

# **ENT Anaesthesia**

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**FIBMS Anaesthesia**

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# Tonsillectomy :

Most children are given I.V induction of anesthesia or may prefer an inhalational induction and this will be necessary in the child with poor venous access. Oral intubation is facilitated by suxamethonium or performed under deep inhalational anesthesia The surgeon uses a Boyle-Davis mouth gag to visualize the oropharynx and to stabilize the ETT

# Tonsillectomy :

Tracheal extubation is performed with the patient slightly head-down in a lateral position after suction has ensured that the pharynx is free of blood.

The trachea may be extubated either under deep anesthesia or when fully .

Postoperative vomiting is common and antiemetics should be used .

# Tonsillectomy :

## Bleeding after adenotonsillectomy :

- May be detected in recovery or many hours later.
- Loss may be much greater than readily apparent (swallowed blood).
- Senior anaesthetist must be involved.
- Problems include:
  - Hypovolaemia
  - Risk of aspiration (fresh bleeding and blood in stomach)
  - Difficult laryngoscopy because of blood in the airway or oedema
  - Residual anaesthetic effect.

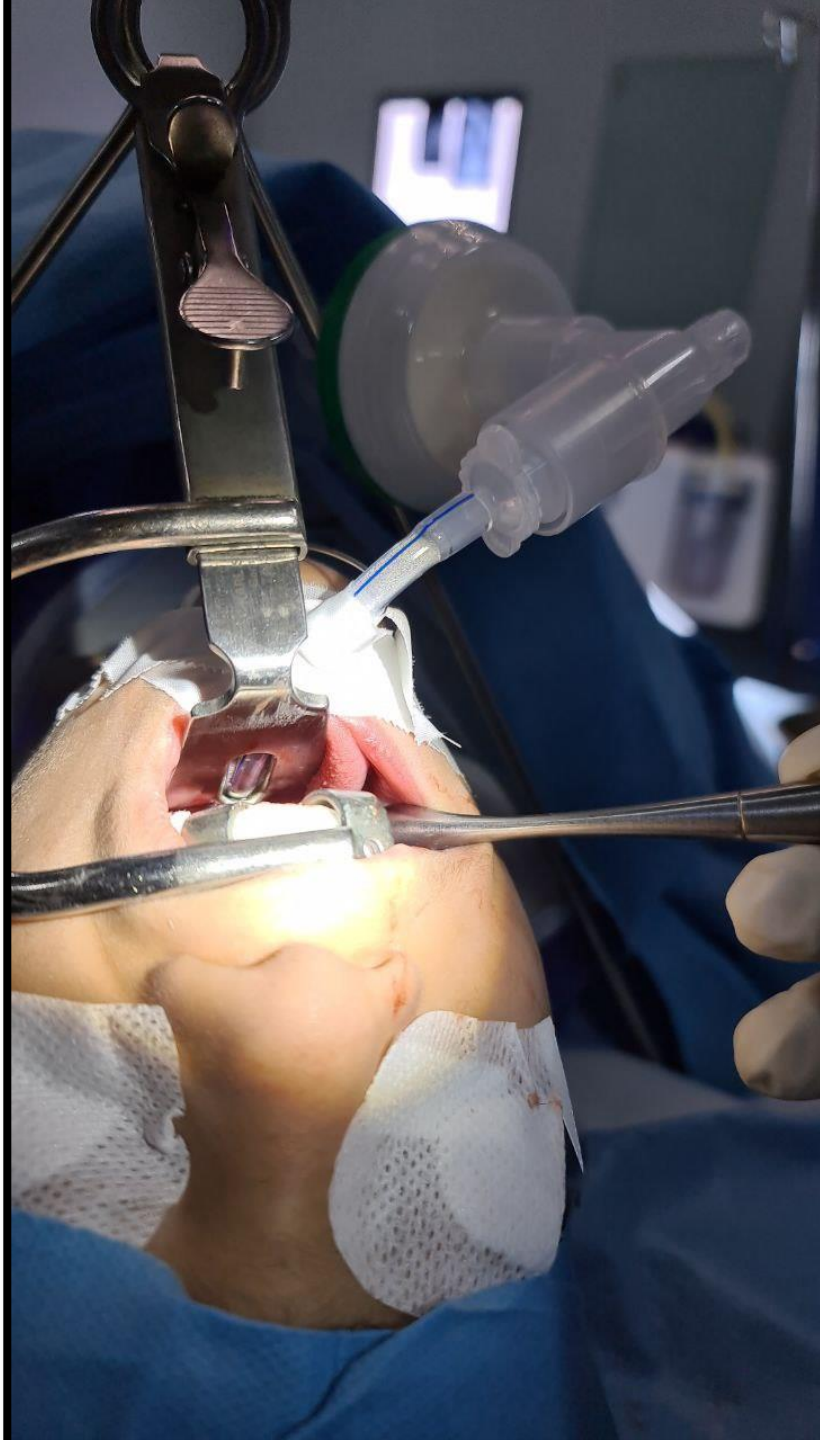
# Tonsillectomy :

- Resuscitate preoperatively; check Hb cross-match, and give blood, as needed. Note: Hb will fall as IV fluids administered (dilution).
- Options:
  - RSI: enables rapid airway protection, but laryngoscopy may be difficult (blood, swelling)—generally preferred
  - Inhalational induction left lateral/head-down: allows time for laryngoscopy but takes longer, and unfamiliar technique to many.
- Use wide-bore gastric tube to empty stomach after bleeding stopped.

# Tonsillectomy :

- Extubate fully awake.
- Extended stay in recovery for close monitoring.
- Nasopharyngeal pack occasionally needed (secured via tapes through nose) if bleeding from adenoids cannot be controlled. Usually very uncomfortable—patient may need midazolam/morphine to tolerate.
- Check post-operative Hb.

## Tonsillectomy :





## Tonsillectomy :





# Adenoidectomy :

It is often combined with either tonsillectomy or examination of the ears under anesthesia.

The adenoids are curetted and the postnasal space is packed to achieve haemostasis.

After 3 minutes, the pack is removed, the patient is turned into the lateral position and the trachea is extubated.

# LASER surgery :

It is used to strip polyps or tumors from the vocal cords accurately and with immediate control of bleeding. There are two major anesthetic problems

(1) Damage to the tracheal tube: the introduction of cuffed flexible stainless steel tubes for nasal or oral use has essentially solved this problem. For added safety, the cuff should be filled with water

(2) Retinal damage: To avoid this, all personnel must wear protective spectacles to prevent retinal damage. Anesthetists are particularly at risk as they are unable to retire behind the operating microscope during the laser procedure

# LASER surgery :

## General Safety Protocol for Surgical Lasers :

- Post warning signs outside any operating area: “WARNING: LASER IN USE.”
- Patient’s eyes should be protected with appropriate colored glasses and/or wet gauze.
- Use the lowest concentration of oxygen possible.
- Avoid using nitrous oxide (N<sub>2</sub>O), because it supports combustion.

# LASER surgery :

## General Safety Protocol for Surgical Lasers :

- Lasers should be placed in STANDBY mode when not in use.
- Use an endotracheal tube specifically prepared for use with lasers.
- Inflate cuff of laser tube with dyed saline so that a cuff perforation is readily apparent.
- All adjacent tissues should be shielded by wet gauze to pre-vent damage by reflected beams.

# Tracheostomy :

## Preoperative :

- Normally done for long-term ICU ventilation or airway obstruction.
- ICU patients almost certainly already intubated.
- Stop NG feeds, if applicable.
- Before induction, ensure all equipment prepared (including cricothyroidotomy kit) and the surgeon ready for emergency tracheostomy, if required

# Tracheostomy :

## Perioperative

- Secure ETT with tape to allow easy removal during case, with pilot cuff readily accessible.
- Aspirate NGT (if present), and clear oropharynx of secretions before draping.
- Drape patient to allow anaesthetist access to ETT for tube change.
- Before changing to tracheostomy tube, preoxygenate for 3–4min (increasing volatile agent as necessary), and check NMB is adequate.
- Ensure scrub nurse has correct tracheostomy tube and sterile catheter mount.

# Tracheostomy :

## Perioperative

Deflate ETT cuff before surgeons incise trachea, so it can be reinflated and ventilation continued if problems occur.

- Withdraw ETT slowly into upper trachea (do not remove from trachea until tracheostomy secure and certain), and connect breathing circuit and capnograph to new tracheostomy tube via sterile catheter mount.
- Beware false passage created during tracheostomy tube insertion, especially in the obese; check position with fiberoptic endoscopy, if any doubt.
- If problems occur, remove tracheostomy tube, and advance ETT back down trachea.

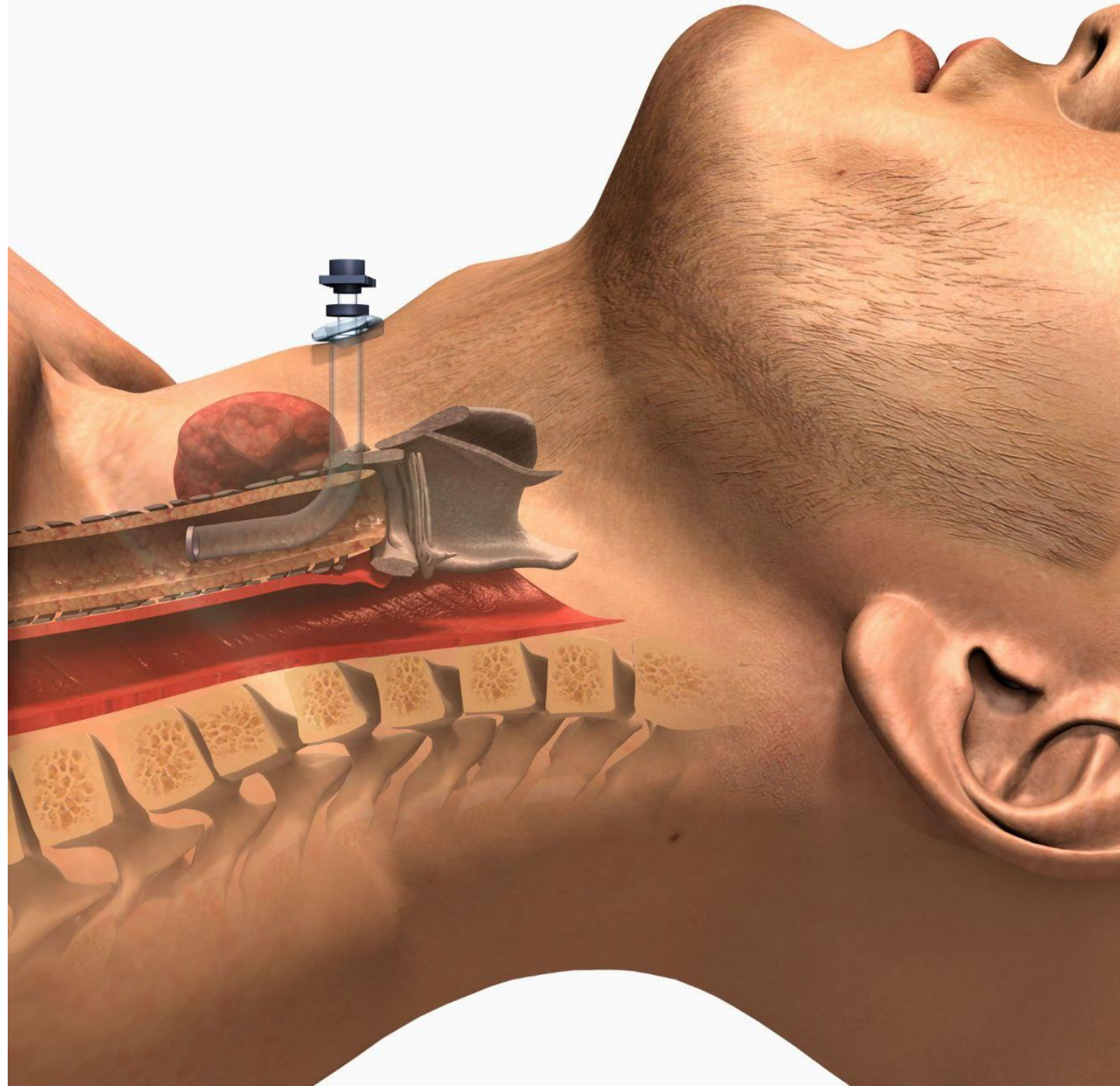


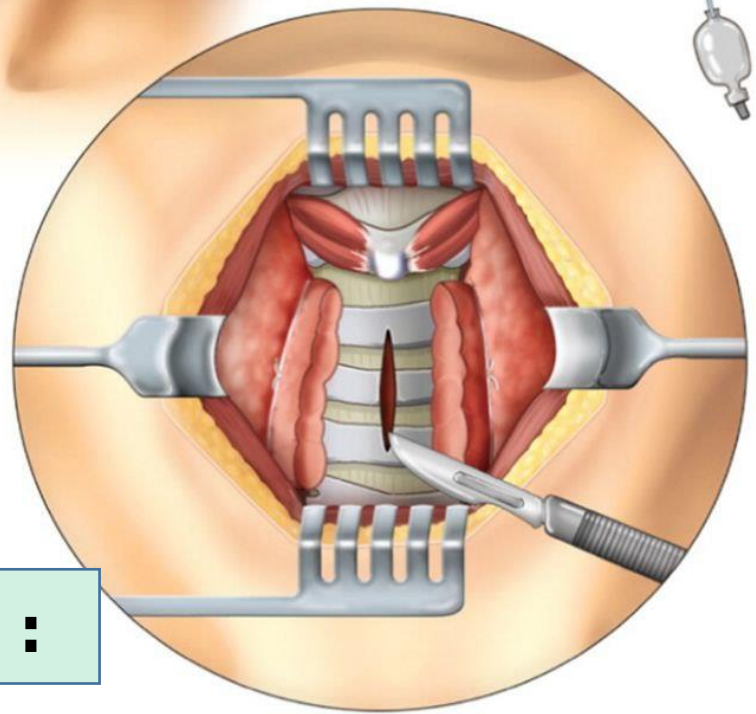
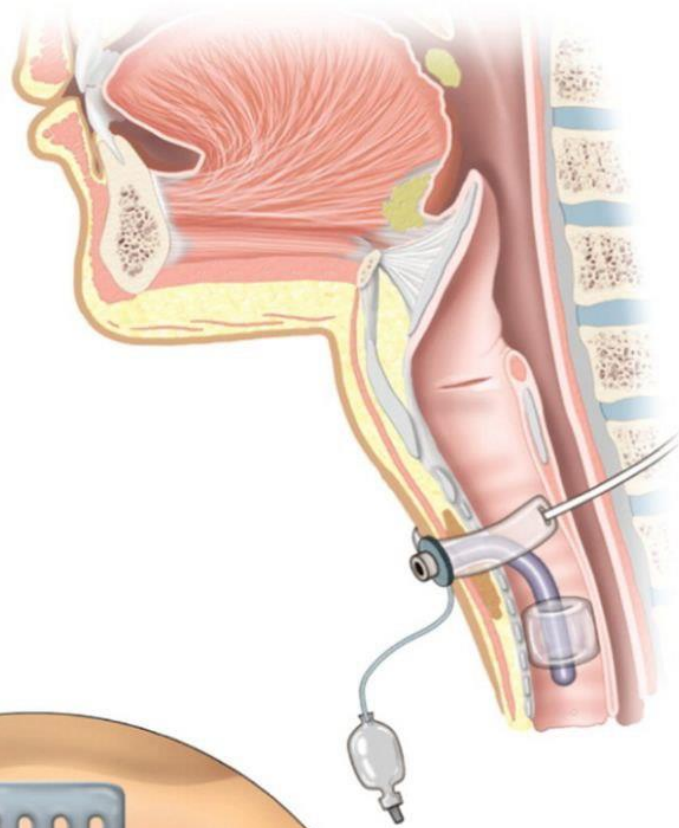
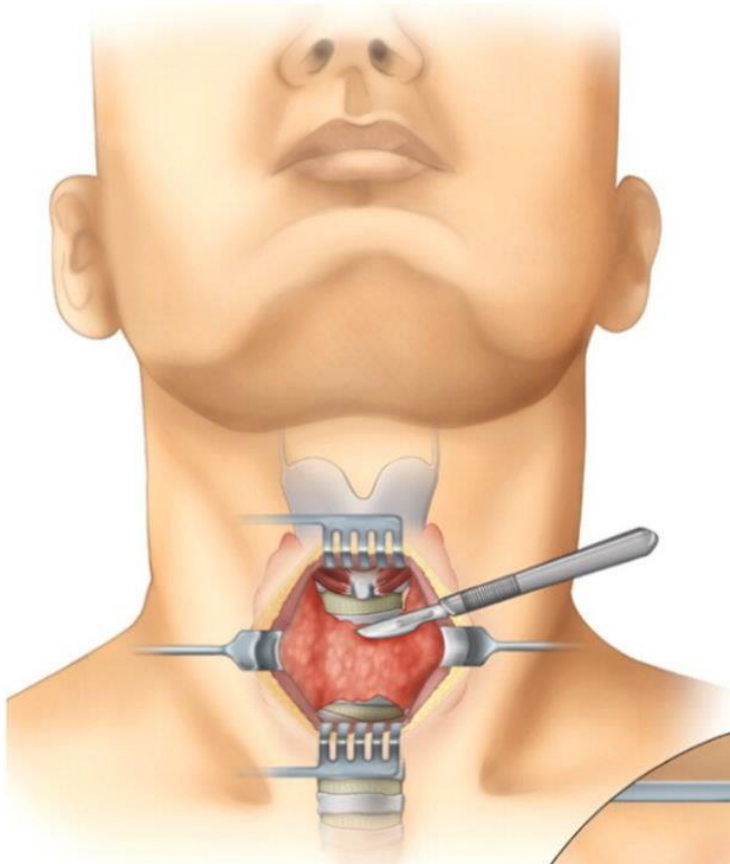
# Tracheostomy :

## Post-operative

- Regular suction to new tracheostomy (blood, secretions).
- Humidify inspired gases.
- Analgesia in recovery with paracetamol or NSAID IV/PR or morphine IV.
- A new tracheostomy often produces protracted coughing—morphine, benzodiazepines, or low-dose propofol useful for control.
- Antiemetic, as required.
- If tracheostomy tube comes out, reinsertion can very difficult in first few days—oro-tracheal intubation often more practical. Two retraction sutures left in tracheal incision are useful for identifying and opening the stoma.

# Tracheostomy :

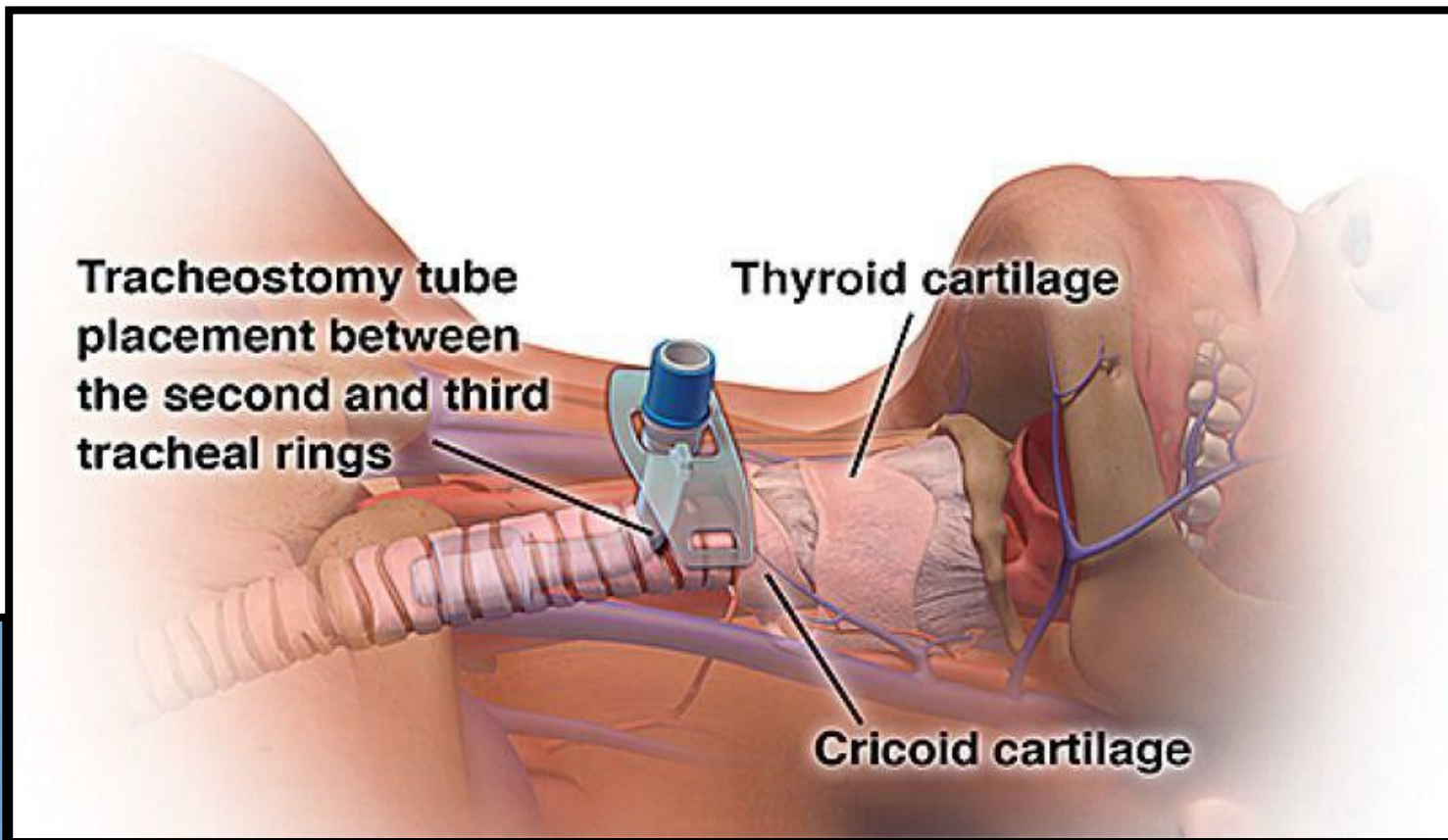
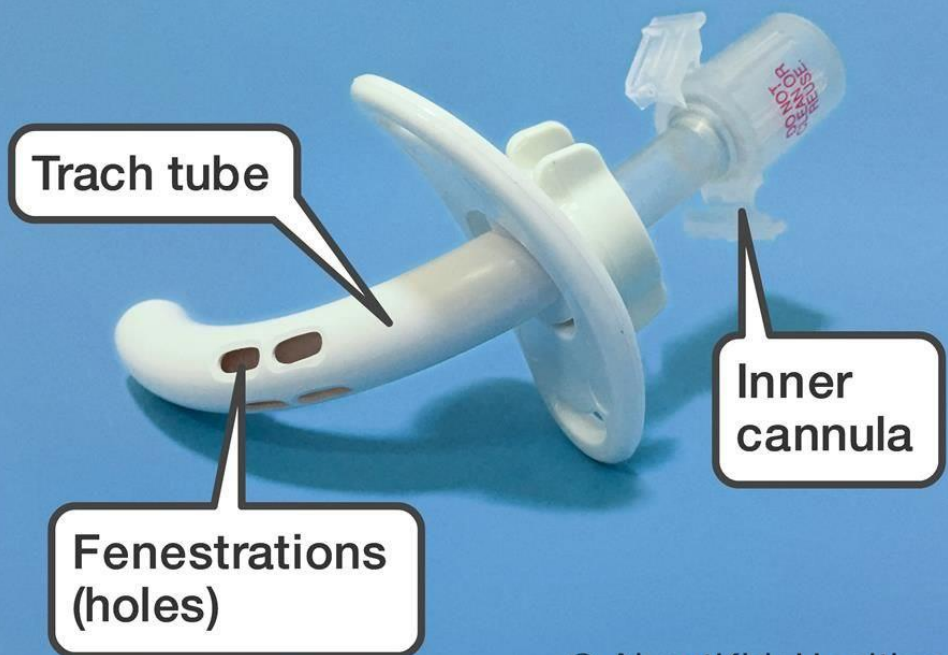




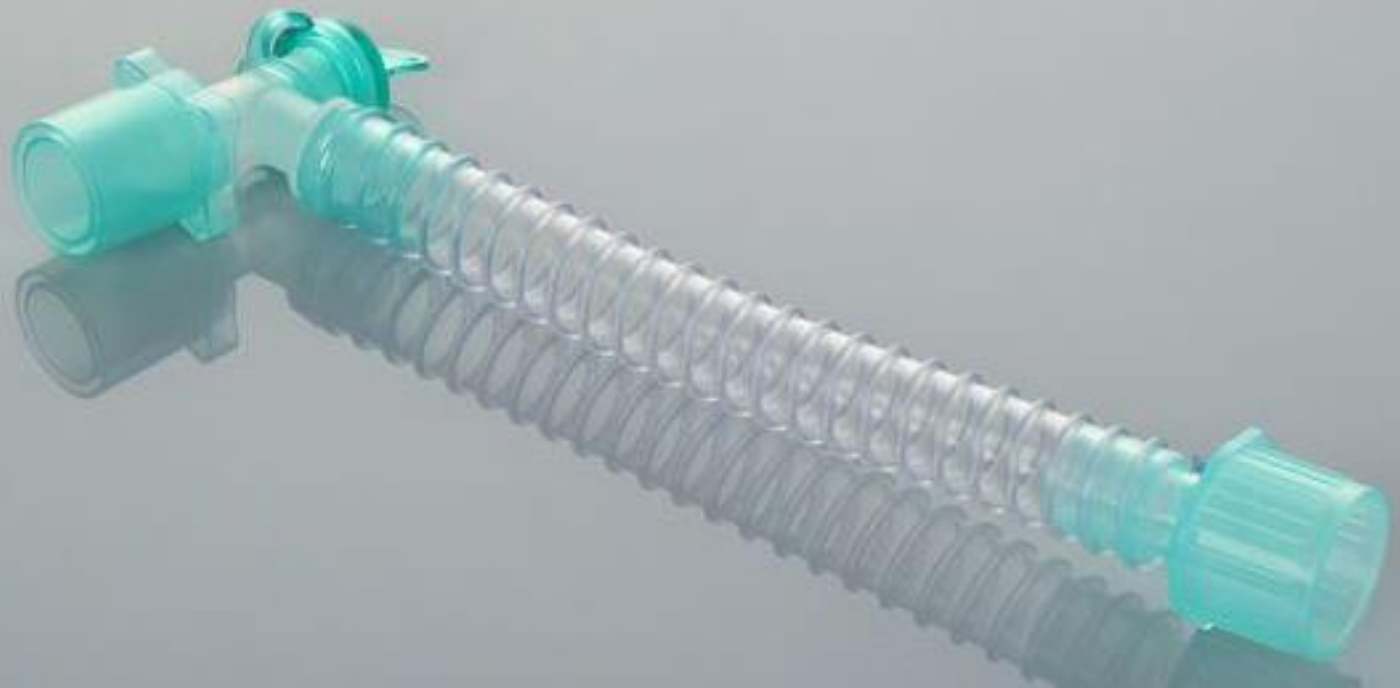
**Tracheostomy :**



# Tracheostomy :



# Mount Catheter :



# Laryngectomy

Airway obstruction by tumor is the major anesthetic problem; alcoholism and .smoking are etiological factors which may influence anesthesia When respiratory obstruction is suspected, opioid or sedative premedication should be avoided, and an inhalational induction should be used; if this result in severe respiratory obstruction, a wake intubation may be required. A selection of non-cuffed tracheal tubes should be available as the lumen of .the trachea may be narrowed at the level of the cords or subglottically At the end of surgery, residual neuromuscular block is antagonized and the tracheal tube changed for a tracheostomy tube. Adequate humidification is essential postoperatively. Enteral nutrition is provided via a nasogastric tube

# Nasal operations

Hypotensive techniques required to reduce bleeding .

The patient is positioned 10 degree head up.

Anesthesia may be maintained using either spontaneous or controlled ventilation, depending on the duration of surgery. The pharynx should be packed with gauze so that blood, pus or debris does not contaminate the larynx or pass into the stomach.

When surgery has been completed, the pack is removed, the pharynx is cleared and the patient is turned into a lateral position



# Nasal cavity surgery :

## Procedure :

Submucous resection of septum, septoplasty, turbinectomy, polypectomy, functional endoscopic sinus surgery

## Preoperative :

- Obstructive airways disease often associated with nasal polyps.

# Nasal cavity surgery :

## Perioperative :

- Face mask ventilation often needs Guedel airway due to blocked nose.
- Nasal vasoconstrictor usually applied (topical or infiltration).
- Leave eyes untaped for polypectomy (the optic nerve can be close, and the surgeon needs to check for eye movement).
- Suck out pharynx (particularly behind soft palate—'coroner's clot'; before extubation; less easy with LMA).

# Nasal cavity surgery :

## Post-operative :

- Left lateral/head-down with Guedel airway in place until airway reflexes return.
- Analgesia with PRN paracetamol or NSAID PO/IV/PR.
- Nose usually packed, producing obstruction of nasal airway if disturbing to patient, or in cases of OSA, nasopharyngeal airway(s) can be incorporated into the pack.
- Sit patient up as soon as awake to reduce bleeding

# Nasal cavity surgery :

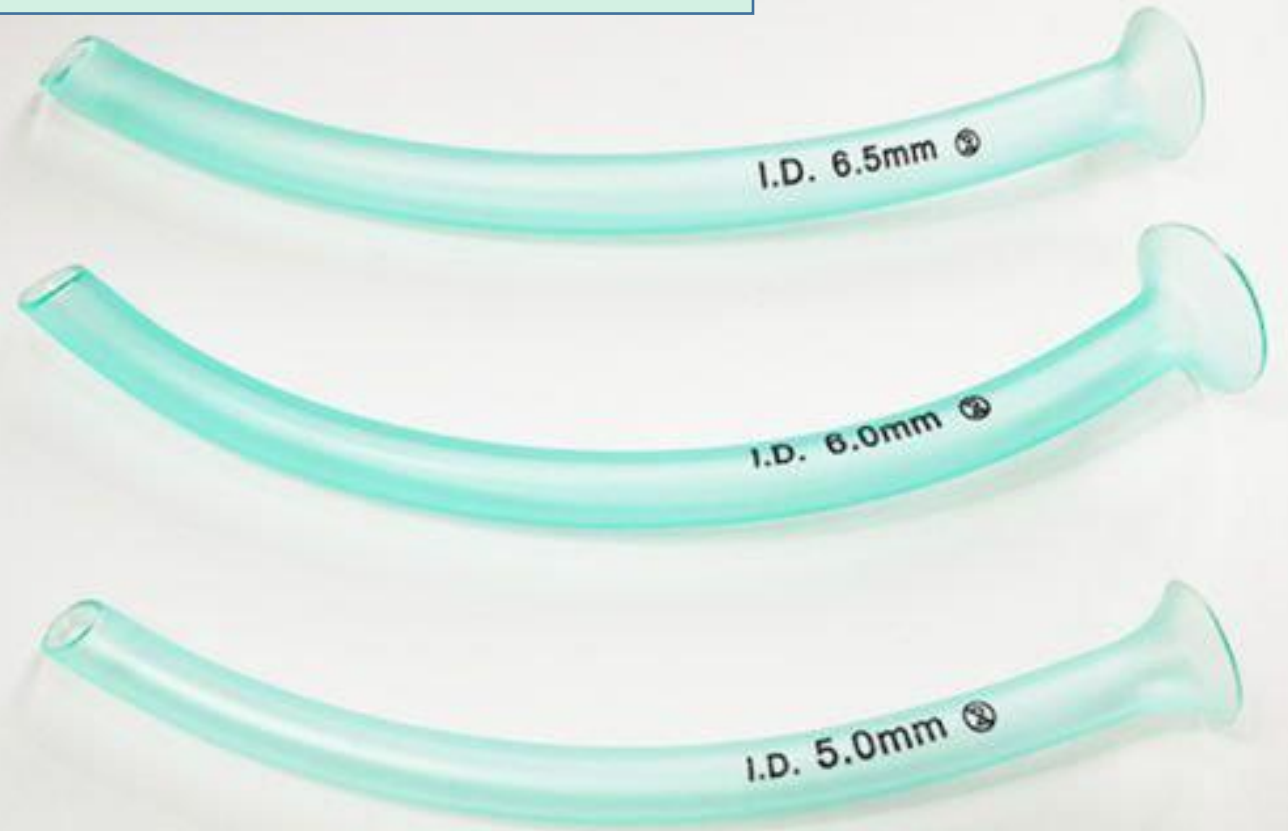
## Special considerations :

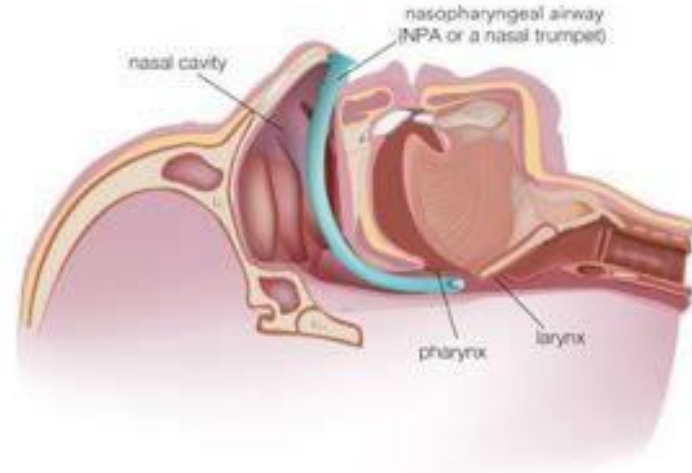
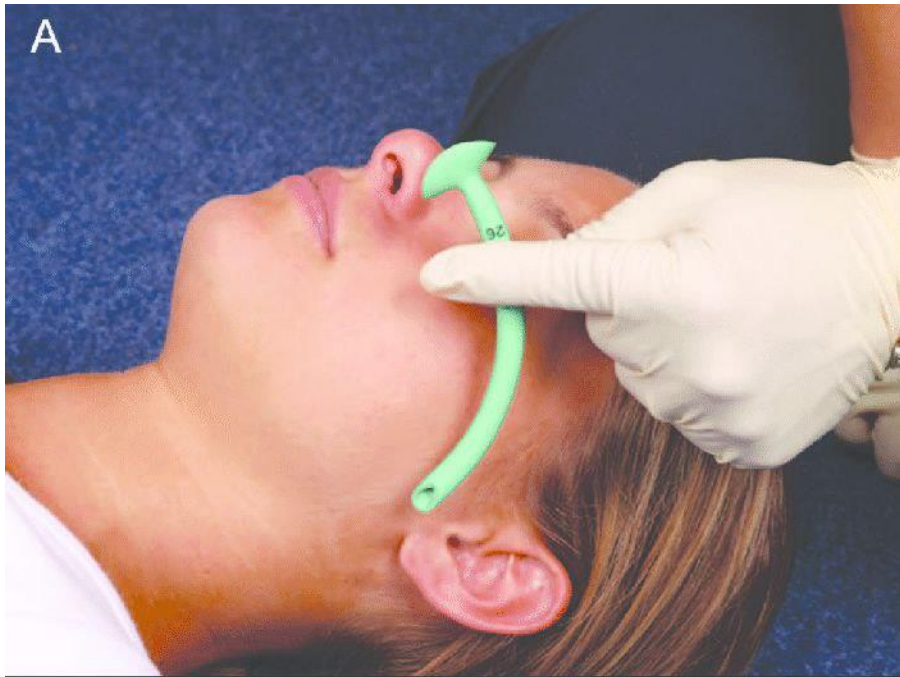
- Leave IV cannula in overnight, as can bleed post-operatively

## Air way :



## Nasal Tubes :





**Nasal Tubes :**



# Preformed ET Tubes

South  North

“South facing”

“North facing”





**Thank You**

**End of lecture**