

Module 4: Disaster Medical Operations

Lesson 12: Treating Life- Threatening Conditions

Self-Study Guide

Lesson Overview

Lesson Purpose	This lesson introduces three life-threatening conditions and procedures for treating them.
Lesson Objectives	After completing this lesson, you should be able to: <ul style="list-style-type: none">▪ Recognize the signs of an obstructed airway, excessive bleeding, and shock.▪ Describe techniques for opening an airway, controlling bleeding, and treating for shock.
Estimated Time	30 minutes
Contents	This lesson includes the following sections: <ul style="list-style-type: none">▪ Lesson Overview▪ The “Killers”▪ Obstructed Airway▪ Excessive Bleeding▪ Shock▪ Lesson Summary

The "Killers"

There are three life-threatening conditions (sometimes referred to as the "killers") that always get first priority: Obstructed airway, excessive bleeding, and shock.

These conditions are discovered during triage, which you'll learn about in the next lesson. As the name "killers" implies, anytime a victim presents one of these conditions, it requires immediate attention.

The Need for Indepth Instruction

In this lesson, you'll learn procedures for:

- Opening the airway.
- Controlling excessive bleeding.
- Treating for shock.

But remember—this self study is only an introduction. Do not try these procedures until you have completed the classroom training. Life-saving techniques require in-depth instruction and supervised practice to enable you to do them correctly.

Protect Yourself

One more reminder before we get started: Always protect yourself. Whenever you perform disaster medical operations, remember to:

- Work with a buddy.
- Do a good sizeup.
- Wear safety equipment (gloves, goggles, mask, helmet, and boots).
- Wear latex gloves.
- Change or sterilize gloves between patients.
- Avoid high-risk situations, such as hazardous materials.

Obstructed Airway

In an unconscious or semiconscious victim—especially one lying on his or her back—the tongue may relax and block the airway. The tongue is the most common airway obstruction.

A victim who does not appear to be breathing must be attended to immediately. If an airway obstruction is suspected, you will need to attempt to open the airway to restore breathing.

Opening the Airway

To open the airway of a victim who appears to be unconscious, look, listen, and feel for air exchange by performing the steps below.

1. Shake the victim and shout, "Can you hear me?"
2. If the person does not respond, place your palm on the victim's forehead.
3. Place two fingers of the other hand under the victim's chin and lift the jaw while tilting the head back slightly.
4. Place your ear over the victim's mouth and your hand on the victim's stomach and look at the victim's chest.
5. Look for chest rise.
6. Listen for breathing.
7. Feel for abdominal movement.

Two Tries, Then Move On To Help Others

In a disaster setting with many people needing help, your mission is to do the greatest good for the greatest number of people. You can't spend unlimited time trying to revive one victim.

- If breathing is not restored on the first try using the Head-Tilt/Chin-Lift method, try once more using the same technique.
- If breathing cannot be restored on the second try, move on to the next victim whom you may be able to help. Unfortunately, when there are many more victims than helpers, CPR is too labor intensive.

Maintaining the Airway

If breathing is restored after one or two tries, the airway must be maintained in an open position with the head tilt. Options for maintaining an open airway when you go to help others include:

- Having a volunteer hold the head in place.
- Placing soft objects under the victim's shoulders to slightly elevate the shoulders and keep the airway open.

Knowledge Review



Instructions: Select the correct answers. When you are finished, turn to the next page to check your answers.

1. What is the most common airway obstruction in an unconscious or semiconscious victim?
 - Vomit
 - Blood
 - The tongue
 - A small object

2. In a disaster setting with multiple victims, if the victim does not respond to the Head-Tilt/Chin-Lift method on the first try, you should:
 - Try once more, and if there still is no breathing, move on to the next victim.
 - Begin cardio-pulmonary resuscitation.
 - Ask a volunteer to keep repeating the procedure until the victim responds.
 - Give up and move on to the next victim.

3. Put the steps for opening the airway in the correct order by typing a number next to each step.
 - If no response, place the palm of the hand on the victim's forehead.
 - Shake the victim and shout, "Can you hear me?"
 - Look for chest rise.
 - Listen for breathing.
 - With two fingers under the chin, lift the jaw and tilt the head back.
 - Place your ear near the victim's mouth and look at the chest. Move your hand from the chin to the stomach.
 - Feel for abdominal movement.

Knowledge Review: Answer Key



Instructions: Compare your answers to those shown below.

1. What is the most common airway obstruction in an unconscious or semiconscious victim?

- Vomit
- Blood
- The tongue**
- A small object

The most common airway obstruction in an unconscious or semiconscious victim is **the tongue**. The tongue, which is a muscle, can relax and block the airway opening.

2. In a disaster setting with multiple victims, if the victim does not respond to the Head-Tilt/Chin-Lift method on the first try, you should:

- Try once more, and if there still is no breathing, move on to the next victim.**
- Begin cardio-pulmonary resuscitation.
- Ask a volunteer to keep repeating the procedure until the victim responds.
- Give up and move on to the next victim.

If the victim does not respond to the Head-Tilt/Chin-Lift method, you should **try once more**. If there is breathing, use a volunteer or soft object under the shoulders to maintain the airway before you go to the next victim. If there still is no breathing, **move on to the next victim**. Your mission is to do the greatest good for the greatest number of people. Administering CPR in a disaster situation is too time consuming to allow you to treat many victims.

Knowledge Review: Answer Key (Continued)



3. Put the steps for opening the airway in the correct order by typing a number next to each step.

- 2 If no response, place the palm of the hand on the victim's forehead.
- 1 Shake the victim and shout, "Can you hear me?"
- 5 Look for chest rise.
- 6 Listen for breathing.
- 3 With two fingers under the chin, lift the jaw and tilt the head back.
- 4 Place your ear near the victim's mouth and look at the chest. Move your hand from the chin to the stomach.
- 7 Feel for abdominal movement.

The proper order for opening the airway is as follows:

- 1. Shake the victim and shout, "Can you hear me?"
- 2. If no response, place the palm of the hand on the victim's forehead.
- 3. With two fingers under the chin, lift the jaw and tilt the head back.
- 4. Place your ear near the victim's mouth and look at the chest. Move your hand from the chin to the stomach.
- 5. Look for chest rise.
- 6. Listen for breathing.
- 7. Feel for abdominal movement.

Excessive Bleeding

The second life-threatening condition is excessive bleeding. If not controlled, excessive bleeding will result in:

- **Weakness.** Uncontrolled bleeding initially causes weakness.
- **Shock.** If bleeding is not controlled, the victim will go into shock within a short period of time.
- **Death.** An adult has about five liters of blood. Losing one liter can result in death.

Types of Bleeding

There are three types of bleeding depending on the type of vessel that is injured. The type of bleeding can usually be identified by how the blood flows.

Type of Bleeding	Description
Arterial	Spurting: Arteries transport blood under high pressure. Bleeding from an artery is bright red blood that spurts with every heartbeat.
Venous	Steady Flow: Veins carry blood under low pressure. Bleeding from a vein is a steady flow of darker blood.
Capillary	Oozing: Capillaries also carry blood under low pressure. Bleeding from capillaries oozes.

Controlling Bleeding

Three main methods are used to control bleeding:

- Direct pressure on the wound
- Elevation
- Pressure points

Direct pressure combined with elevation will control most bleeding.

We'll look at each method for controlling bleeding. Do not use these steps until you receive classroom training.

Using Direct Pressure To Control Bleeding

Use these steps to control bleeding using direct pressure:

- **Step 1:** Put a clean dressing over the wound and press firmly.
- **Step 2:** Use a pressure bandage, such as a triangle bandage, to maintain pressure on the dressing.
- **Step 3:** Tie the ends of the bandage over the wound with a bow instead of a knot. The bow allows the bandage to be loosened later to reduce the pressure if the extremity becomes numb or turns blue and allows the wound to be checked for infection. Then, the bandage can be retied, saving time and supplies.

Excessive Bleeding

Using Elevation To Control Bleeding

Elevation is used in combination with direct pressure to control bleeding. To use this method:

- Elevate the wound above the level of the heart to help stop the bleeding.
- Try to find a position that the victim can maintain with comfort.
- If necessary, prop the limb up with nearby objects.

After Pressure and Elevation, Keep Checking

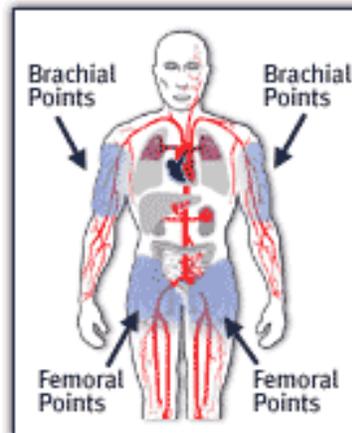
Using direct pressure and elevation can take 5 to 7 minutes to completely stop the bleeding. Using a dressing and pressure bandage to maintain the pressure on the wound allows you to move on to the next victim. That doesn't mean you're done, however.

CERT members need to continue assessing the victim's status. If the victim's limb is turning blue or becoming numb below the bandage, the bandage should be loosened and retied over the wound with less pressure.

Using Pressure Points To Control Arterial Bleeding

A pressure point is where a major artery to an arm or leg crosses over a bone. By pressing firmly on a pressure point, you can slow or stop the flow of blood to the bleeding arm or leg.

The pressure points shown in the diagram are the brachial points for the arms and the femoral points for the legs.



Knowledge Review

Instructions: Select the correct answers. When you are finished, turn to the next page to check your answers.

Situation: At the disaster scene, you have discovered a barely conscious victim bleeding profusely from a gash just above the knee. Blood is spurting rhythmically from the wound.

1. What type of bleeding is this victim experiencing?
 - Arterial
 - Capillary
 - Venous

2. What methods could you use to control bleeding?
 - Put direct pressure on the wound.
 - Elevate the wound above the heart.
 - Elevate the heart above the wound.
 - Press on the brachial pressure point.
 - If still bleeding after 5 to 7 minutes, apply pressure to the femoral pressure point for that leg.

3. Of the three types of bleeding, which is the most serious and most difficult to control?
 - Capillary
 - Arterial
 - Venous

Knowledge Review: Answer Key



Instructions: Compare your answers to those shown below.

1. What type of bleeding is this victim experiencing?

- Arterial**
- Capillary
- Venous

The victim is experiencing **arterial** bleeding. Blood that spurts rhythmically is coming from an artery under high pressure.

2. What methods could you use to control bleeding?

- Put direct pressure on the wound.**
- Elevate the wound above the heart.**
- Elevate the heart above the wound.
- Press on the brachial pressure point.
- If still bleeding after 5 to 7 minutes, apply pressure to the femoral pressure point for that leg.**

In this situation, the following methods would be useful:

- Putting direct pressure on the wound.
- Elevating the wound above the heart.
- After 5 to 7 minutes, applying pressure to the femoral pressure point for that leg.

Direct pressure and elevation stop most bleeding. Applying pressure to the femoral pressure point for that leg can be used if bleeding doesn't stop in 5 to 7 minutes.

3. Of the three types of bleeding, which is the most serious and most difficult to control?

- Capillary
- Arterial**
- Venous

Arterial bleeding is the most serious and most difficult to control. Blood in the arteries is transported under high pressure. This kind of bleeding can lead to significant blood loss. However, any sustained bleeding—arterial, venous, or capillary—is a danger to the victim.

Shock

The third life-threatening condition is shock, a disorder resulting from ineffective circulation of blood. Remaining in shock will lead to the death of:

- Cells.
- Tissues.
- Entire organs.

The body can compensate for blood loss and initially may mask the symptoms of shock. Therefore it is very important to evaluate patients for shock and to monitor their conditions continually.

Recognizing Shock

A victim may display one or more signs of shock. Several shock symptoms are fairly easy to identify. They include:

- Rapid, shallow breathing.
- Capillary refill of greater than 2 seconds.
- Failure to respond to a simple command, such as "Squeeze my hand."

Let's take a brief look at each of these signs and how to recognize them.

Signs of Shock: Rapid Breathing

A victim whose breathing is rapid and shallow could be in shock. The person's breathing will sound like panting and will be more than 30 breaths per minute.

Signs of Shock: Slow Capillary Refill

A second sign of shock is slow capillary refill. In a person experiencing shock, the capillaries take longer than 2 seconds to refill and return the skin to normal color.

The blanch test, as this technique is called, is used to check capillary refill time. To see how quickly normal color returns to your skin, try it on yourself. Simply press your thumb into the palm of your hand or the base of your fingernail. Normal color should return immediately.

Signs of Shock: Failure To Respond

A third sign of shock is the victim's failure to follow simple commands. Shock can make a traumatized person appear:

- Restless, nervous, or agitated.
- Confused or dazed.
- Unaware of his or her surroundings.

Holding the person's hand and giving a simple command, such as "Squeeze my hand," is a good way to check a person's ability to respond.

Knowledge Review

Instructions: Select the correct answers. Click on ALL that apply. When you are finished, turn to the next page to check your answers.

1. Which of the following statements are true about shock?
 - Shock results from ineffective circulation of blood.
 - Remaining in shock can lead to the death of cells, tissues, and organs.
 - Slow, steady breathing is one sign of shock.
 - More than 2 seconds for normal skin color to return after blanch test is indicative of shock.
 - In most cases, the signs of shock are immediately apparent.
 - Victim may seem dazed or confused.

2. Following a tornado, you are checking victims at the disaster scene. It is a windy summer day, about 78°F, and conditions are dry. A victim has a small cut on her head that is not bleeding, but she does not respond to simple commands and is panting. She is on the verge of losing consciousness. How should you treat the person?
 - Shake the victim and shout, "Can you hear me?"
 - Place the victim on her back.
 - Maintain body temperature.
 - Use available objects to prop up her head.
 - Use available objects to elevate her feet.
 - Help the victim walk out of the disaster area.
 - Encourage her to drink fluids.
 - Maintain an open airway.

Knowledge Review: Answer Key



Instructions: Compare your answers to those shown below.

1. Which of the following statements are true about shock?
- Shock results from ineffective circulation of blood.**
 - Remaining in shock can lead to the death of cells, tissues, and organs.**
 - Slow, steady breathing is one sign of shock.
 - More than 2 seconds for normal skin color to return after blanch test is indicative of shock.**
 - In most cases, the signs of shock are immediately apparent.
 - Victim may seem dazed or confused.**

The following are true statements about shock:

- Shock results from ineffective circulation of blood.
- Remaining in shock can lead to the death of cells, tissues, and organs.
- More than 2 seconds for skin color to return after a blanch test is indicative of shock.
- Victim may seem dazed or confused.
- Another sign of shock is rapid, shallow breathing. Shock is not always immediately apparent. Sometimes the body will mask signs of shock, so you should continually monitor victims for signs of shock.

Knowledge Review: Answer Key (Continued)

2. Following a tornado, you are checking victims at the disaster scene. It is a windy summer day, about 78°F, and conditions are dry. A victim has a small cut on her head that is not bleeding, but she does not respond to simple commands and is panting. She is on the verge of losing consciousness. How should you treat the person?

- Shake the victim and shout, "Can you hear me?"
- Place the victim on her back.**
- Maintain body temperature.**
- Use available objects to prop up her head.
- Use available objects to elevate her feet.**
- Help the victim walk out of the disaster area.
- Encourage her to drink fluids.
- Maintain an open airway.**

The following treatments would be appropriate in this situation:

- Place the victim on her back.
- Maintain body temperature.
- Use available objects to elevate her feet.
- Maintain an open airway.

Rough or excessive handling, such as shaking, shouting, or walking would not be advisable for a shock victim. Drinking is not advisable because of the possibility of nausea.

Lesson Summary

Lesson Summary

In this lesson, you learned:

- Conditions that always get priority are obstructed airway, excessive bleeding, and shock.
- To use the Head-Tilt/Chin-Lift method to open the airway.
- To use direct pressure and elevation, then pressure points, as needed, to control bleeding.
- To keep shock victims warm and quiet, maintain body temperature, keep the feet elevated 6-10 inches above the heart, and maintain an open airway.

Next Lesson

You have completed this lesson. You are now ready to begin Lesson 13: Conducting Triage.