

EMT

Chapter 14 Review

1. All of the following are common signs and symptoms of cardiac ischemia, EXCEPT:
 - A. headache.
 - B. chest pressure.
 - C. shortness of breath.
 - D. anxiety or restlessness.

Answer: A

Rationale: Cardiac ischemia occurs when the heart's demand for oxygen exceeds the available supply. Common signs and symptoms of cardiac ischemia include chest pain or discomfort, shortness of breath (dyspnea), and anxiety or restlessness. Headache is not a common symptom of cardiac ischemia.

1. All of the following are common signs and symptoms of cardiac ischemia, EXCEPT:

A. headache.

Rationale: Correct answer

B. chest pressure.

Rationale: Chest pressure is a definite symptom of a cardiac event.

1. All of the following are common signs and symptoms of cardiac ischemia, EXCEPT:

C. shortness of breath.

Rationale: This is a response to decreased cardiac output and hypoxia.

D. anxiety or restlessness.

Rationale: This is caused by a fear of death and is a result of hypoxia, decreased cardiac output, and ischemia.

2. While palpating the radial pulse of a 56-year-old man with chest pain, you note that the pulse rate is 86 beats/min and irregular. This indicates:

A. pain.

B. fear.

C. anxiety.

D. an arrhythmia.

Answer: D

Rationale: An irregular pulse in a patient with a cardiac problem suggests an arrhythmia—an abnormality in the heart's electrical conduction system. Patients with signs of cardiac compromise, who have an irregular pulse, must be monitored closely for cardiac arrest.

2. While palpating the radial pulse of a 56-year-old man with chest pain, you note that the pulse rate is 86 beats/min and irregular. This indicates:

A. pain.

Rationale: Pain could be a result or symptom of cardiac ischemia.

B. fear.

Rationale: Fear of impending death is usually the psychological result of having chest pain.

2. While palpating the radial pulse of a 56-year-old man with chest pain, you note that the pulse rate is 86 beats/min and irregular. This indicates:

C. anxiety.

Rationale: Anxiety is also a symptom of a cardiac event.

D. an arrhythmia.

Rationale: Correct answer

3. A 56-year-old man has an acute myocardial infarction. Which of the following blood vessels became blocked and led to his condition?

- A. Coronary veins
- B. Coronary arteries
- C. Pulmonary veins
- D. Pulmonary arteries

Answer: B

Rationale: The coronary arteries, which branch off the aorta, supply the myocardium (heart muscle) with oxygen-rich blood. Occlusion of one or more of these arteries results in a cessation of oxygenated blood beyond the area of occlusion and results in acute myocardial infarction (AMI).

3. A 56-year-old man has an acute myocardial infarction. Which of the following blood vessels became blocked and led to his condition?

A. Coronary veins

Rationale: Coronary veins do not carry oxygen and would not be the direct cause of an acute MI.

B. Coronary arteries

Rationale: Correct answer

3. A 56-year-old man has an acute myocardial infarction. Which of the following blood vessels became blocked and led to his condition?

C. Pulmonary veins

Rationale: Pulmonary veins are the primary blood supply to the lungs and not the heart.

D. Pulmonary arteries

Rationale: Pulmonary arteries are the route of blood return to the left atrium from the lungs. An obstruction would not cause an acute MI.

4. Major controllable risk factors for an AMI include:

- A. older age.
- B. family history.
- C. cigarette smoking.
- D. male sex.

Answer: C

Rationale: Smoking is a major controllable risk factor for any cardiovascular disease.

4. A major controllable risk factor for an AMI includes:

A. Older age.

Rationale: This is an uncontrollable risk factor.

B. Family history.

Rationale: This is an uncontrollable risk factor.

4. A major controllable risk factor for an AMI includes:

C. Cigarette smoking.

Rationale: Correct answer.

D. Male sex.

Rationale: This is an uncontrollable risk factor.

5. A patient with cardiac arrest secondary to ventricular fibrillation has the greatest chance for survival if:
- A. CPR is initiated within 10 minutes.
 - B. oxygen and rapid transport are provided.
 - C. defibrillation is provided within 2 minutes.
 - D. paramedics arrive at the scene within 5 minutes.

Answer: C

Rationale: Survival from cardiac arrest secondary to ventricular fibrillation is highest if CPR is provided immediately and defibrillation is provided within 1 minute of the patient's cardiac arrest. Early high-quality CPR and defibrillation are the two most important factors that influence survival from cardiac arrest.

5. A patient with cardiac arrest secondary to ventricular fibrillation has the greatest chance for survival if:

A. CPR is initiated within 10 minutes.

Rationale: CPR needs to be initiated immediately.

B. oxygen and rapid transport are provided.

Rationale: Oxygen therapy and transport are important parts of resuscitation, but CPR and early defibrillation afford the greatest chance of survivability.

5. A patient with cardiac arrest secondary to ventricular fibrillation has the greatest chance for survival if:

C. defibrillation is provided within 2 minutes.

Rationale: Correct answer

D. paramedics arrive at the scene within 5 minutes.

Rationale: Not necessarily; CPR and early defibrillation will provide the greatest chance of survivability.

6. A 59-year-old woman presents with chest pressure. She is conscious and alert, but her skin is cool, pale, and clammy. Your first step in providing care (treatment) should be:
- A. apply the AED.
 - B. administer high-flow oxygen.
 - C. ask her if she takes nitroglycerin.
 - D. take a complete set of vital signs.

Answer: B

Rationale: Any patient with suspected cardiac compromise should be given high-flow oxygen as soon as possible. Obtaining vital signs and inquiring about the use of nitroglycerin are appropriate; however, you should administer oxygen first. The AED is only applied to patients in cardiac arrest.

6. A 59-year-old woman presents with chest pressure. She is conscious and alert, but her skin is cool, pale, and clammy. Your first step in providing care (treatment) should be:

A. apply the AED.

Rationale: The AED is only applied to patients in cardiac arrest.

B. administer high-flow oxygen.

Rationale: Correct answer

6. A 59-year-old woman presents with chest pressure. She is conscious and alert, but her skin is cool, pale, and clammy. Your first step in providing care (treatment) should be:

C. ask her if she takes nitroglycerin.

Rationale: Inquiring about the use of nitroglycerin is appropriate, but not the first step.

D. take a complete set of vital signs.

Rationale: Obtaining vital signs is important, but not the first step.

7. If a patient with an implanted pacemaker is in cardiac arrest, the EMT should:
- A. avoid defibrillation with the AED and transport at once.
 - B. not apply the AED until he or she contacts medical control.
 - C. place the AED pads at least 1" away from the pacemaker.
 - D. apply the AED pads directly over the implanted pacemaker.

Answer: C

Rationale: The only modification required for cardiac arrest patients with an implanted pacemaker is to ensure that the AED pads are at least 1" away from the pacemaker. Placing the AED pads directly over the pacemaker will result in a less effective defibrillation and may damage the pacemaker.

7. If a patient with an implanted pacemaker is in cardiac arrest, the EMT should:

A. avoid defibrillation with the AED and transport at once.

Rationale: AEDs can be used with pacemakers, but avoid placing pads over pacemakers.

B. not apply the AED until he or she contacts medical control.

Rationale: EMTs are trained in the use of AEDs.

7. If a patient with an implanted pacemaker is in cardiac arrest, the EMT should:

C. place the AED 1" away from the pacemaker.

Rationale: Correct answer

D. apply the AED pads directly over the implanted pacemaker.

Rationale: AEDs should not be placed over pacemakers.

8. The main advantage(s) of the AED is:
- A. it provides quick delivery of a shock.
 - B. it is easier than performing CPR.
 - C. there is no need for ALS providers to be on scene.
 - D. All of the above.

Answer: D

Rationale: The AED provides quick delivery of a shock, is easier to perform than CPR, and does not require ALS providers to operate it.

8. The main advantage(s) of the AED is:

A. it provides quick delivery of a shock.

Rationale: The AED provides quick delivery of a shock.

B. it is easier than performing CPR.

Rationale: The AED is easier to perform than CPR.

8. The main advantage(s) of the AED is:

C. there is no need for ALS providers to be on scene.

Rationale: ALS providers do not need to be on scene to put the AED to use.

D. All of the above.

Rationale: Correct answer.

9. After administering a nitroglycerin tablet to a patient, the EMT should:

- A. check the expiration date of the nitroglycerin.
- B. reassess the patient's blood pressure within 5 minutes.
- C. instruct the patient to chew the tablet until it is dissolved.
- D. ensure that the nitroglycerin is prescribed to the patient.

Answer: B

Rationale: Nitroglycerin is a vasodilator and can lower the patient's BP; therefore, you should reassess the patient's BP within 5 minutes after giving nitroglycerin. Instruct the patient to allow the nitroglycerin to dissolve under his or her tongue; it should not be chewed. You should check the drug's expiration date and ensure that it is prescribed to the patient *before* administering it.

9. After administering a nitroglycerin tablet to a patient, the EMT should:

A. check the expiration date of the nitroglycerin.

Rationale: This is checked before medication administration.

B. reassess the patient's blood pressure within 5 minutes.

Rationale: Correct answer

9. After administering a nitroglycerin tablet to a patient, the EMT should:

C. instruct the patient to chew the tablet until it is dissolved.

Rationale: The tablet is placed under the patient's tongue and allowed to dissolve.

D. ensure that the nitroglycerin is prescribed to the patient.

Rationale: This is checked before medication administration.

10. Nitroglycerin is contraindicated in patients:

- A. with a systolic blood pressure less than 100 mm Hg.
- B. with chest pain of greater than 30 minutes duration.
- C. who are currently taking antibiotics for an infection.
- D. who are less than 40 years of age and have diabetes.

Answer: A

Rationale: Nitroglycerin is a vasodilator and may cause a drop in BP; therefore, it is contraindicated in patients with a systolic BP of less than 100 mm Hg and in patients who have taken erectile dysfunction (ED) drugs (eg, Viagra, Cialis, Levitra) within the past 24 to 36 hours. ED drugs are also vasodilators; if given in combination with nitroglycerin, severe hypotension may occur.

10. Nitroglycerin is contraindicated in patients:

A. with a systolic blood pressure less than 100 mm Hg.

Rationale: Correct answer

B. with chest pain of greater than 30 minutes duration.

Rationale: Cardiac chest pain is the primary indication for the use of nitroglycerin.

10. Nitroglycerin is contraindicated in patients:

C. who are currently taking antibiotics for an infection.

Rationale: Antibiotics are not a contra-indication for nitroglycerin use. Prior adverse reactions to the drug and the use of other nitrates would be a contraindication.

D. who are less than 40 years of age and have diabetes.

Rationale: While the patient's age must be considered, it is not a contraindication.