

## Skill Sheet

### Needle Decompression of Tension Pneumothorax

**Objective:** DEMONSTRATE the appropriate procedure for needle decompression of a tension pneumothorax.

**References:**

PHTLS (Military Version) Eighth Edition, Jones and Bartlett Learning

**Evaluation:** Students will be evaluated as a Pass/Fail (P/F). The instructor will verify the accuracy of the student's ability to properly manage a simulated tension pneumothorax on a mannequin's thoracic section and perform a NDC by means of observing the student's procedures and technique.

**Materials:**

Student Checklist

Needle decompression simulator, Betadine/alcohol prep, needle/catheter 14 gauge and 3.25", ½ inch gauze tape.

**Instructor Guidelines:**

1. Provide each instructor with a Student Checklist.
2. Ensure student has all student-required materials.
3. Read the Learning Objective and the evaluation method to the student.
4. Explain the grading of the exercise.
5. Allow time for the students to extract the information required from the instructor-provided scenario.

**Performance Steps:**

1. Prepare equipment.
2. Verbalize that body substance isolation (BSI) precautions were considered.
3. Verbalize that the progressive respiratory distress is due to chest trauma.
4. Identify the fifth intercostal space (ICS) on the lateral chest wall at the anterior axillary line (AAL) on the same side as the injury.
5. Verbalize that the needle to be used for the procedure is a 3.25 inch, 14-gauge needle.
6. Verbalize the importance of ensuring that the needle entry site is not medial to the nipple line.
7. Clean the site with an antimicrobial solution (alcohol or Betadine).
8. Insert the needle into the chest.
  - Remove the plastic cap from the 3.25 inch, 14-gauge needle. Also remove the cover to the needle's flash chamber.
  - Insert the needle into the skin over the superior border of the lower rib at the site and direct the needle into the ICS at a 90-degree angle.
  - As the needle enters the pleural space, a "pop" was felt, followed by a possible hiss of air. Insure that the needle is advanced all the way to the hub.
  - Remove the needle, leaving the catheter in place.
  - If tension pneumothorax recurs (as noted by return of respiratory distress), repeat the needle decompression on the injured side.

9. Stabilize the catheter hub to the chest wall with ½ inch gauze tape.
10. Listen for increased breath sounds or observe decreased respiratory distress.
11. Remove gloves and dispose of them appropriately.
12. Document the procedure on the TCCC Casualty Card.

### Decompress the Chest: Needle Decompression

Task	Completed		
	1st	2nd	3rd
Verbalized that body substance isolation (BSI) precautions were considered.	P / F	P / F	P / F
Assessed the casualty to ensure the respiratory distress was due to chest trauma.	P / F	P / F	P / F
Identified the fifth ICS on the lateral chest wall at nipple level on the same side as the injury.	P / F	P / F	P / F
Cleaned the site with an antimicrobial solution.	P / F	P / F	P / F
Inserted the needle into the chest at a 90-degree angle to the chest wall.	P / F	P / F	P / F
<b><i>INSTRUCTOR: Administratively gain control of the needle and place it in a sharps container.</i></b>			
Stabilized the catheter hub to the chest wall with adhesive tape	P / F	P / F	P / F
Listen for increased breath sounds or observe decreased respiratory distress.	P / F	P / F	P / F
Removed their gloves and disposed of them appropriately.	P / F	P / F	P / F
Documented the procedure on the DD 1380.	P / F	P / F	P / F

**Critical Criteria:**

- \_\_\_\_\_ Did not know that the needle to be used was a 14 gauge, 3.25-inch needle.
- \_\_\_\_\_ Did not recognize progressive respiratory distress as an indication for needle decompression.
- \_\_\_\_\_ Did not perform the needle decompression at the proper landmarks or on the same side as

the chest injury.

\_\_\_\_\_ Did not secure the catheter hub to the chest wall.

\_\_\_\_\_ Performed the procedure in a manner that was dangerous to the casualty.

**Evaluator's Comments:**

Student Name: \_\_\_\_\_ Date: \_\_\_\_\_

Evaluator: \_\_\_\_\_ Pass: \_\_\_\_\_ Fail: \_\_\_\_\_