



Airway and Tracheostomy



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ENT SHO

St Mary's Hospital ENT Department

Founded by Joseph Toynbee in 1851



Contents:

- The nightmare airway
- What is this thing you call tracheostomy?

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Approach to airway

Usual ALS/ATLS stuff:

1. Approach with caution
2. Say 'hello'
3. Call for help





Check airway

- Position head to clear airway if no C-spine injury suspected
- Look, listen and feel for air movement
- Clear airway

If no breathing detected...



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Rescue breaths

Five attempts to get two 'breaths'
in

Use a bag valve mask!

Mouth to mouth in hospital is
usually really nasty



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The cervical spine issue



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Difficult under these circumstances

The 'Holy Trinity'

1. Head blocks
2. Tapes
3. Spine board



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- Perform jaw thrust
- Perform chin lift
- NO HEAD TILT
- Alternative airways

But....Airway is the main priority

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Airway adjuncts

Guedell / Oropharyngeal airway



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Airway adjuncts

Nasopharyngeal airway



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But not if

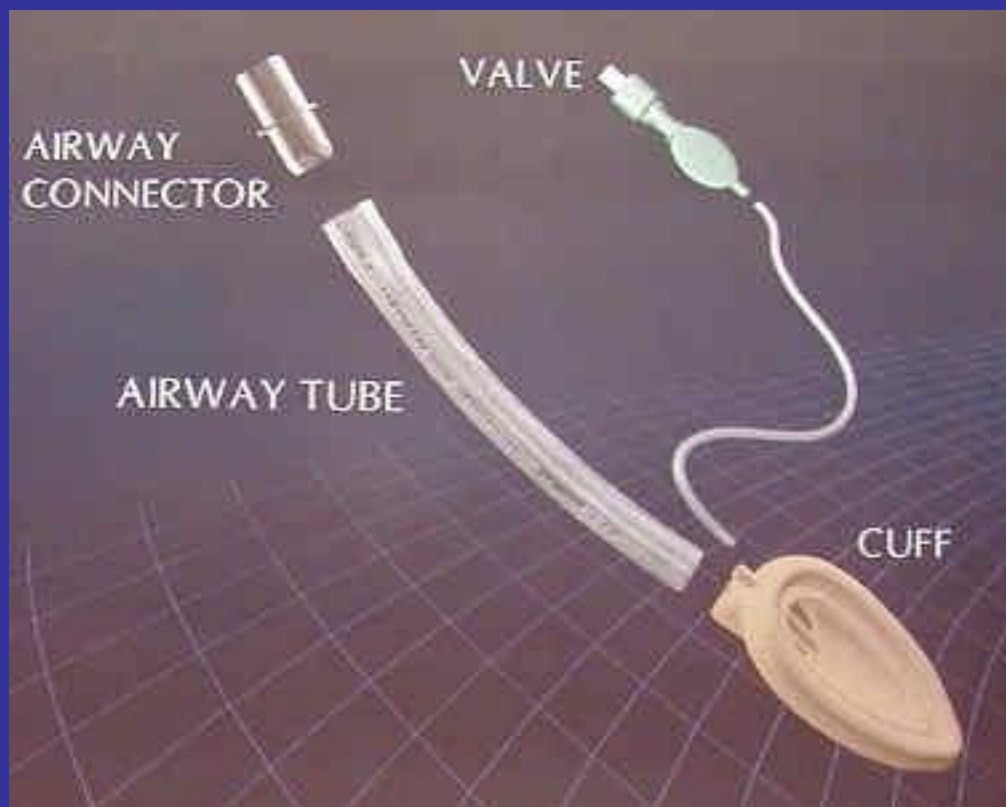


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LMA



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ETT



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Right – time to draw blood

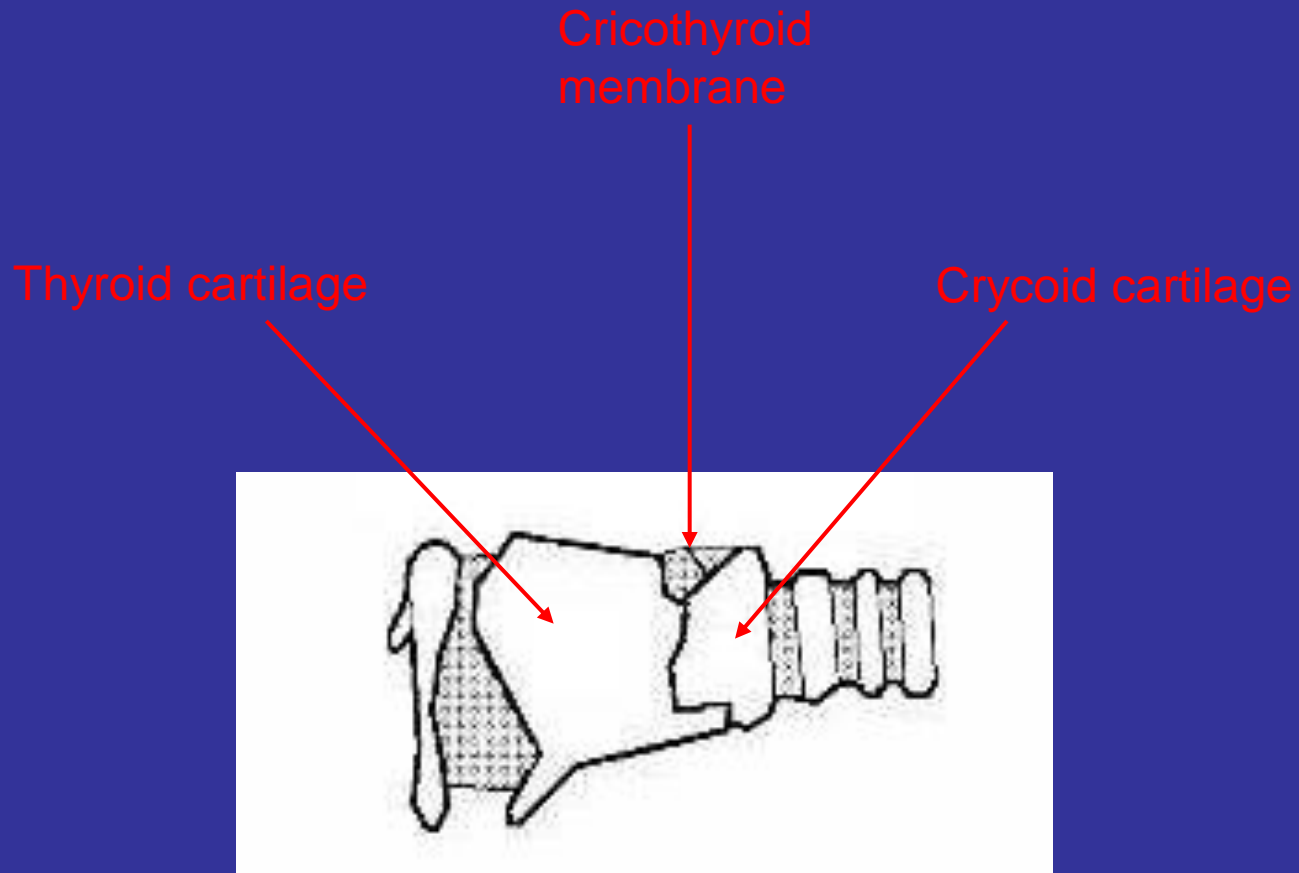
Needle cricothyrotomy

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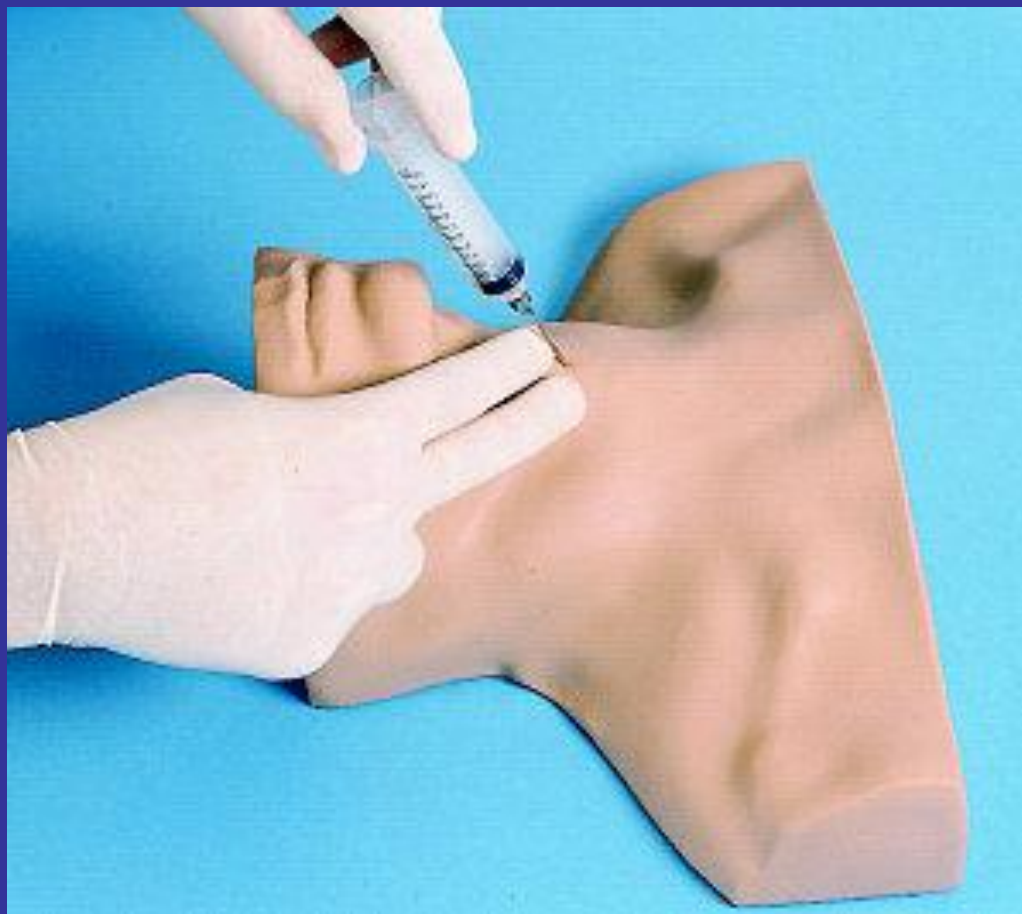


Landmarks



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Connect it up



Make hole in the side and attach end to end of cannula

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Pulsed jet oxygenation

- NB Not ventilation
- Gives a bit of 'breathing room'!
- +/- 20 mins to call ENT for formal airway



Tracheostomy



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History

From old...

References in Egyptian hieroglyphics refer to its use 3500 BCE

Chevalier Jackson in the early 20th century popularised its use in the mainstream

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History

To new...



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Surgical procedure

- Elective

Most common + most fun

Horizontal incision

- Emergency

Less common but more 'exciting'

Vertical incision



Percutaneous tracheostomy

- Normally done in ITU
- Must be a suitable candidate
i.e. no clotting problems or 'no neck'
- Seldinger technique used under bronchoscopic control
- Smaller scar, but more of an uncontrolled procedure



Indications

- **Airway obstruction**
eg. Tumour, bilateral vocal cord palsy
- **Ventilation**
long term intubation
- **Dead space and secretions**
weaning from ventilator, chronic lung disease
- **Protection of airway**
eg. Chronic aspiration



Types of tubes

- Cuffed and uncuffed
- Fenestrated and unfenestrated
- Single and double lumen
- Various diameters



cuffs

- To protect airway
- To allow ventilation

Uncuffed



Cuffed



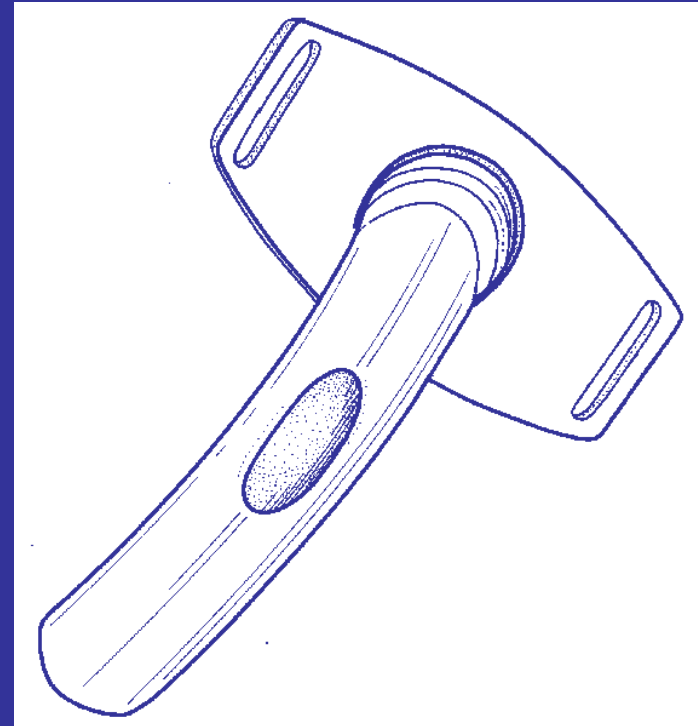
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fenestrations

- Allow patient to ventilate past tube via upper airway
- Allow speech



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Single/Double lumen

- Double lumen allows easy cleaning
- Single lumen has a greater internal diameter



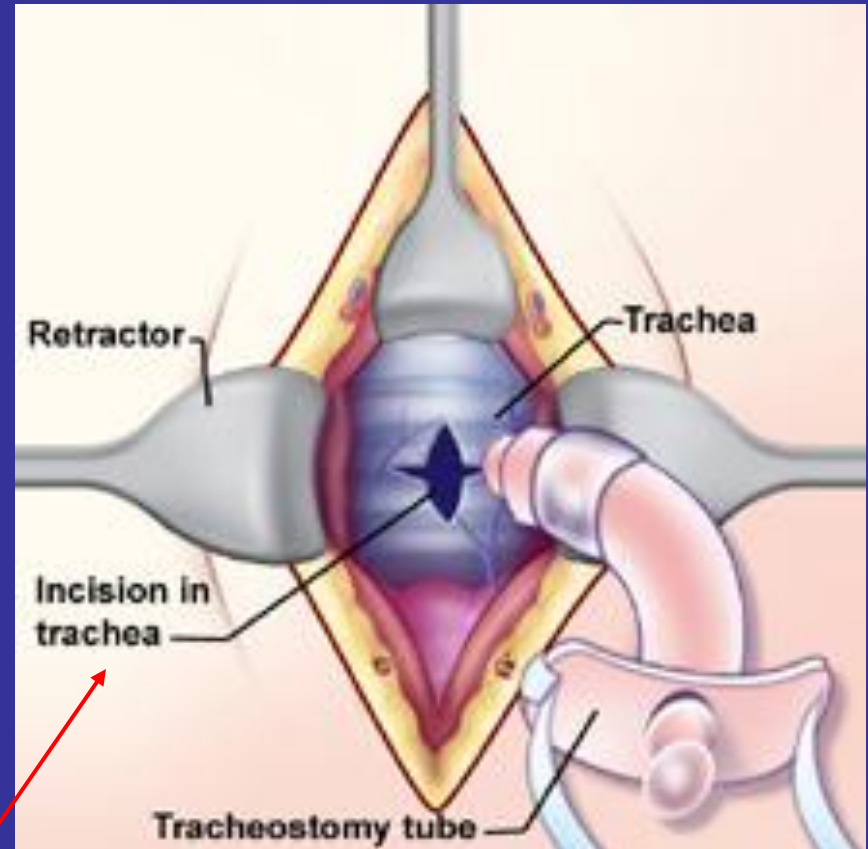
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Procedure

- Skin
- Dissection
- Separate straps
- Divide thyroid isthmus
- Window in trachea
- Below 1st ring
- Stitch in place



Incision=bad

Hole=good

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Post-op care

- Nursing job with medical responsibility
- Regular gentle suctioning
- Meticulous wound and stoma care
- Primary goal is to keep tube in stoma
- Tube change after 5 days if required – earlier can be risky
- ENT do not normally need to be involved in all aspects of trache care!!



Tube change

Easy but scary

NB Get gear together

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Equipment

- Nurse or assistant
- Oxygen mask
- Tracheal dilators
- Suction
- New tube (tested)
- Good light source
- Bougie
- Intubation equipment available



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Decannulation



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Make sure...

- Ready to be decannulated
- No further need for tracheostomy
- Maintaining own airway
- Not aspirating



Steps to decannulation

1. Involve physio
2. Change to fenestrated uncuffed tube
3. Start capping off tracheostomy (NOT with a cuffed unfenestrated tube!)
4. When 24 hrs of uninterrupted capping at normal sats, decannulation is possible



Decannulation itself

1. Prepare equipment (Same as for tube change, including fresh tube)
2. Take a deep breath
3. Remove tube and suction stoma
4. Close with steristrips and sleek
5. Daily dressing and steristrip change
6. Patient to cover wound when talking



What if things go wrong?



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- Always follow ABC
- A blocked tube is invariably the problem
- Remove tube if rapid suctioning fails or is even slightly delayed
- Direct ventilation over stoma may be effective
- An ET tube works well through a tracheal stoma



Call ENT!

When you aren't having
trache fun...bleep 1311

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Questions?

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