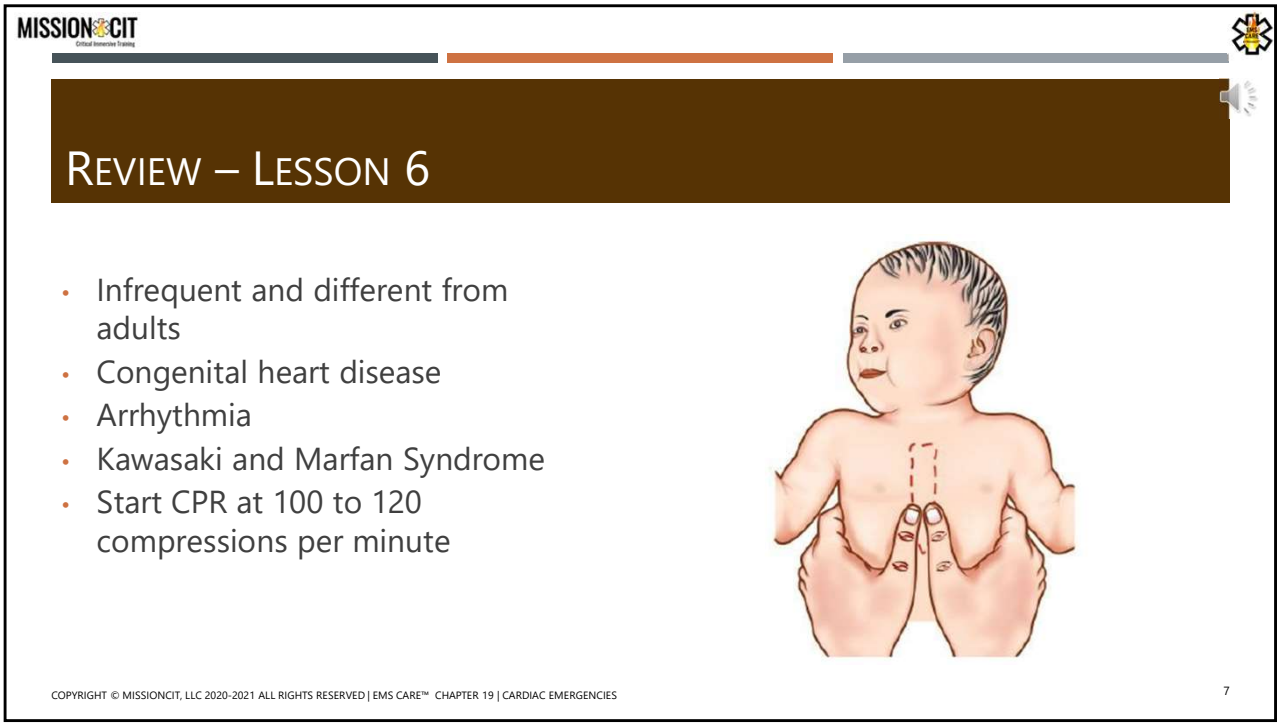
A chain of survival refers to a series of actions, that reduce patients' mortality rate, provided they are executed well.

It is a six-step process, that includes recognizing the signs, calling emergency, providing CPR, providing rapid

defibrillation, having effective A L S, and integrated post-cardiac arrest care.

Next, we talked about CPR, where you have to provide 100 to 120 compressions per minute. Each compression, should be 2 inches or 5 centimeters.

Though mechanical CPR devices are touted to be a great alternative, research shows that there is no difference at all between these devices and manual compressions.



The last lesson was pediatric cardiac emergencies. This is fairly infrequent and very different from adults since no comorbidities or lifestyle factors are involved. Some of the possible emergencies are:

- Congenital heart disease, where there is an underlying heart defect.
- Arrhythmia is a conduction disorder
- Kawasaki disease and Marfan syndrome are acquired diseases.

If it's an emergency, start CPR at the rate of 100 to 120

compressions per minute.

With this, we have come to the end of the chapter review. Please proceed to take the quiz.