

# Emergency tracheostomy

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If a skilled anaesthetist is unavailable, local anaesthesia is employed, but in desperate cases when the patient is unconscious, none is required. In patients who have suffered severe head and neck trauma and who may have an unstable cervical spine fracture, cricothyroidotomy may be more suitable. If it is possible, the patient should be laid supine with padding placed under the shoulders and the extended neck kept as steady as possible in the midline. This aids palpation of the thyroid and cricoid cartilage between the thumb and index finger of the free hand. The movements of the fingers of the free hand are important in this technique. The operation is more difficult in small children and thick-necked adults as the landmarks are difficult to palpate ( Figures 52.39 and 52.40 ).

**Indications for tracheostomy**

A vertical midline incision is made from the inferior aspect of the thyroid cartilage to the suprasternal notch and continued down between the infrahyoid muscles. There may be heavy bleeding from the wound at this point, particularly if the neck is congested as a result of the patient's efforts to breathe around an acute upper airway obstruction. No steps should be taken to control this haemorrhage, although an assistant and suction are valuable. The operator should feel carefully for the cricoid cartilage using the index finger of the free hand while retracting the skin edges by pressure applied by the thumb and middle finger. If the situation is one of extreme urgency, a further vertical incision straight into the trachea at the level of the second, third and fourth rings should be made immediately without regard to the presence of the thyroid isthmus. The knife blade is rotated through 90°, thus opening the trachea. At this point the patient may cough violently as blood enters the airway. The operator should be aware of this possibility - and avoid losing the position of the scalpel in the open trachea. Any form of available tube should be inserted into the trachea as soon as possible and blood and secretion sucked out. Once an airway has been established, haemostasis is then secured.

**With the emergency under control, the tracheostomy should be refashioned as soon as possible. Should additional equipment and more time be available once the cricoid cartilage has been identified, blunt finger dissection inferiorly can be used to mobilise the thyroid isthmus, which should be clipped and divided, clearing the trachea before making a vertical incision through the second to the fourth rings. A tracheal dilator is inserted through the tracheal incision and the edges of the tracheal wound are separated gently. This is likely to induce coughing and so, particularly in cases where there is a suspected infection risk, as far as possible care should be taken to minimise the risk of contaminating the operator(s). A tracheostomy tube is inserted into the trachea and the dilator removed. It is important that the surgeon/assistant keeps a finger on the tube while it is secured with sutures to the neck skin. Additional securing of the tube is achieved by means of tapes attached to the flange of the device passed behind the neck and secured to the opposite side with the neck in a neutral position.**

**Acute upper airway obstruction** For example, an inhaled foreign body, a large pharyngolaryngeal tumour or acute pharyngolaryngeal infections in children  
**Potential upper airway obstruction** For

example, after or prior to major surgery involving the oral cavity, pharynx, larynx or neck  
Protection of the lower airway For example, protection against aspiration of saliva in unconscious patients as a consequence of head injuries, maxillofacial injuries, comas, bulbar poliomyelitis or tetanus Patients requiring prolonged artificial respiration Best performed within 10 days of ventilation

Figure 52.39 Position of the skin incision in an emergency tracheostomy.

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