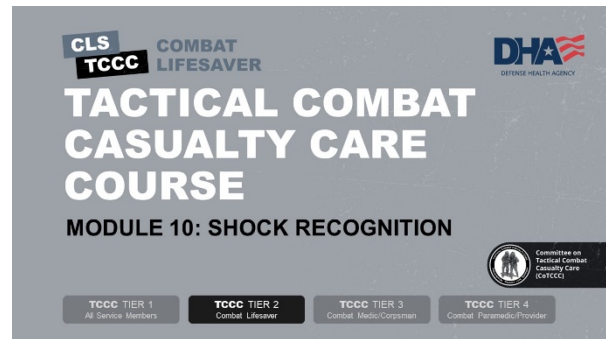


MODULE 10 – SHOCK RECOGNITION

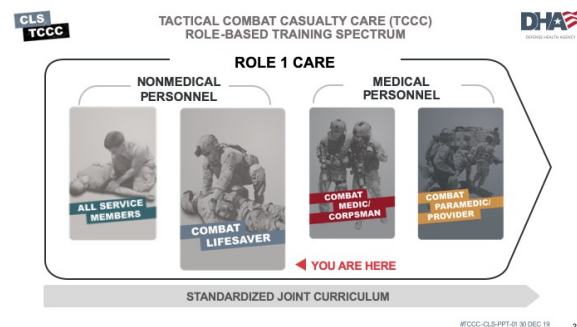
SLIDE 1 – TITLE SLIDE



SLIDE 2 – TCCC ROLES

Tactical Combat Casualty Care is broken up into 4 roles of care. The most basic is taught to All Service Members (ASM), which is the absolute basics of hemorrhage control and to recognize more serious problems.

You are in the Combat Lifesaver (CLS) role. This teaches you more advanced care to treat the most common causes of death on the battlefield, and to recognize, prevent, and communicate with medical personnel the life-threatening complications of these injuries.



The Combat Medic/Corpsman role has much more advanced and invasive care requiring significantly more medical knowledge and skills.

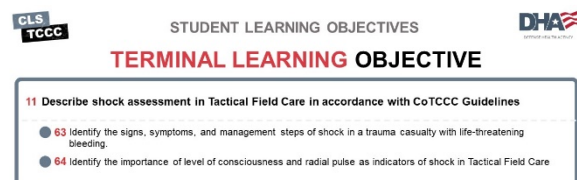
Finally, the last role is for combat paramedics and advanced providers, to provide the most sophisticated care to keep our wounded warriors alive and get them to definitive care.

Your role as a combat lifesaver is to treat the most common causes of death on the battlefield, which are massive hemorrhage and airway/respiratory problems. In addition, you are given the skills to prevent complications and treat other associated but not immediately life-threatening injuries.

SLIDE 3 – TLO/ELO

The TCCC-CLS course is built on a foundation of learning objectives. These objectives lay out the basic structure of the course and describe the knowledge and skills you are expected to acquire by the end of the course.

The module has one Terminal Learning Objective, or TLO. The TLO is supported by a series of Enabling Learning Objectives, or ELOs. This graphic shows how the ELOs are mapped to the TLOs. The blue dots are cognitive or knowledge learning objectives, and the green dots are performance objectives focused on skills.



02 ENABLING LEARNING OBJECTIVES (ELOs) ● Cognitive ELOs ● Performance ELOs

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SLIDE 4 – MARCH PAWS

Shock recognition is related to circulation, which is the “C” in the MARCH PAWS sequence.

SLIDE 5 – SHOCK RECOGNITION VIDEO

Play video.

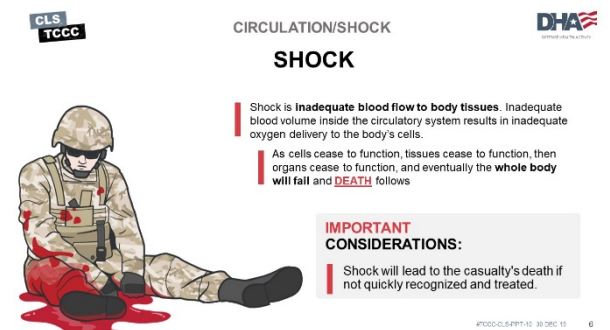


SLIDE 6 – SHOCK

Shock is inadequate blood flow to body tissues. Inadequate blood volume inside the circulatory system results in inadequate oxygen delivery to the body's cells.

As cells cease to function, tissues cease to function, then organs cease to function, and eventually, the whole body will fail and **DEATH** follows.

REMEMBER: Shock will lead to the casualty's death if not quickly recognized and treated.



SLIDE 7 – SHOCK (CONT.)

Shock is caused by a decrease in the amount of blood volume circulating in the casualty's blood circulatory system.

Shock can have many causes:

- Low blood volume or hypovolemia, such as dehydration or blood loss
- Low blood pressure from massive infection
- Heart failure
- Neurologic damage

Shock is usually caused by severe bleeding, but it can also be caused by severe burns, such as second- and third-degree burns on 20 percent or more of the body surface.

On the battlefield, assume shock is from severe blood loss. This is also called hemorrhagic shock.

Remember: If uncontrolled, hemorrhagic shock can result in the casualty's **death**.

CLS
TCCC

CIRCULATION/SHOCK
SHOCK

Caused by a decrease in the amount of blood volume circulating in the casualty's blood circulatory system


Shock can have many causes – low blood volume or hypovolemia (dehydration or blood loss), low blood pressure (massive infection), heart failure, or neurologic damage

Usually caused by severe bleeding, but it can also be caused by severe burns (second- and third-degree burns on 20 percent or more of the body surface)

On the battlefield, assume shock is from severe blood loss (also called hemorrhagic shock)

Hemorrhagic shock can result in the casualty's death

MARCH



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SLIDE 8 – GENERAL INDICATORS OF SHOCK

You need to know the signs of hemorrhagic shock on the battlefield:

- Mental confusion or altered mental status in the absence of a head injury
- Rapid or shallow breathing
- Sweaty, cool, clammy skin
- Pale/grey or blotchy blue skin as shock progresses
- Weak or absent radial pulse
- Nausea and/or vomiting
- Excessive thirst
- Previous severe bleeding


CLS
TCCC

CIRCULATION/SHOCK
GENERAL INDICATORS OF SHOCK

SIGNS AND SYMPTOMS OF SHOCK INCLUDE:

Mental confusion	Weak or absent radial pulse
Rapid breathing	Nausea
Sweaty, cool, clammy skin	Excessive thirst
Pale/gray skin	Previous severe bleeding

MARCH



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Make sure you frequently assess casualties during TFC for signs of shock. These symptoms can change and progress over time.

SPEAKER NOTES

SLIDE 9 – GENERAL INDICATORS OF SHOCK (CONT.)

Shock has two important indicators. These are mental confusion and a weak or absent radial pulse.

If BOTH indicators exist, the casualty has lost a SIGNIFICANT amount of blood and is at risk of death.

As previously stated, shock will lead to the casualty's death if not quickly recognized and treated.

CLS TCCC CIRCULATION/SHOCK

GENERAL INDICATORS OF SHOCK

IMPORTANT Indicator:
Mental confusion

IMPORTANT Indicator:
Weak or absent radial pulse

If BOTH indicators exist, the casualty has lost a SIGNIFICANT amount of blood. As previously stated, Shock will lead to the casualty's death if not quickly recognized and treated.

#TCCC-CLS-PPT-10 30 DEC 19 9

SLIDE 10 – GENERAL INDICATORS OF SHOCK (CONT.)

This table provides an overview of the effects of blood loss.

Up to 500 cc of blood loss is well tolerated with often no effects except a possible increase in the heart rate.

1,000 cc of blood loss will usually produce an elevated heart rate greater than 100, but otherwise the casualty may appear normal. This amount of blood loss is not usually fatal.

1,500 cc of blood loss may be associated with a change in mental status, a weak radial pulse greater than 10, and increased respirations. If there is no further blood loss, the casualty is still unlikely to die.

2,000 cc of blood loss is accompanied by confusion and lethargy, a weak radial pulse often greater than 120, and a high respiratory rate greater than 35. This amount of blood loss is possibly fatal if not managed quickly.

2,500 cc of blood loss will usually present with the casualty unconscious, with no radial pulse, a carotid pulse greater than 140, and respirations greater than 35. This amount of blood loss will be fatal without immediate and rapid intervention.

This table highlights why it is so important to quickly apply a tourniquet, once safe, during CUF and reassess and evaluate for additional bleeding sources during TFC.

CLS TCCC CIRCULATION/SHOCK

GENERAL INDICATORS OF SHOCK

Blood Volume	Blood Loss	Signs/Symptoms	Effects/Outcome
4 liter bottles full, one bottle 1/2 empty	500 cc	Possible increased HR	Usually no effects
4 liter bottles full, 1 empty	1,000 cc	Radial pulse >100 Breathing prob normal	Unlikely to die from this amount of loss
3 1/2 bottles full, 1 1/2 empty	1,500 cc	Change in mental status Weak radial pulse >100 Increased respirations	Still unlikely to die
3 bottles full, 2 empty	2,000 cc	Confusion and lethargy Very weak radial pulse >120 High respiratory rate (>35)	Very possibly fatal if not managed
2 1/2 bottles full and 2 1/2 bottles empty	2,500 cc	Unconscious No radial pulse, carotid pulse, HR >140 Respirations >35	Fatal without immediate and rapid interventions

MARCH

#TCCC-CLS-PPT-10 30 DEC 19 10

SLIDE 11 – PREVENT SHOCK BY CONTROLLING BLEEDING

It is better to prevent shock with hemorrhage control than to treat it. Even if shock is already present, the most critical first step in treating it is to control the bleeding. Reassess all bleeding control measures to ensure they are still effective. Ensure tourniquets and pressure dressings remain tight, as soon as possible. This is the most critical thing to accomplish in treating shock.

CLS TCCC CIRCULATION/SHOCK

PREVENT SHOCK BY CONTROLLING BLEEDING

#1- Reassess to confirm all bleeding control measures are still effective. Ensure tourniquets and pressure dressings remain tight

Check radial pulse

It is better to prevent shock with hemorrhage control than to treat it

If shock is present, though, the most critical first step is to control the bleeding

Internal bleeding from chest or abdominal trauma may not be controllable, and shock may develop later, so continuously assess the casualty

Medical personnel will provide other treatments, but you can save them time if extremal bleeding is controlled

DO NOT WAIT for signs and symptoms of shock to occur

MARCH

#TCCC-CLS-PPT-10 30 DEC 19 11

Internal bleeding from blunt trauma or penetrating trauma to the chest or abdomen may not be controllable, and continued bleeding from an internal source may cause shock to develop later, so continually reassess the casualty. If a casualty is not in shock, then they don't need treatment for shock, but should be watched carefully for the development of shock if they have been seriously injured.

DO NOT WAIT for signs and symptoms of shock to occur.

Medical personnel will provide other treatments, but you can save them time if extremal bleeding is controlled.

SLIDE 12 – ASSESS/MONITOR FOR HEMORRHAGIC SHOCK

Assess for signs and symptoms of shock as soon as hemorrhage is controlled, the airway is open, and respirations have been managed.

The best TACTICAL indicators of shock are a decreased state of consciousness, if the casualty has not suffered a head injury, and/or an abnormal, weak, absent radial pulse.


Assess for hemorrhagic shock, as noted by altered mental status in the absence of brain injury and/or weak or absent radial pulse.

Reassess/monitor for changes in the level of consciousness by checking for alertness or responsiveness to verbal or physical stimulation.

CLS TCCC CIRCULATION/SHOCK

ASSESS/MONITOR FOR HEMORRHAGIC SHOCK

DHA DEFENSE HEALTH AGENCY



Assess for signs and symptoms of shock as soon as hemorrhage is controlled, the airway is open, and respirations have been managed

The best TACTICAL indicators of shock are a decreased state of consciousness (if casualty has not suffered a head injury) and/or an abnormal, weak, absent radial pulse

Assess for hemorrhagic shock (altered mental status in the absence of brain injury and/or weak or absent radial pulse)

Reassess/monitor for changes in the level of consciousness by checking for alertness or responsiveness to verbal or physical stimulation

MARCH

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SLIDE 13 – REASSESS

Reassess the level of consciousness every 15 minutes using the AVPU scale.

Check whether they are **Alert**, have **Verbal** responses, respond only to **Pain**, or are **Unconscious**. A decreasing AVPU could indicate the casualty's condition is worsening.


Also, continue to reassess the breathing rate and monitor the casualty's respirations.

- Thoracic trauma may indicate a tension pneumothorax, which will require a needle decompression of the chest.
- If a casualty becomes unconscious or their breathing rate drops below two respirations every 15 seconds, insert a nasopharyngeal airway.

CLS TCCC SHOCK RECOGNITION

REASSESS


DHA DEFENSE HEALTH AGENCY



Level of consciousness
Check casualty every 15 minutes for **AVPU**

Alertness - Knows who, where they are
Verbal - Orally responds to verbal commands
Pain - Rub sternum briskly with your knuckle (if needed)
Unconscious - Unresponsive

Decreasing AVPU could indicate condition worsening



Breathing Rate
Monitor respirations

Thoracic trauma may indicate tension pneumothorax (needle decompression of the chest required)

If a casualty becomes unconscious or their breathing rate drops below two respirations every 15 seconds, insert a nasopharyngeal airway

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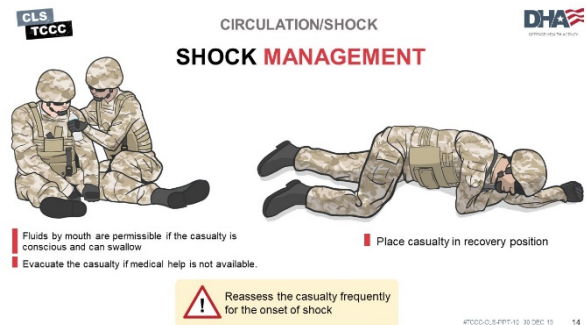
SLIDE 14 – SHOCK MANAGEMENT

It is a good idea to let those casualties who are not in shock, and who are able to swallow, to drink water or other fluids. Dehydration is common on the battlefield and is not good for casualties. Any casualty not in shock, but who has lost some blood, will benefit from oral rehydration.

Position the casualty in the recovery position with their head turned so fluids can drain from their mouth or in a position that allows them to breathe.

Evacuate the casualty if medical help is present or available.

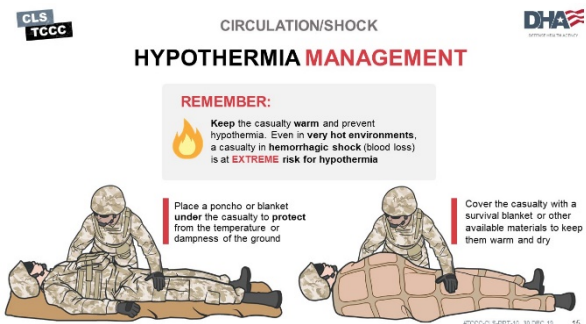
Reassess the casualty frequently for the onset of shock. Continually reassess and monitor!



SLIDE 15 – HYPOTHERMIA MANAGEMENT

Keep the casualty warm and prevent hypothermia. Even in very hot environments, a casualty suffering hemorrhagic shock from blood loss is at extreme risk for hypothermia.

Remember the active and passive means to warm and prevent hypothermia. Place a poncho or blanket under the casualty to protect them from the cold temperature or dampness of the ground. Cover the casualty with a survival blanket or other available materials to keep them warm and dry.



SLIDE 16 – SUMMARY

In summary, you should now be able to define shock, identify the indicators of shock, discuss prevention measures for shock, and discuss the management of shock. You should also understand that hypothermia can be caused by shock and can make it worse.

Remember, the two most important indicators of shock are mental confusion in the absence of a head injury and a weak or absent radial pulse. If the casualty is in shock or develops shock, refer them to medical personnel and evacuate as soon as possible.

Always continue to reassess and communicate with your casualty.

Document all findings and treatments on the DD Form 1380.



SLIDE 17 – CHECK ON LEARNING

Ask questions of the learners referring to key concepts from the module.

Now for a check on learning.

What is shock?

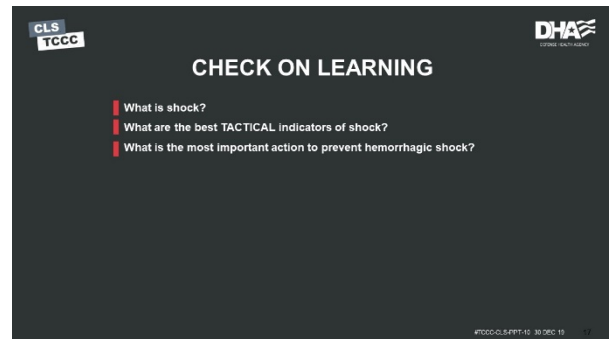
- Shock is inadequate blood flow and oxygen delivery to the body's cells, which leads to organ failure and death.

What are the best TACTICAL indicators of shock?

- Decreased state of consciousness (if casualty has not suffered a head injury) and/or an abnormal, weak, absent radial pulse.

What is the most important action to prevent hemorrhagic shock?

- Stop the bleeding



SLIDE 18 – ANY QUESTIONS

