# Pediatric Instruments AMBU Bag

- AMBU?
- Material
- Indications?
- Contraindications?
- Complications?
- Parts?
- Use of reservoir?
- Mask?
- Use of pop-off valve?
- Sterilization?
- How do you check if the bag is in proper condition?
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- **●** <u>A</u>mbulatory
- **B**reathing
- <u>U</u>nit

#### **Material**

Silicon

- Indications :
  - During resuscitation
    - Birth asphyxia
    - Respiratory distress
    - Apnoea
    - After surfactant therapy
    - Paralysis of resp. muscles

- Contraindications:
  - Meconium aspiration
  - Diaphramatic hernia

- Parts
  - Oxygen inlet
  - Air inlet (reservoir is attached here)
  - Self inflating silicon rubber bag
  - Pop-off valve
  - Fish-mouth valve
  - Expiratory valve







#### <u>Reservoir</u>

- used to increase the O<sub>2</sub> concentration upto
- 90-98%
- Prevents air from mixing with the oxygen in the bag
- ullet Molecular weight of  $CO_2 > O_2$

#### **MASK**

- Round
- Anotomically shaped
- Cushioned (less traumatic, requires less pressure to maintain the seal)
- Uncushioned
- **Size**
- Should cover
  - the nose upto the bridge,
  - Mouth
  - Tip of the chin
  - Should not cover the eyes
- Seal is maintained by E-C clamp technique

#### Pop-off Valve

- Usually pops-off at 30-40 cm of H<sub>2</sub>O
- May be blocked to deliver first high pressure breath in HMD
- It prevents barotrauma
- Prevents the development of pneumothorax

- Sterilization
  - Gluteraldehyde
  - Washed with soap water and dried
  - Autoclaved

 Checked by blocking the outlet and pressing the bag, the pop-off valve should pop-off.

#### Check for adequate ventilation:

- Adequate chest rise
- Improvement in pts SpO₂

# Diff bet anesthesia bag and ambu bag

- Flow inflating
- Needs compressed air
- Free flow O2 can be given

- Self inflating
- Can be used with room air/atmospheric pressure
- Cannot be given

### Laryngoscope

- Parts?
- Types of blades?
- Indications?
- Method of use?
- Size of blades?

#### **Parts**

- Handle (also contains the batteries)
- Blade
- Two types of blades
  - Straight miller
  - Curved Macintosh (preferred in children >8yrs)

#### <u>Size</u>

Preterm & LBW - o

Term neonates - 1

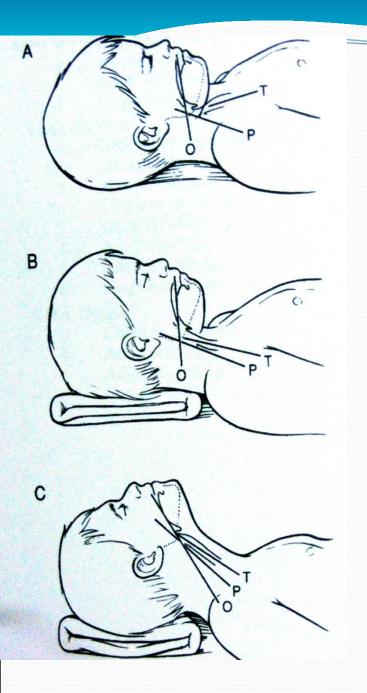
2 to 10 yrs - 2

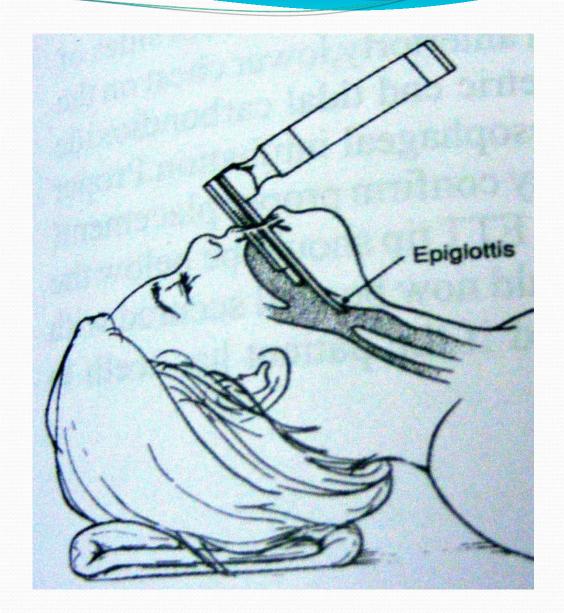
> 10 yrs - 3

#### **Indications**

- intubation
  - During resuscitation
    - Birth asphyxia
    - Respiratory distress
    - Apnoea
  - MSL
  - General anesthesia
  - Foreign body

- Always check the bulb before intubating
- Check batteries
- Check for loose teeth





### E.T. Tube

- Material?
- Types?
- Size?
- Length?
- Indications?
- contraindications?
- Drugs?

- Latex
- Portex
- Cuffed preferred in children >8yrs
- Uncuffed preferred because anatomical narrowing at level of cricoid cartilage provides functional cuff
- Internal diameter = age in years +4 uncuffed
   4
   Age in years +3 cuffed

2 - 2.5

3 - 3.5

4 - 4.5

- Lip to tip distance
  - 6 + weight <44wks
  - 3x ET tube size

#### **Uses**

- Resuscitation
- Mechanical ventilation
- MSL
- Respiratory distress
- Life threatening croup
- General anesthesia
- Air way obstruction

#### <u>Drugs</u>

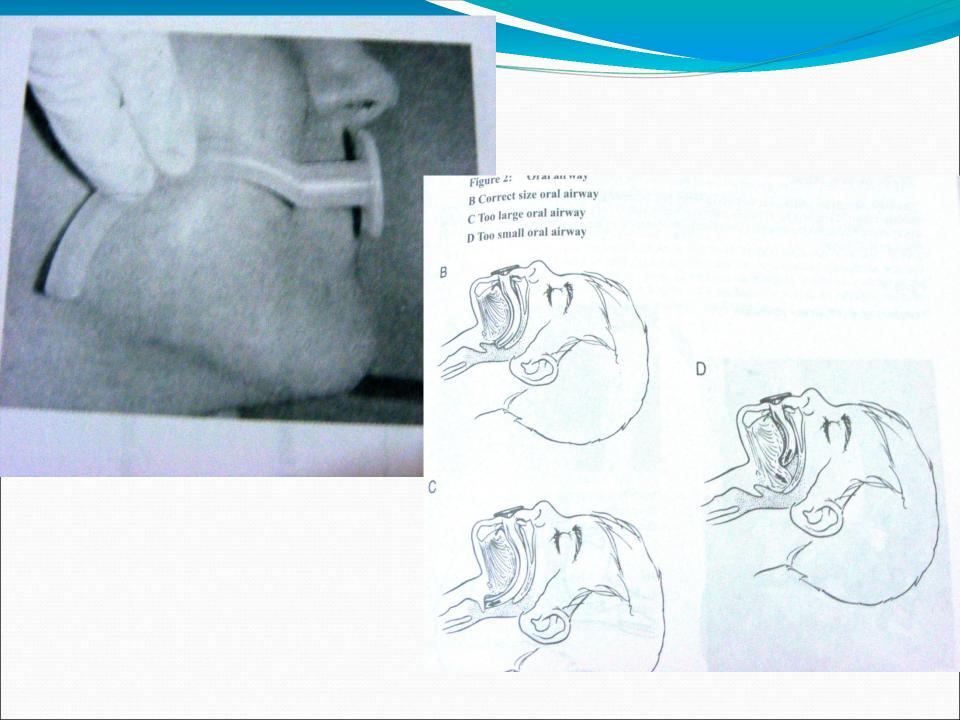
- Adrenaline
- Surfactant
- Sodabicarb is never given.

- Confirmation of tube placement
  - Symmetrical chest rise
  - Equal breath sounds
  - Improved SpO<sub>2</sub>
  - Xray tip should be at the T4 level.
- DOPE

## Oro-pharyngeal airway

- Indications
- Size

- Non patent nostril and choane
- Macroglossia
- Difficult to maintain airway
- Size measured from the angle of mouth to the angle of the jaw



# Feeding tube

- Size
- Use

- Plastic tube with a blind end
- Opening is present laterally proximal to the end
- Outer end can be closed
- Measured from tip of the nose to tragus to xiphisternum
- Check proper placement before administering any fluids.

#### Use

- Diagnostic
  - Gastric lavage for AFB
  - GI Bleeding
  - TOF
  - Chemical analysis of stomach contents
  - To R/o imperforate anus
- Theraputic
  - Feeding
  - Medications
  - Gastric decompression
  - management of poisoning
  - Umbilical line
- Other uses
  - O₂ catheter
  - Tourniquet
  - Urinary catheter

## Folley's cath

- 1 year 6-8
- 1-6yrs 8-10
- 6-10 10
- **-**>10 12-14
- Inserted by no touch technique
- **USES** 
  - relieve acute retention
  - To measure exact urine production
  - Collection of sterile urine sample
  - Bladder wash
  - Post op patients

#### Contraindications

- Stricture
- Local infection
- Trauma
- Difficult insertion

Macro-drip set	Macro-drip set	Macro-drip set	Macro-drip set
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