

CLS

TCCC

COMBAT LIFESAVER

TACTICAL COMBAT CASUALTY CARE

MODULE 08:
RESPIRATION
ASSESSMENT
AND MANAGEMENT
IN TFC
SKILL INSTRUCTIONS

30 JUN 2020



**Committee on
Tactical Combat
Casualty Care
(CoTCCC)**

CHEST SEAL INSTRUCTION

TASK:	Apply an occlusive dressing/chest seal to an open/sucking chest wound
CONDITION:	Given a scenario where casualty and responder are in combat gear and the casualty has an open chest injury and you have a chest seal
STANDARD:	Demonstrate proper application of a chest seal following all steps and meeting performance measures without causing further injury to the casualty
EQUIPMENT:	Joint First Aid Kit with a chest seal

PERFORMANCE MEASURES: step-by-step instructions

- 01 Expose and uncover any chest wounds.
NOTE: Expose casualty's back and look for additional open wounds (chest, under the arms, and back).
- 02 Check for signs of an open and/or sucking chest wound. A casualty with an open chest wound will exhibit one or more of the following signs and symptoms: a "sucking" or "hissing" sound when the casualty inhales, difficulty breathing, a puncture wound of the chest, froth or bubbles around the injury, or coughing up blood or blood-tinged sputum (spit).
NOTE: If you are not sure if the wound has penetrated the chest wall completely, treat the wound as though it were an open chest wound.
NOTE: If multiple wounds are found, treat them in the order in which you found them.
- 03 Place hand or back of hand over open chest wound to create a temporary seal.
- 04 Fully open the outer wrapper of the commercial chest seal or other airtight material.
- 05 Remove and use the 4x4 gauze from the chest seal package or other airtight material to wipe away any dirt, blood, or other fluid.
- 06 Peel off the protective liner, exposing the adhesive portion of the seal.
- 07 Place the adhesive side directly over the hole as the casualty exhales, pressing firmly to create a seal.
NOTE: Ensure edges of the chest seal extend 2 inches beyond the edges of the wound.
- 08 Ensure that the adhesive (sticky) surface of the chest seal is adhering to the skin.
NOTE: Tape may be used to secure the edges of the chest seal, if needed.
- 09 Assess the effectiveness of the vented chest seal when the casualty breathes.
NOTE: When the casualty inhales, the plastic should be sucked against the wound, preventing the entry of air.
NOTE: When the casualty exhales, trapped air should be able to escape from the wound and out the valve.
- 10 Check/feel for additional open chest wounds by using a raking motion (anterior/front, axillary/armpit, and posterior/back) and treat them the same way with additional chest seals (repeat steps 3–8), if needed.
- 11 Place a **conscious** casualty in a sitting position or in a position of comfort that best allows the casualty to breathe; place an **unconscious** casualty with their injured side down in the recovery position.
- 12 Monitor for signs of a tension pneumothorax.
NOTE: Signs of a tension pneumothorax include significant torso trauma or primary blast injury followed by severe/progressive respiratory distress (a respiratory rate greater than 20 breaths per minute).
- 13 If signs of a tension pneumothorax develop, lift one edge of the seal and allow the tension pneumothorax to decompress ("burping" the seal), and then press the chest seal down firmly to recreate the seal.
NOTE: Alternatively, remove the seal for a few seconds to accomplish the decompression, reapply or replace with a new chest seal, and then press the chest seal down firmly to recreate the seal.
- 14 If the signs of a tension pneumothorax persist despite burping the seal, perform a needle decompression of the chest (see Needle Decompression of the Chest Instruction).
- 15 Document all findings and treatments on a DD Form 1380 TCCC Casualty Card and attach it to the casualty.

NEEDLE DECOMPRESSION OF THE CHEST (NDC) INSTRUCTION

TASK:	Perform a Needle Decompression of the Chest
CONDITION:	Given a scenario where the casualty and responder are in combat gear and the casualty has torso trauma and progressive respiratory distress (signs of tension pneumothorax) in the Tactical Field Care phase, and you have needle decompression equipment
STANDARD:	Perform a needle decompression of the chest in 3 minutes or less
EQUIPMENT:	Joint First Aid Kit with needle decompression supplies

PERFORMANCE MEASURES: step-by-step instructions

NOTE: Signs of a tension pneumothorax include significant torso trauma or primary blast injury followed by severe/progressive respiratory distress (respiratory rate greater than 20 breaths per minute).

- 01** Assess the casualty for signs of suspected tension pneumothorax.
- 02** If a chest seal has been previously applied, burp or remove (if improperly applied, replace the seal) the chest seal and reassess the casualty. (See Chest Seal Instruction.)
- 03** Identify the site for needle insertion on the side of injury.
NOTE: Either of two sites can be used (whichever one is most accessible):
 - (a) The fifth intercostal space in the anterior axillary line on the side of the injury or decreased breath sounds.
 - (b) The second intercostal space at the midclavicular line on the side of the injury or decreased breath sounds.**NOTE:** If the midclavicular line site is used, ensure the site selection is outside the nipple line.
- 04** Use the appropriate needle catheter (either 10 or 14 gauge, 3¼ inches).
NOTE: If available, use antiseptic solution or a pad to clean the site.
- 05** Remove the Luer lock cap from the needle catheter (if applicable).
- 06** Insert the needle just over the top of the lower rib at the insertion site, at a 90-degree angle (perpendicular) to the chest wall, advancing it to the hub.
- 07** Leave the needle in place for 5–10 seconds to allow decompression to occur; then remove the needle, leaving the catheter in place.
- 08** Assess for successful needle decompression. Signs of success include:
 - (a) An obvious hissing sound is heard as air escapes from the chest when NDC is performed
NOTE: This may be difficult to hear in high-noise environments.
 - (b) Respiratory distress improves
- 09** If the first needle decompression fails to improve the casualty's signs/symptoms, then perform a second needle decompression on the same side of the chest at whichever of the two recommended sites was not previously used.
NOTE: Use a new needle unit for the second decompression attempt.
- 10** Place the casualty in a position of comfort or recovery position with injured side down.
- 11** Continue reassessing the casualty for reoccurrence of progressive respiratory distress.
- 12** If the initial NDC was successful, but symptoms later recur, then perform another NDC at the same site that was used previously. Use a new needle/catheter unit for the repeat NDC.
- 13** If the second NDC is also not successful, then continue onto the Circulation section of the MARCH (Massive bleeding, Airway, Respiration, Circulation, Hypothermia/Head) sequence.
- 14** Document all findings and treatments on a DD Form 1380 TCCC Casualty Card and attach it to the casualty.

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