

**NEEDLE CRICOTHYROTOMY
EMMCO WEST ALS GUIDELINE**

Criteria:

- A. Patient with complete airway obstruction that cannot be relieved by basic and advanced obstructed airway techniques or a patient in respiratory arrest with a spinal or head injury who cannot be ventilated adequately with a bag-valve mask or a patient in respiratory arrest with facial injuries that preclude endotracheal intubation.

Exclusion Criteria:

- A. Patients under 10 years of age.

System Requirements:

- A. ALS ambulance services that choose to provide needle cricothyrotomies must carry a transtracheal ventilation system that is capable of providing oxygen at 50 PSI and must carry the equipment necessary for needle cricothyrotomy.
- B. Commercial percutaneous cricothyrotomy kits may be used if approved by the service medical director.
- C. Regional EMS Councils may set regional requirements or restrictions for cricothyrotomy by EMS personnel.

Procedure:**A. All patients:**

1. Attempt to clear obstruction by basic and advanced methods.
2. Contact Medical Command to evaluate the need for the procedure.
3. Place the patient in supine position and place roll or pillow under the back and neck for hyperextension (except for head and spinal injuries).
4. Palpate and identify the Cricothyroid space:
 - a. Palpate the thyroid notch anteriorly.
 - b. Palpate the cricoid cartilage inferiorly.
 - c. Locate the cricothyroid space between the cricoid and thyroid cartilages.
5. Stabilize the trachea by holding the thyroid cartilage between the thumb and fingers.
6. Prep the area.
7. Assemble and attach either a 10g, 12g, or 14g angiocath to a 10 ml syringe.¹
8. Puncture the skin midline and directly over the cricoid cartilage, directing the needle at a 45-degree angle caudally.
9. Aspirate the syringe as the needle advances, any air aspiration signals entry into the trachea.
10. Withdraw the inner stylet while gently advancing the catheter into position.
11. Attach the catheter to the hub of the transtracheal jet insufflator.
12. Ventilate the patient while observing chest inflation and auscultating breath sounds.
13. Allow passive expiration while opening the Y adaptor on the jet insufflator, as to allow expiration.
14. Secure device to the neck.
15. Apply and continuously monitor pulse oximetry.
16. Prepare to transport.
17. Observe patient color, vital signs and level of consciousness and document findings.

Notes:

1. A commercially available alternative airway device like Nu-Trake or Pertrach may be used if approved by ALS service Medical Director and used in accordance to the manufacture's directions
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