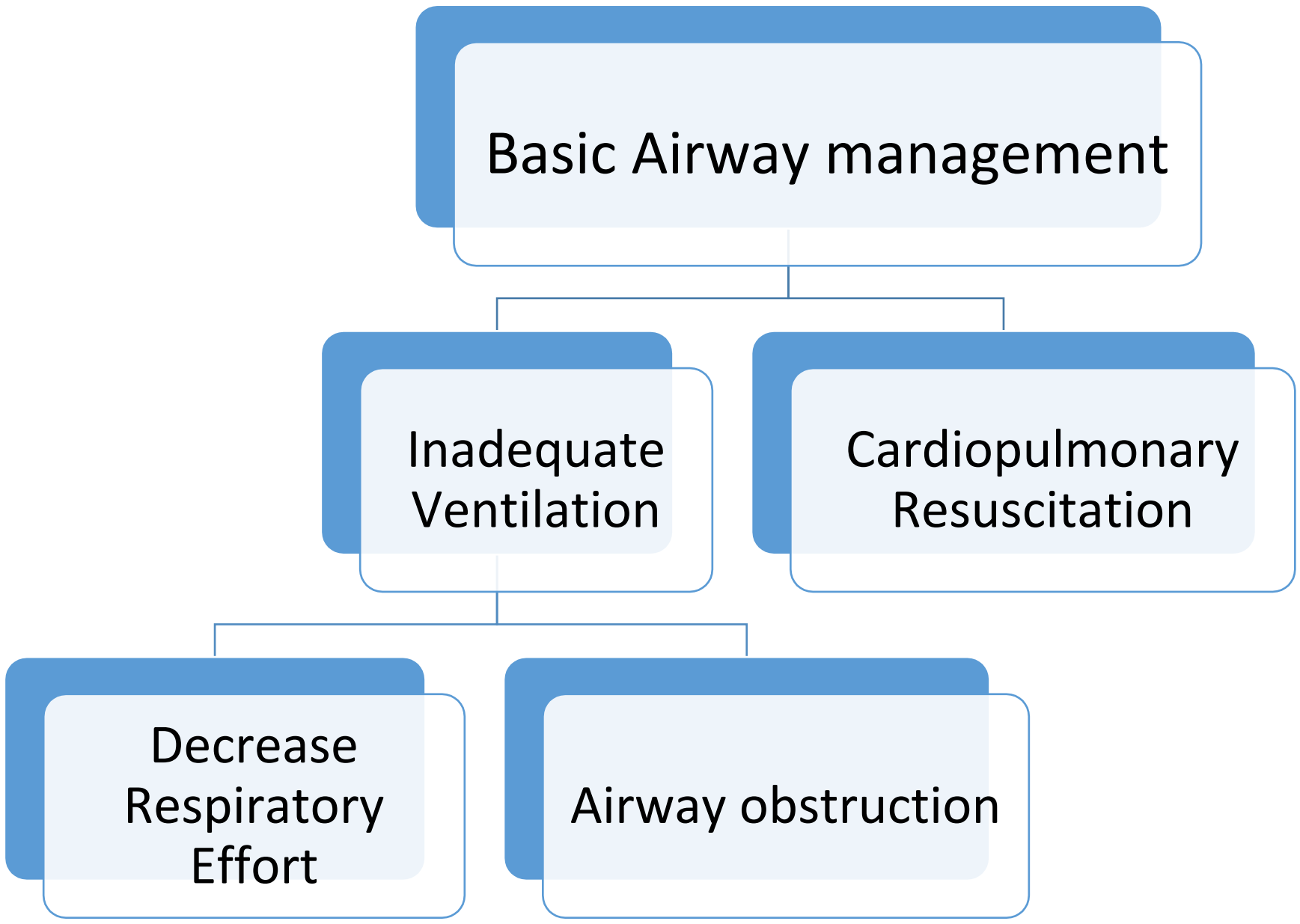
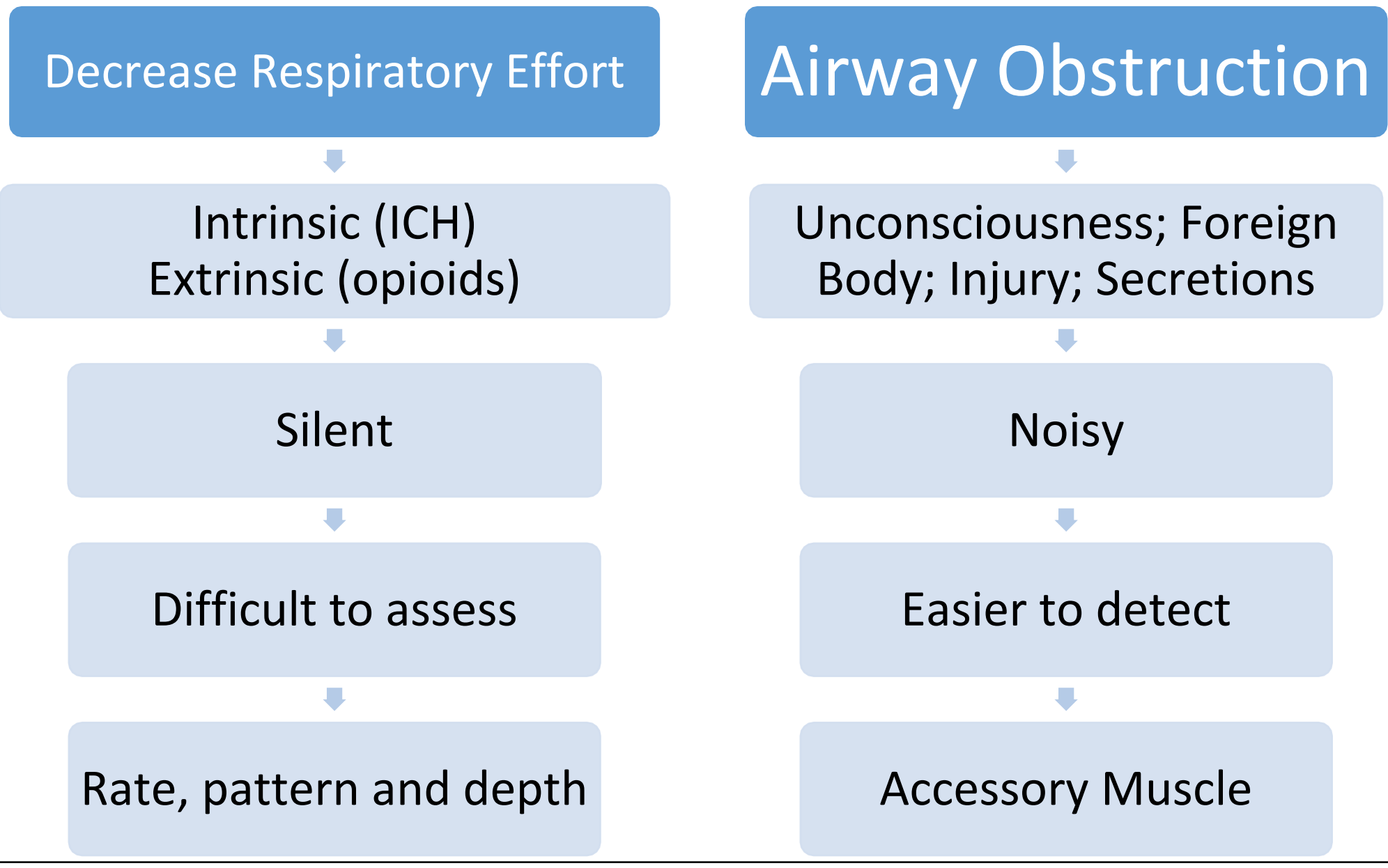
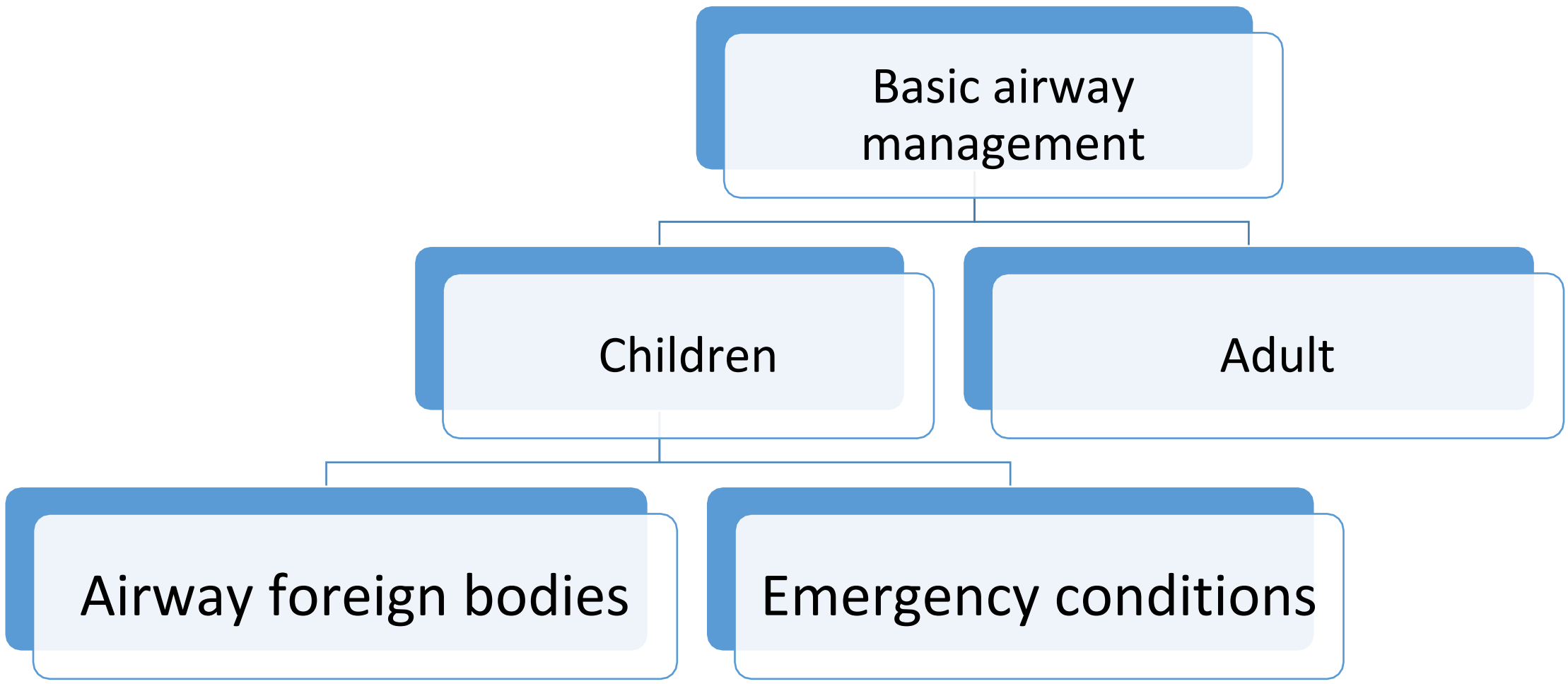
Basic Airway Management

Learning Objectives

- Which conditions need Airway management
- How to Recognise Severity of problem
- Different approach of Management for adult and children
- Familiarization to techniques of basic airway management
- Assessing your Knowledge gain







Potentially life-threatening causes

- Foreign body
- Epiglottitis
- Croup
- Bacterial tracheitis
- Retropharyngeal abscess
- Peritonsillar abscess
- Infectious mononucleosis

- Blunt or penetrating injury
- Upper airway burns
- Anaphylaxis
- Laryngotracheomalacia
- Hereditary angioedema
- Vocal cord dysfunction
- Laryngospasm

MILD OBSTRUCTION

Ability to speak

Hoarse cry

Forceful cough

Good air entry

Inspiratory stridor

Snoring (stertor)

Minimal or no retractions

No nasal flaring or grunting

Encourage continuing coughing

Stay and monitor

Take steps if progress to severe obstruction

SEVERE OBSTRUCTION

Universal Choking sign

Unable to speak or cry

Poor or no air entry

Retractions

nasal flaring

Prolonged inspiratory time
Tachypnea

Audible inspiratory stridor

loss of consciousness

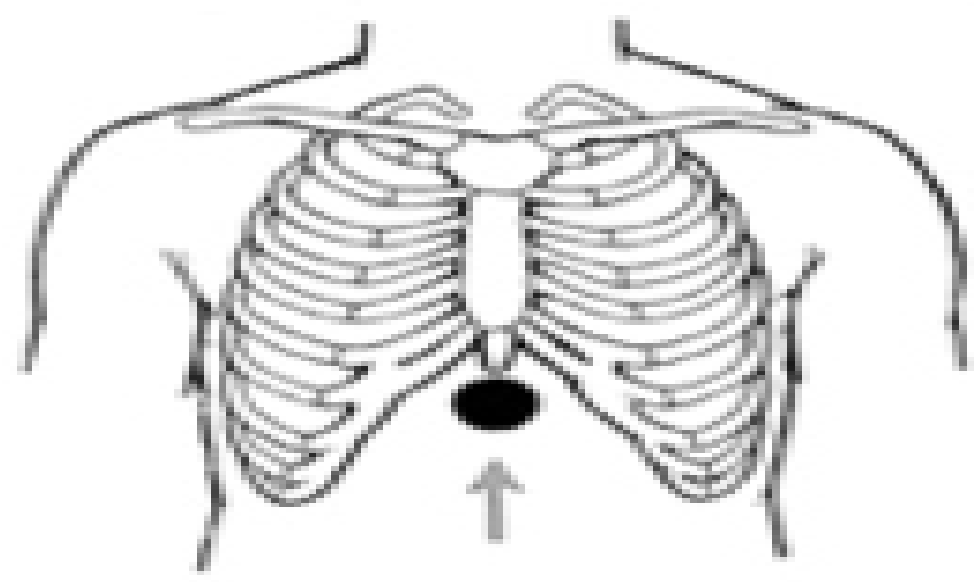
Take steps to relive obstruction: Abdominal thrusts/ Chest thrusts/ Back thrusts

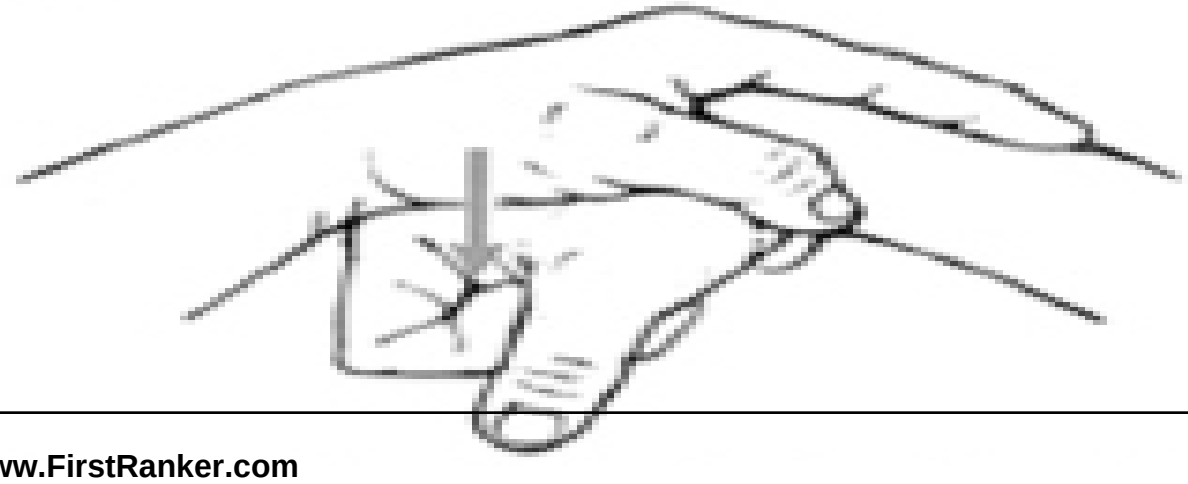
No Blind finger-sweeps

CPR when unconscious

Management

- History and Examination
- Radiological images and Endoscopy
- Positioning Manoeuvres
- Airway Adjuncts
- Patient position
- Breathing Techniques
- Cervical fixation technique





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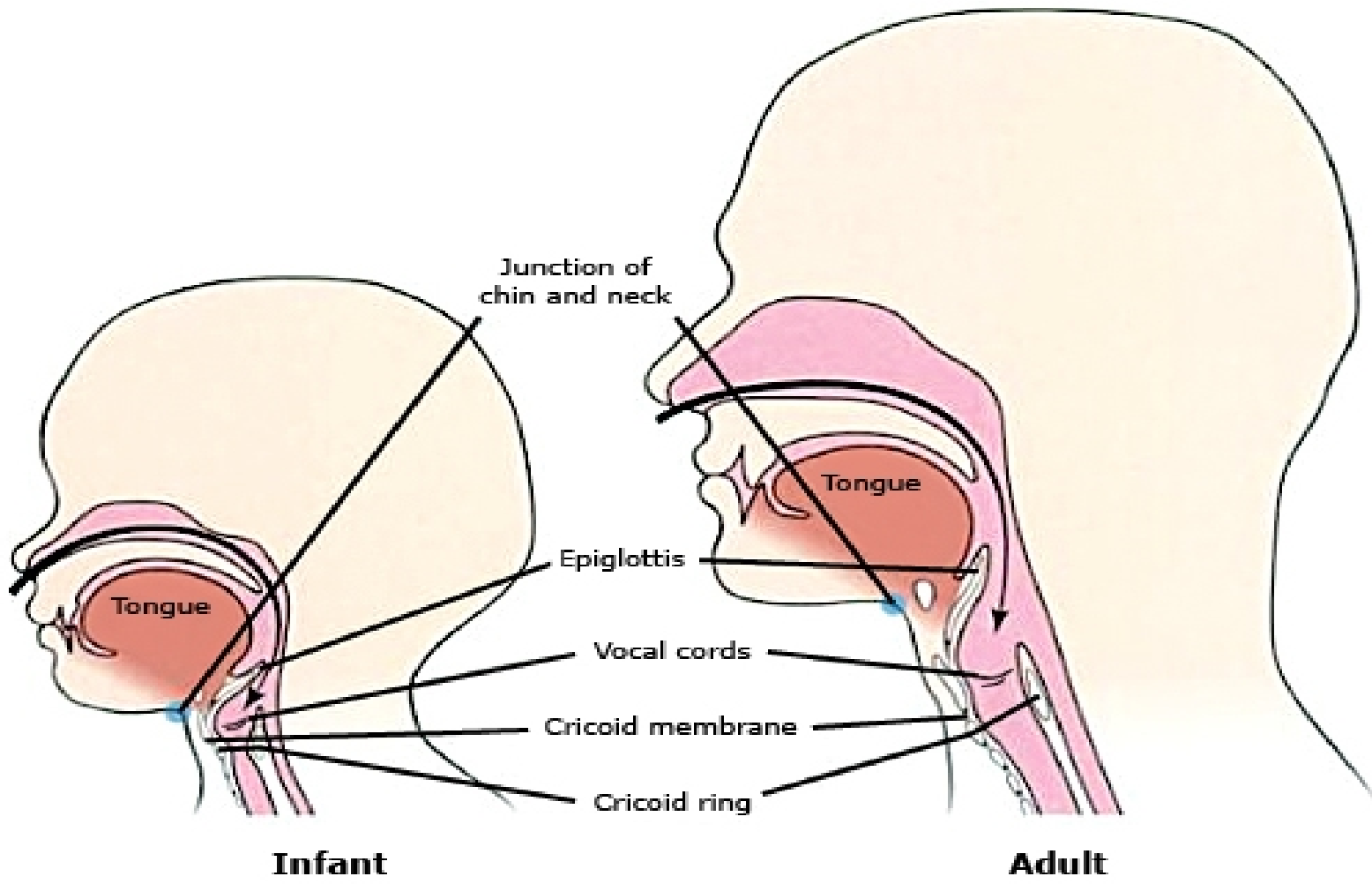
Anatomic considerations in children

- Prominent occiput
- Small mouth opening
- Large tongue, tonsils and adenoids
- Superior laryngeal position
- Weaker hyoepiglottic ligament
- Large, floppy epiglottis
- Shorter trachea
- Anatomic subglottic narrowing

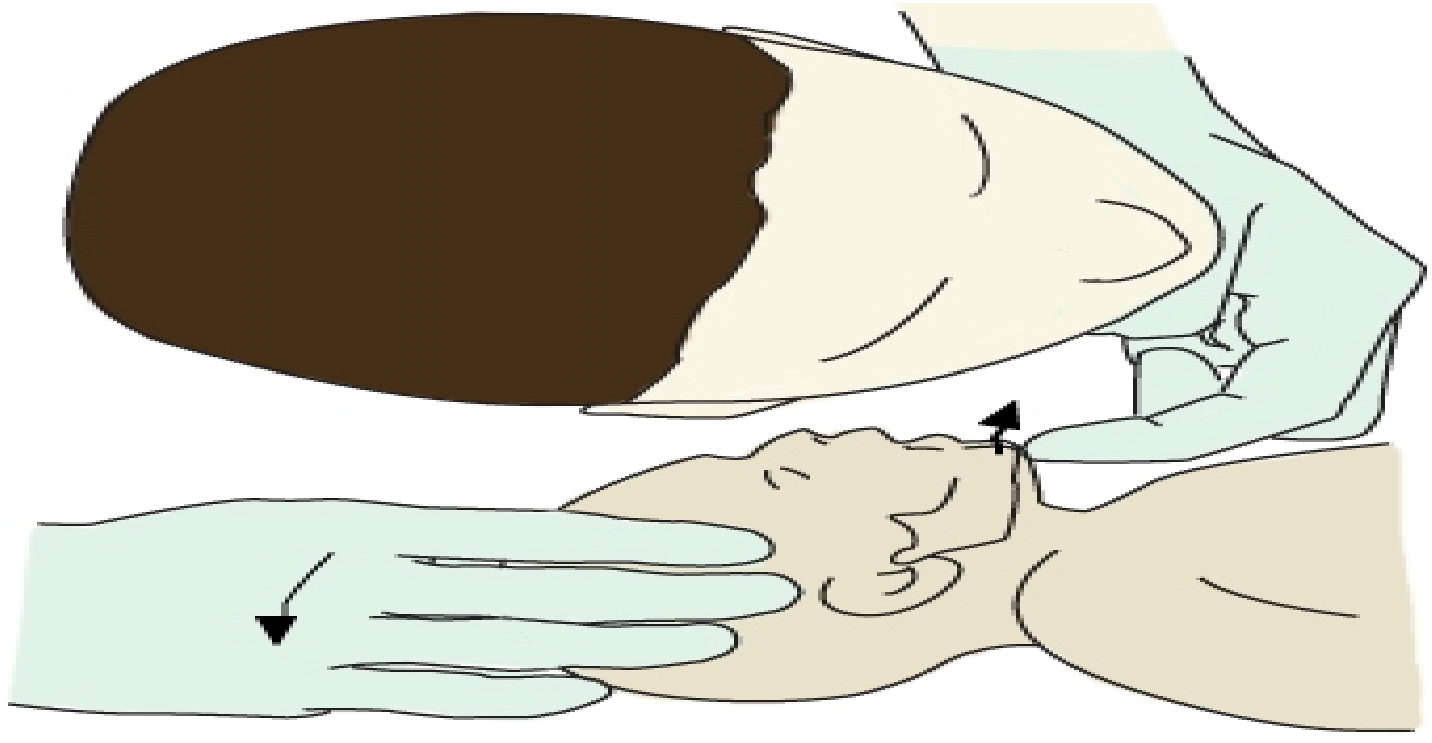


PHYSIOLOGIC CONSIDERATIONS

- Age-related high respiratory rate
- Periodic breathing and Apnoea
- Preferential nasal breathing
- Smaller tidal volumes relative to body size (6 to 8 mL/kg)
- Lower functional residual capacity
- Higher oxygen metabolism: (6 versus 3 mL/kg/min)
- Prone to respiratory fatigue: lower percentage of type 1 muscle fibres
- Higher vagal tone

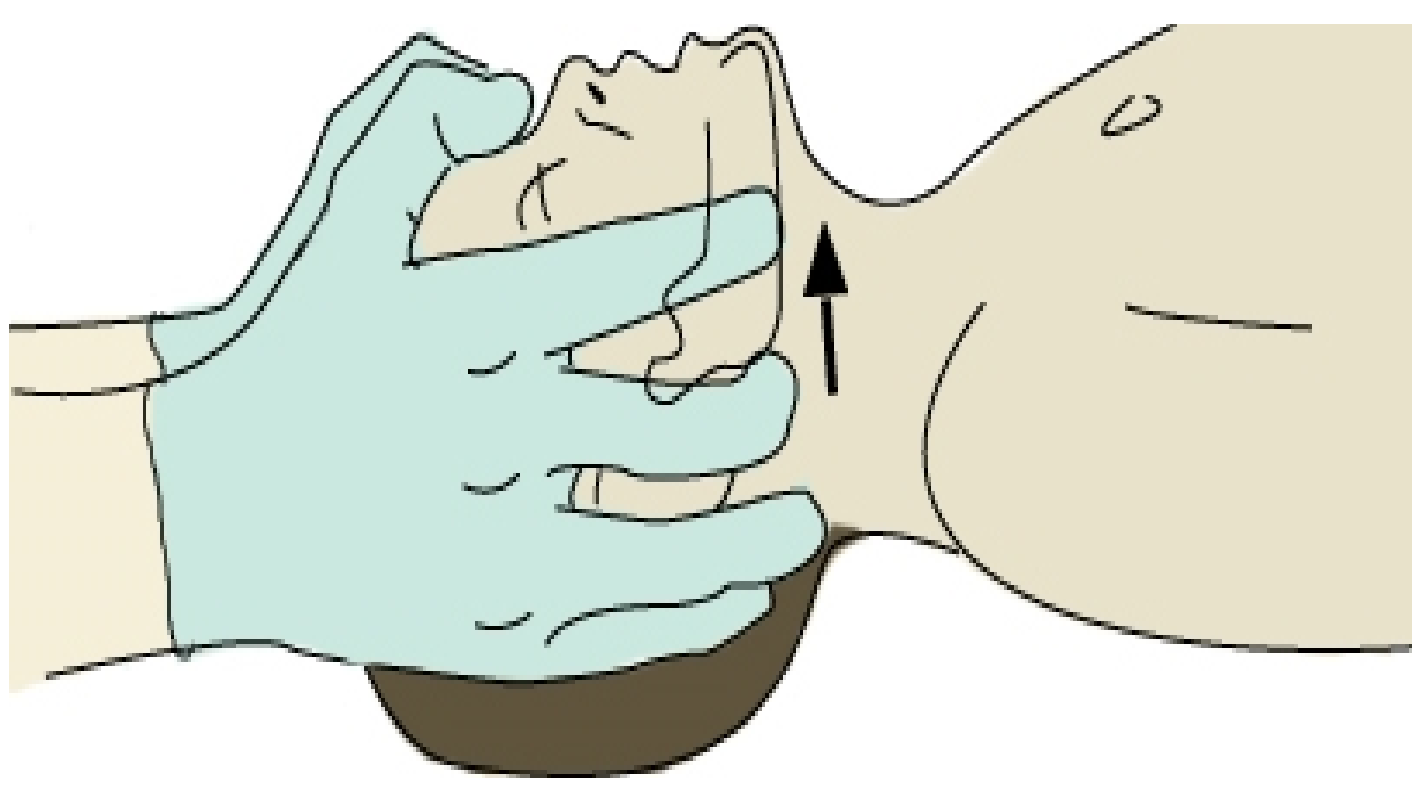
Head Tilt & Chin Lift

Head Tilt & Chin Lift



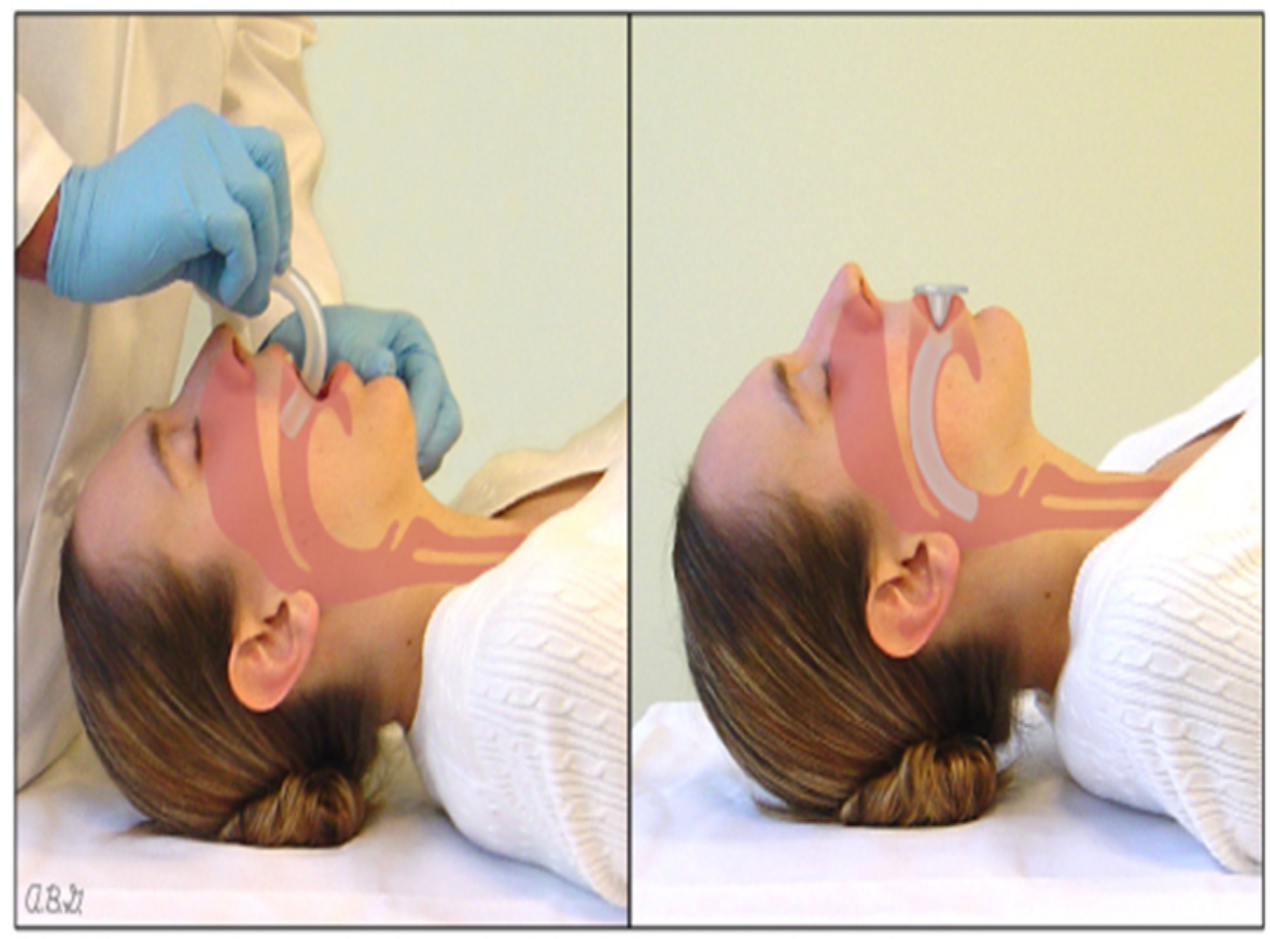
Jaw-thrust manoeuvre

Jaw-thrust manoeuvre in children



Oropharyngeal Airway by Arthur Guedel

- Pushing the tongue posteriorly
- too small a device is ineffective
- too large a device can obstruct the larynx
- traumatizing the soft tissue
- in intact airway reflexes, induce vomiting



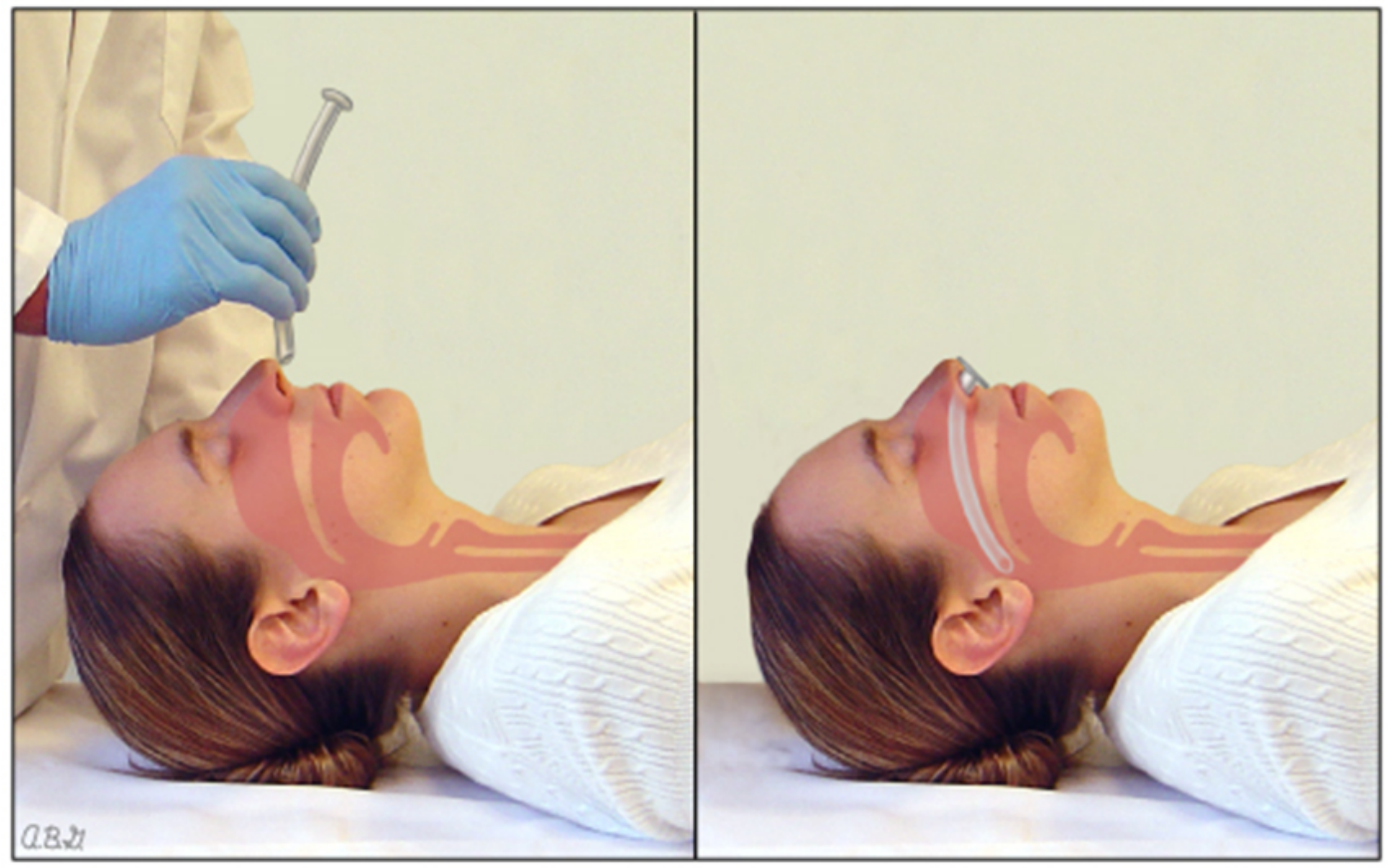
Nasopharyngeal Airway

Used when

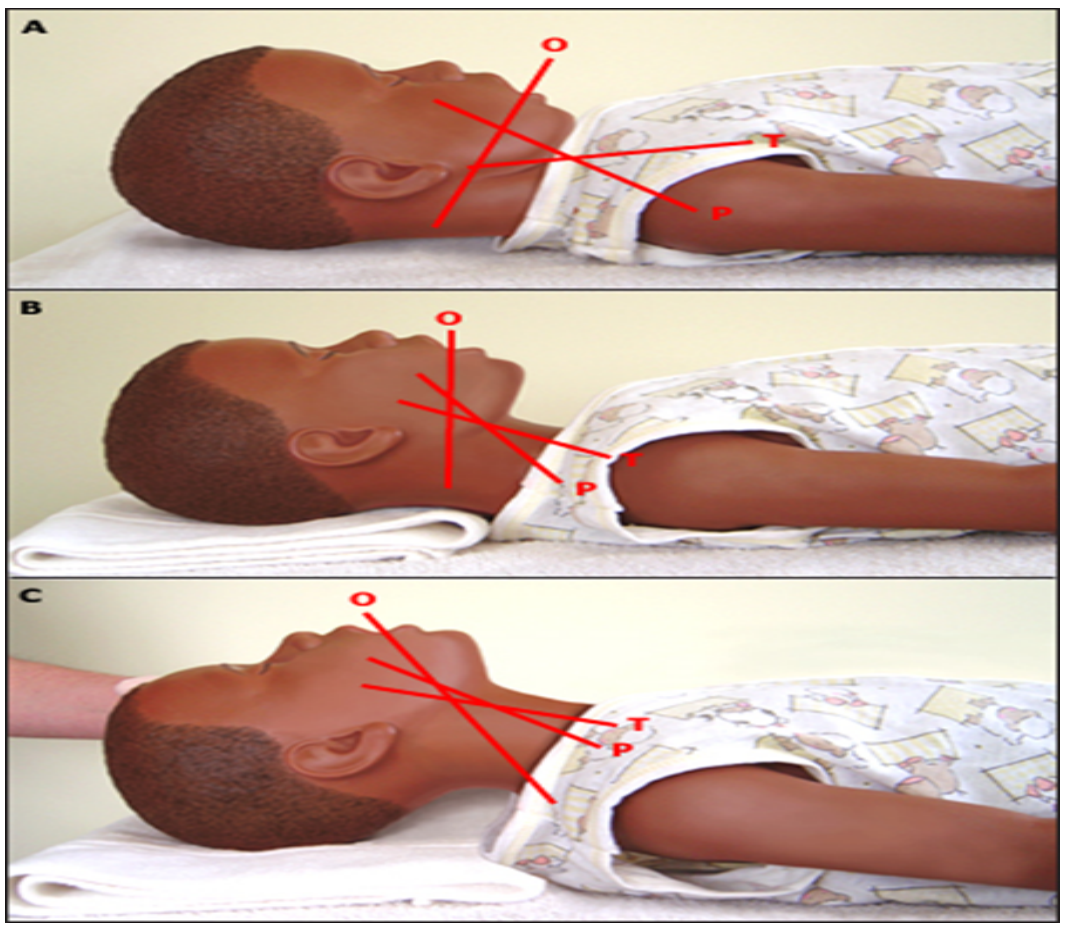
- ➢ OPA insertion is difficult
- ➢ oral trauma
- ➢ clenched Jaw
- ➢ semiconscious patient
- ➢ intact airway reflexes

- Select NPAs based on length
- nostril to the earlobe or the angle of the jaw

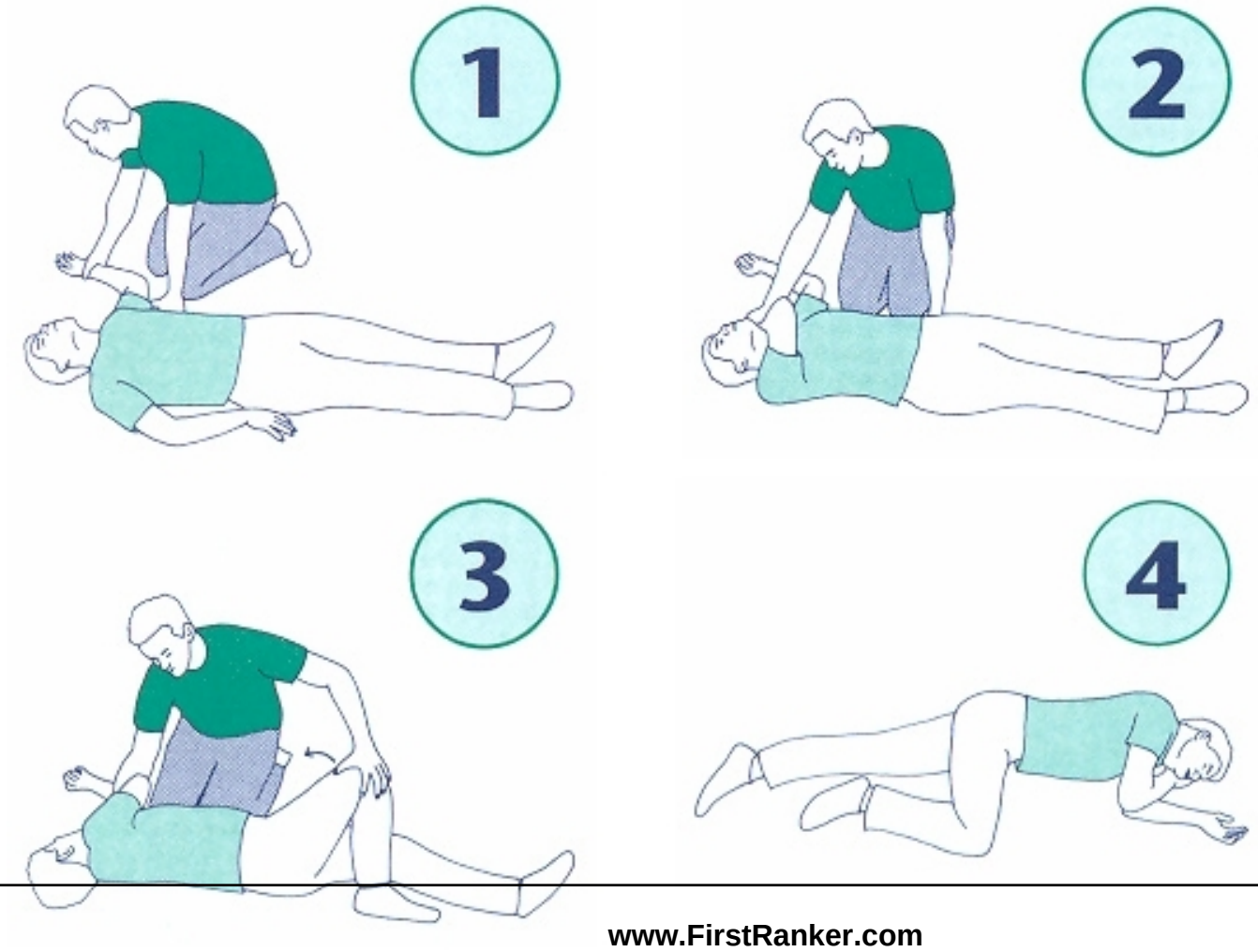
- Intracranial NPA placement
- long NPA may enter oesophagus
- Injury to the nasal mucosa



Sniffing position



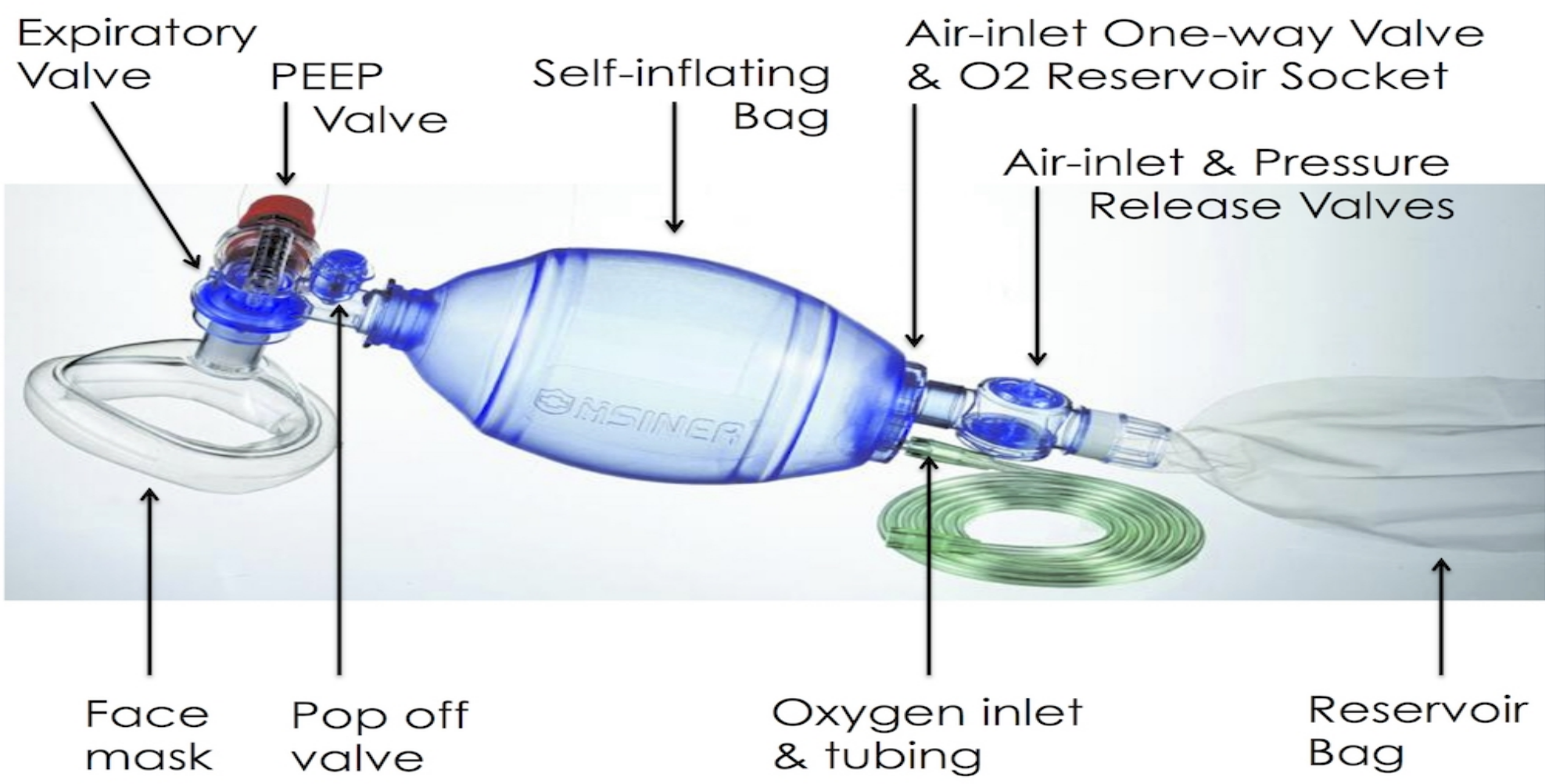
Recovery Position



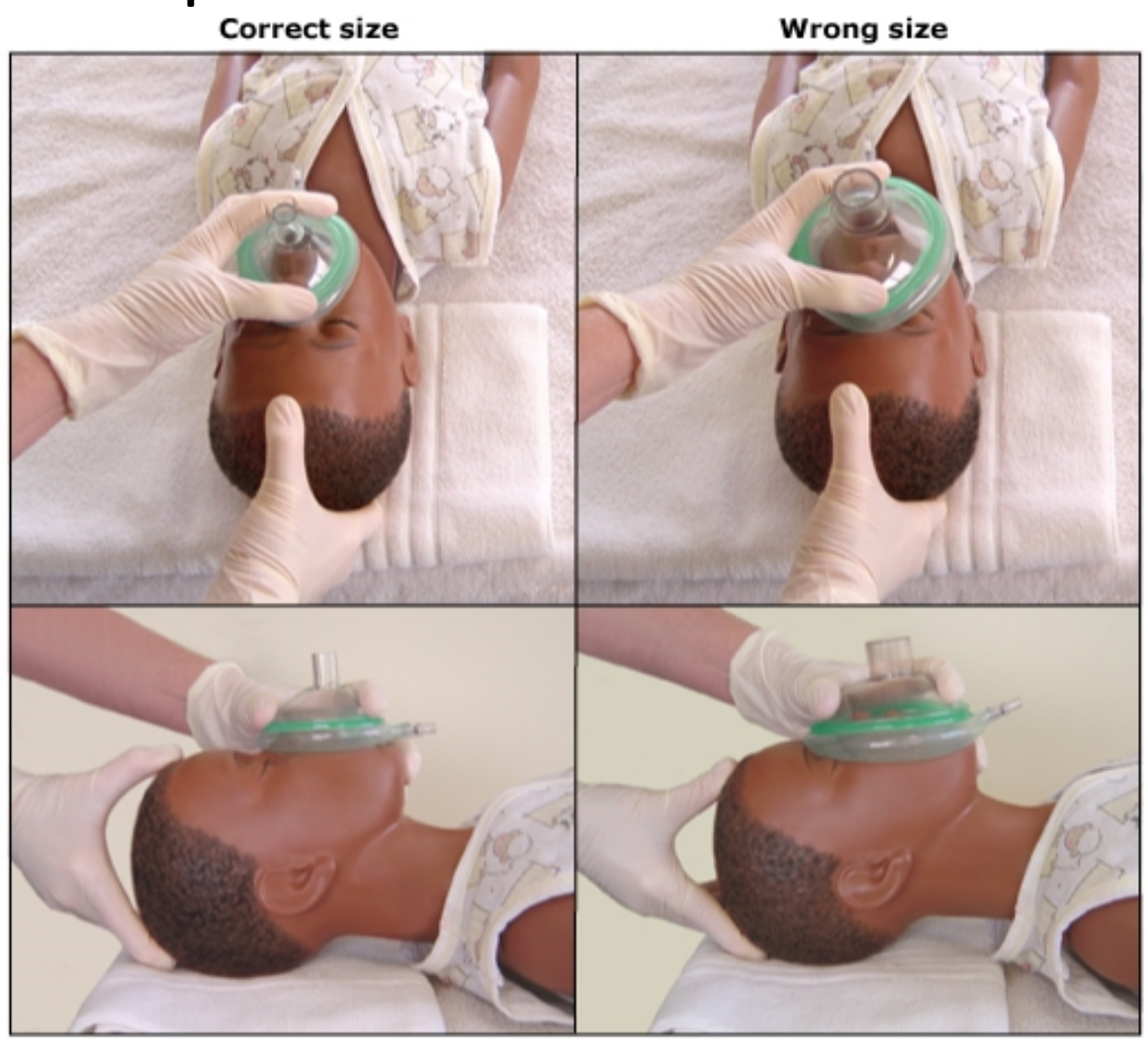
Breathing Techniques: Bag Valve Mask

- Developed by Holger Hesse & Henning Ruber in 1953
- AMBU company: Artificial Manual Breathing Unit
- Manual Resuscitator or Self Inflating Bag
- Provides PPV in emergency or Temporary Ventilation
- Disposable or Reusable
- Sizes: Infant , children and adult

Components



Complications



- Stomach Inflation
- Overinflation more harmful than hyperventilation
- tidal volumes 6 to7 mL/kg
- 10 breaths each minute
- Each breath over 1 second
- Lung Injury with ETT

Flow Volume Loops in Airway obstruction