

**NOTE:** This guideline is designed for use by pre-hospital and in-hospital clinicians who may not be experienced in paediatric tracheostomy. The paediatric section of this guideline therefore advises that if the cricothyroid membrane can be identified, surgical cricothyroidotomy should be performed in children over age 1. This is different to the advice given by the difficult airway society. If a clinician has the relevant expertise and equipment then the difficult airway society guidance should be followed.

### **Surgical cricothyroidotomy using a scalpel-bougie-tube technique**

#### **Indications**

Patient in Extremis and with compromised airway **AND**

Without intervention patient may die **AND**

Unable to establish and maintain an airway with non-surgical methods.

#### **Equipment**

- Scalpel
- Bougie
- Size 6.0 endotracheal tube or 6.0 tracheostomy tube
- 10ml syringe
- Tube tie/tape
- Local anaesthetic or sedation if conscious

#### **Technique**

1. Don appropriate PEE including eye protection
2. Aseptic technique where possible
3. Consider local anaesthetic/sedation if conscious
4. Identify the cricothyroid membrane using the laryngeal handshake as shown in figure 1



Figure 1.

5. If cricothyroid membrane is palpable make a single transverse stab incision through the skin and membrane (figure 2).

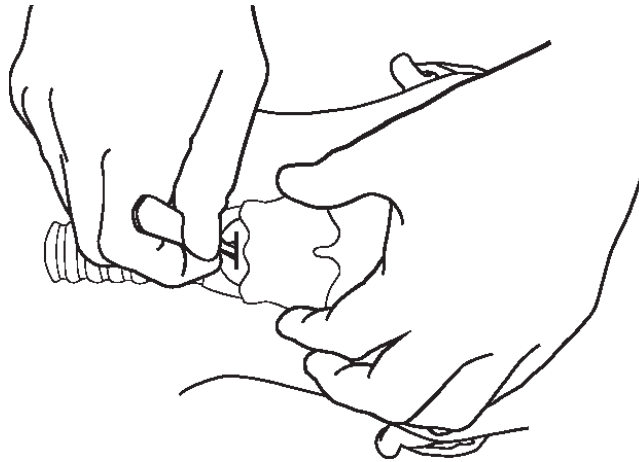


Figure 2

6. Turn blade through 90 °
7. Slide tip of bougie along blade and into trachea directing down towards the lungs (figure 3)



Figure 3

8. Railroad lubricated 6.0 tracheal tube (or 6.0 tracheostomy tube if available and comfortable using) into the trachea, inflate cuff and hold securely in position.
9. Ventilate gently and confirm position using standard methods including capnography
10. If position is not confirmed stop ventilating, remove tube and return to step 7.

If cricothyroid membrane is not palpable at step 5

- Make an 8-10cm vertical skin incision caudad to cephalad
- Use blunt dissection with fingers of both hands to separate tissues
- Identify and stabilise larynx
- Proceed with technique as above

### **Paediatric patients**

- Infants up to 1 year of age will require direct visualisation of the tracheal wall using a surgical tracheostomy technique
- Between 1 and 5 years of age, if the cricothyroid membrane is palpable, a surgical cricothyroidotomy should be used. Otherwise, they will require a tracheostomy technique as above
- Over 5 years of age, a surgical cricothyroidotomy is appropriate

An appropriately sized endotracheal tube should be used in paediatric cases, and this may need to be a size smaller than the standard tube for that age group.

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<b>RELATED INFORMATION</b>	Royal College of Anesthesia <a href="#">Difficult Airway Society</a>