

Tracheostomy

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Definition

- ▶ It is a surgical opening made in the *anterior wall of cervical trachea* to facilitate respiration in certain conditions.

Indications

- ▶ **Upper airway respiratory obstruction**
- ▶ **Lower airway respiratory problems**
- ▶ **Prophylactic: Elective**

I-Upper Airway obstruction

▶ Causes:

- 1- Laryngeal: congenital, inflammatory, traumatic, neoplastic
- 2- Neck, thyroid & Mediastinum.
- 3- Extra-laryngeal: Tongue, postcricoid area, OSAS

▶ II- Lower airway causes

▶ **Value:** To help the patient by:

- ▶ Suction of secretions
- ▶ Artificial respiration

▶ **Causes:**

- ▶ Depression of cough reflex:
 - ▶ Central causes: Coma
 - ▶ Peripheral causes: non-efficiency of respiratory muscles
- ▶ Protection of airway: Aspiration:
 - ▶ Bilateral adductor paralysis, pseudobulbar paralysis, etc.

III- Prophylactic

▶ Value:

- ▶ Overcome anticipated upper airway obstruction.

▶ Before surgery of:

- ▶ Oral cavity
- ▶ Mandible
- ▶ Larynx

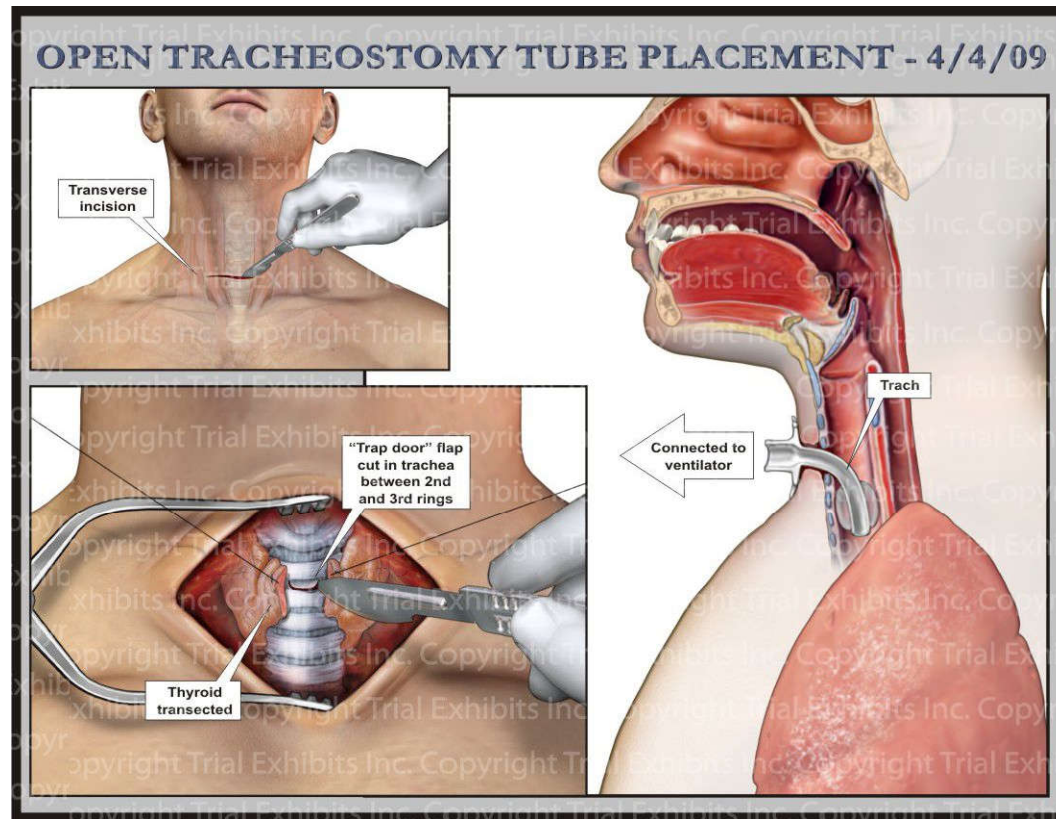
▶ Types of tracheostomy

- ▶ According to the level in relation to the thyroid isthmus (3rd -4th)

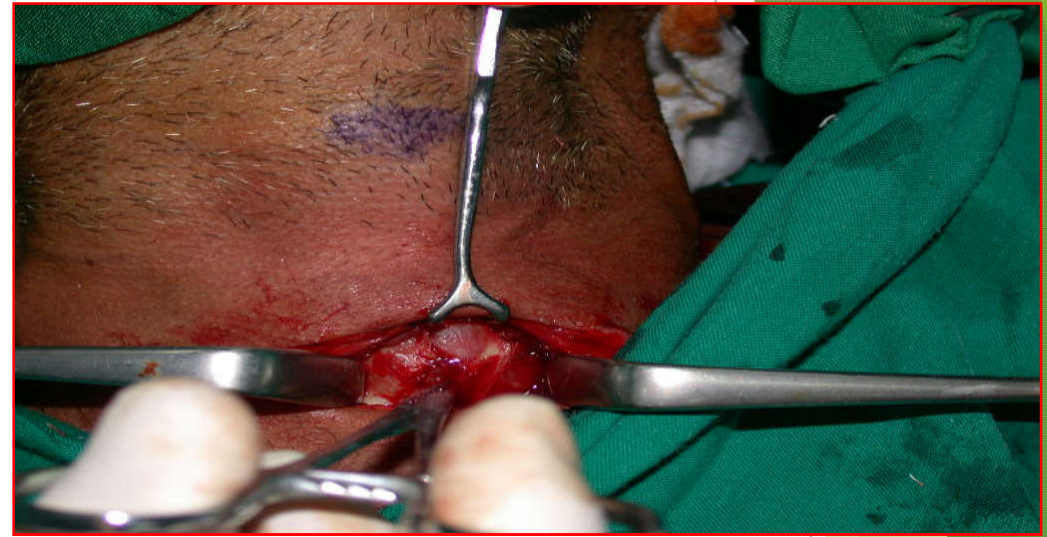
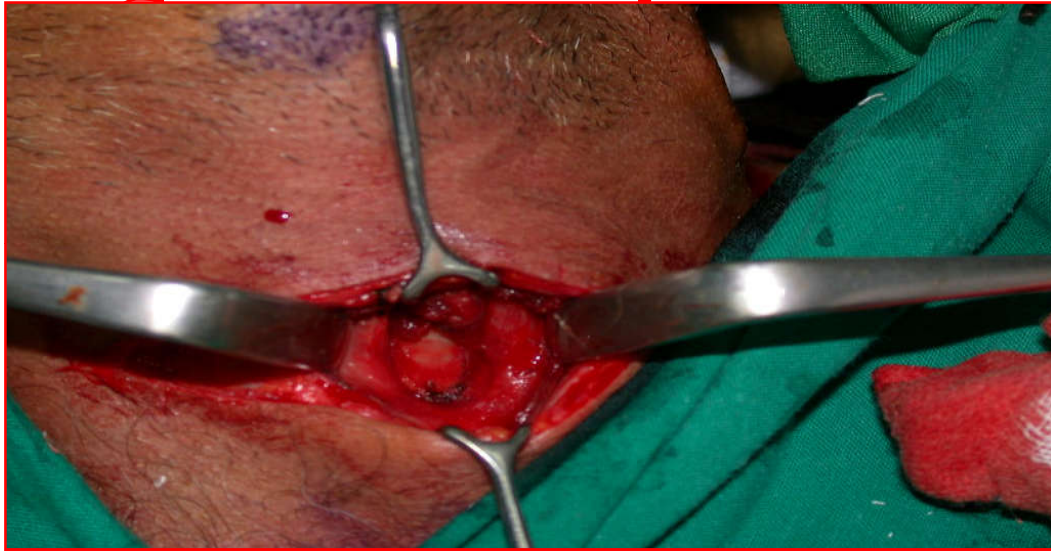
rings):

- ▶ **High:** above isthmus= 1st -2nd rings:
 - ▶ Trachea is superficial, no vessels
 - ▶ Cricoid cartilage injury
- ▶ **Mid:** behind the isthmus= 3rd -4th rings:
 - ▶ **BEST**
- ▶ **Low:** below the isthmus= 5th -6th rings:
 - ▶ Trachea is deep, big vessels, apex of pleura
 - ▶ Suitable for upper tracheal lesions

Surgical Procedure



Surgical Technique



Incision:

- ▶ Skin, subcutaneous tissue, superficial and deep fascia
- ▶ Separate the muscles and retract them
- ▶ Retract the thyroid isthmus by a hook
- ▶ Dissect the pretracheal fascia

- ▶ **OPEN TRACHEA:**
 - Complete hemostasis
 - ▶ Local anaesthesia.
 - ▶ Tube insertion, fixation and closure.

▶ Postoperative care

- ▶ Semisitting position
- ▶ Humidification: Oxygen, steam inhalation...
- ▶ Mucolytics, antibiotics, analgesics...
- ▶ Plain X-ray neck & Chest: PA & Lateral
- ▶ Care of the tube:
 - ▶ Patency
 - ▶ Suction
 - ▶ Cleaning

Complications

- ▶ GA: complications of anaesthesia
- ▶ Injury of important structures:
 - ▶ Blood vessels: **haemorrhage** or **air embolism** ?? TTT
 - ▶ Anterior jugular &
 - ▶ Inferior thyroid veins, azygos veins
 - ▶ Others: arteries or veins
 - ▶ Pleura: more in children and strained patients
 - ▶ Pneumothorax
 - ▶ Esophagus:
 - ▶ TE fistula
 - ▶ Cricoid cartilage:
 - ▶ subglottic stenosis.

▶ Postoperative

▶ Immediate:

- ▶ Reactionary haemorrhage
- ▶ Surgical emphysema
- ▶ Pulmonary complications:
 - ▶ Pneumothorax
 - ▶ Mediastinal emphysema
- ▶ Thyroid crisis
- ▶ Tube problems (Bolckage, malposition, slippage).

- ▶ **Late:**
- ▶ Secondary haemorrhage
- ▶ Infection
- ▶ Tube problems:
 - ▶ Difficult extubation
 - ▶ Tracheo-cutaneous fistula

Tracheal stenosis

Thank you

The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the right side of the frame, creating a modern, layered effect against the white background.