



# Jackson Hole Fire/EMS Operations Manual

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Title: **Procedure Guidelines:  
Cricothyrotomy-Surgical**  
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## CRICOHYROTOMY-SURGICAL (Procedure Guideline)

### SCOPE OF PRACTICE

All Paramedics shall operate within their authorized Scope of Practice as limited to those skills and medication approved for use by the Physician Medical Director and Physician Task Force on Pre-Hospital Care as approved and authorized by the Wyoming Board of Medicine

**SCOPE OF PRACTICE:** Paramedic

#### INDICATIONS:

Surgical cricothyrotomy is a difficult and hazardous procedure and should be used only in extraordinary circumstances as defined below.

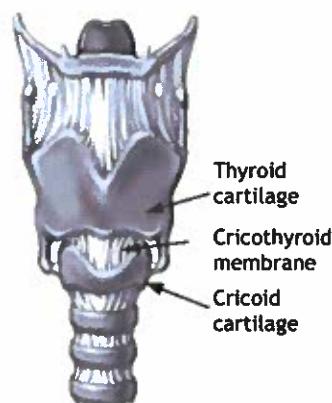
- Complete airway obstruction not relieved by manual procedures
- Inability to insert ALS airway and inability to successfully ventilate by any other means ("Cannot intubate/Cannot ventilate").
- Patient  $\geq$  12 years
- For Patients, less than 12-years, use Pediatric Quick-Trach

#### EQUIPMENT:

- Surgical airway kit: Tracheostomy tube, hemostat, scalpel, 10-ml syringe, tracheal hook.
- Oxygen & BVM
- Suction
- 4x4 Gauze Sponges (to assist with bleeding control)
- End-Tidal CO<sub>2</sub> monitoring device
- ETTI – Endotracheal Tube Introducer (Bougie)

#### PROCEDURES:

1. Place the patient in a supine position with support under the shoulders and mild hyperextension of the neck (unless C-Spine injury is suspected).
2. Palpate the neck in the midline and locate the slight depression just below the notch of the thyroid cartilage. This is the position of the cricothyroid membrane.
3. Prepare the area with antiseptic solution.



4. Stabilize the airway between thumb and forefingers.
5. Using a scalpel, make a 3 cm vertical incision through the skin and fascia, over the cricothyroid membrane.
6. Using blunt dissection with fingers, locate the cricothyroid membrane.
7. Make a horizontal stabbing incision approximately  $\frac{1}{2}$  inch through the visualized membrane with the scalpel blade oriented caudal and away from the cords using care to avoid recurrent laryngeal nerve.
8. Insert the tracheostomy tube through the incision angled towards the patient's feet. Use the tracheal hook to lift the caudal edge of the incision to facilitate visualization and introduction of the tube directly into the trachea.
9. Inflate the cuff and ventilate the patient while maintaining manual stabilization of the tube.
10. Confirm and document placement as with all advanced airways (Waveform ETCO<sub>2</sub>, lung sounds, chest rise, etc.).
11. Secure with ties.
12. Observe for subcutaneous air, which may indicate tracheal injury of extra-tracheal tube position.
13. Continually reassess ventilation, oxygenation, and tube placement.



#### **ALTERNATIVE PROCEDURE: Endotracheal Tube Introducer (ETTI)**

1. Insert the ETTI, curved tip up through the incision and angled towards the patient's feet. Use the tracheal hook to lift the caudal edge of the incision to facilitate visualization and introduction of the ETT directly into the trachea.
2. Advance ETTI into trachea feeling for "clicks" of tracheal rings and until "hang-up" when it cannot be advanced further.
3. Remove the stylet and advance the trach tube or a 6.0 ETT over the ETTI and into the trachea.
4. Remove ETTI while stabilizing the ETT ensuring it does not become dislodged.
5. It is very easy to advance into the right mainstem bronchus, so carefully assess for bilateral lung sounds.
6. Confirm placement and secure as noted above.

#### **SPECIAL CONSIDERATIONS:**

- Hazards in performing this procedure are primarily those of damage to nearby structures- major vessels to either side of the midline, to the vocal cords if the puncture is made too high, or a through and through injury of the trachea if the puncture is made too deeply.
- Bleeding will occur, even with correct technique.
- Reassess placement every time patient is moved.