AL-Ayen University
College of Health and Medical Technology
Department of Anesthesia

Face Mask

Lecture (6) theoretical
Basics of Anesthetic Equipment (1)
2nd Stage
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Face Mask :

It is the device which allows administration of gases to the patient from breathing system without introducing any apparatus to the patients mouth.

A face mask can be made up of:

1. black rubber
2. clear plastics
3. elastomeric material or combination of these.

The parts of face mask:

- **BODY :** constitutes the main parts of the mask. Transparent body allows observation of moisture , vomitus, secretions etc.
- **SEAL:** come in contact with the face.

Two types are available

1. pad or cushion - inflated with air
2. flap - flexible extension of the body

Seal (Rim, Flap, Edge)

It comes in contact with the face.

Pad (cushion) type seal

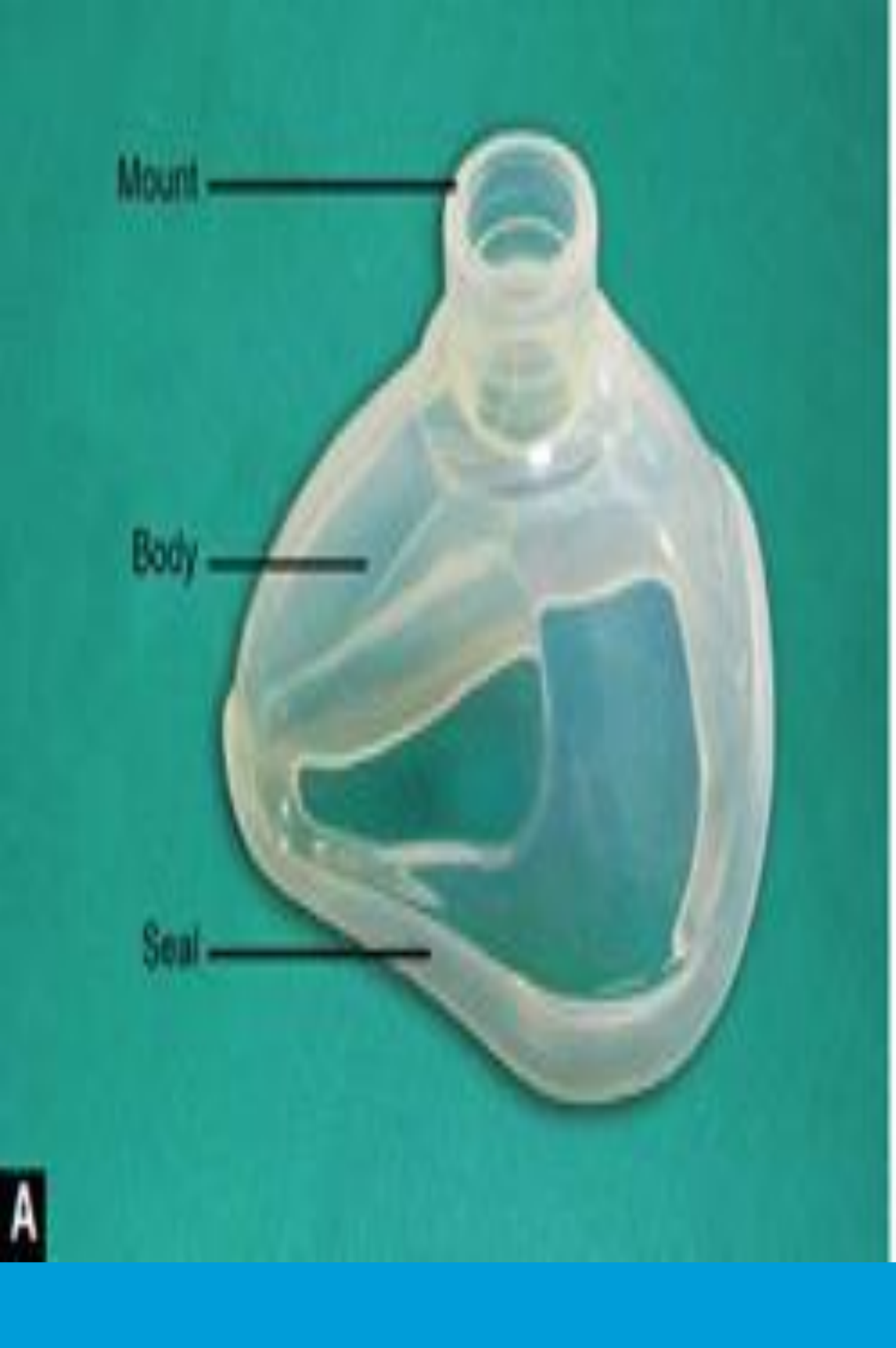
Inflated with air or filled with a material that will conform to the face when pressure is applied.

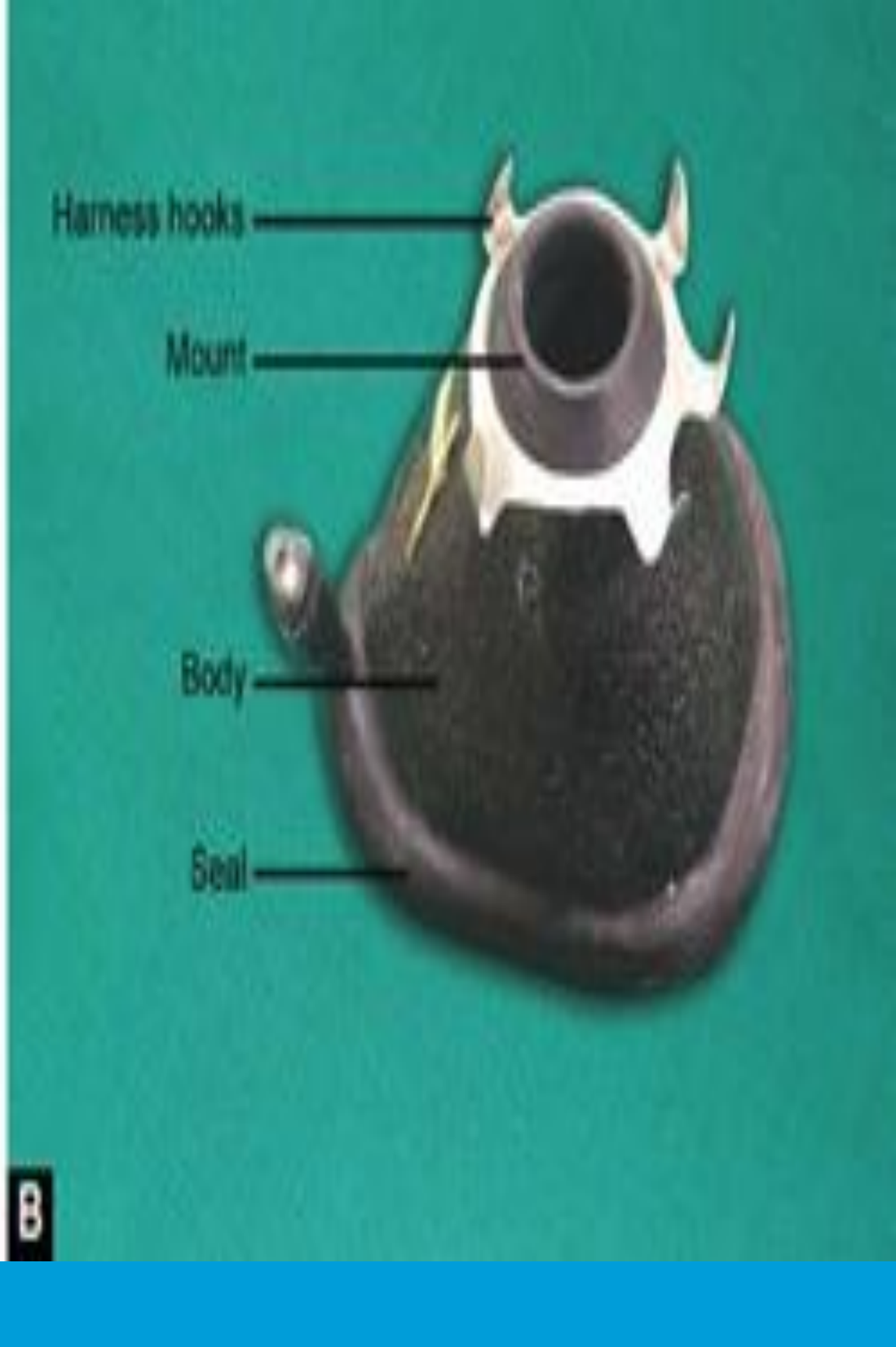
Flap type seal

Flexible extension of the body that conforms to the contour of the face. It is pressed onto the face to create a seal.

- **CONNECTOR (orifice / collar)**

- opposite to the seal
- thickened fitting of 22mmID
- ring with hooks helps in strapping the mask


Mount
Body
Seal
A


Harness hooks
Mount
Body
Seal
B

Specific masks :

1. **Anatomical mask :**

- Can be moulded to conform to the anatomy of face .
- Has slightly malleable rubber body, a sharp notch for the nose and a curved chin section.

2. Rendell-baker-soucek(RBS) mask

- Designed for paediatric patients < than 10 yrs
- It has triangular body and low dead space
- Used in tracheostomy and acromegaly patients

3. **Endoscopic mask :**

- Designed to allow mask ventilation during endoscopy
- It has port or diaphragm in the body to allow fibroscope insertion

Techniques of use :

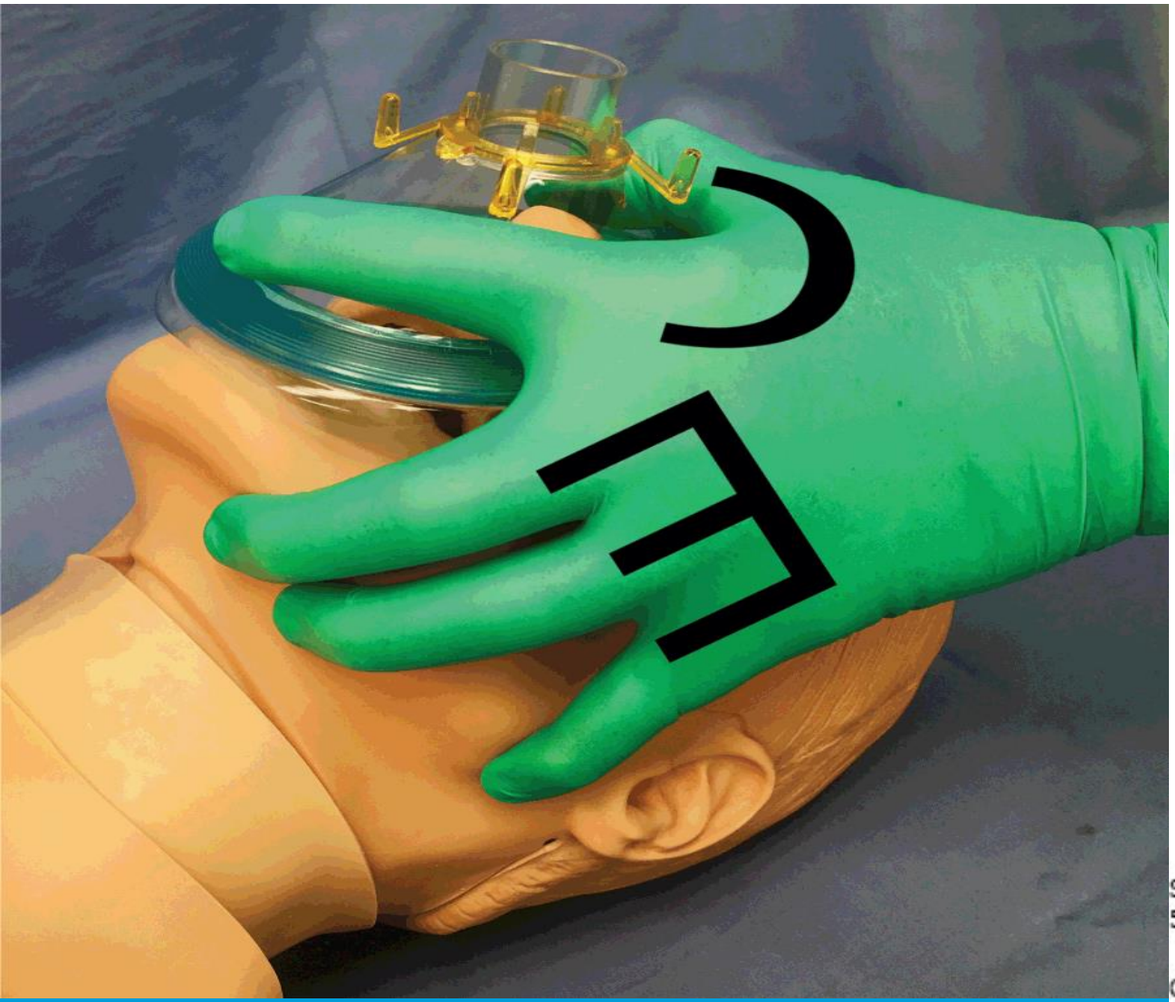
The face mask should form tight seal on the patients face while fitting comfortably in the users hand . The smallest mask is most desirable because it will cause least increase in dead space , easy to hold & less likely to result in pressure on eyes.

The Methods:

1. One hand method
2. two hand method
3. two hand jaw thrust
4. claw hand technique

1- One hand method:

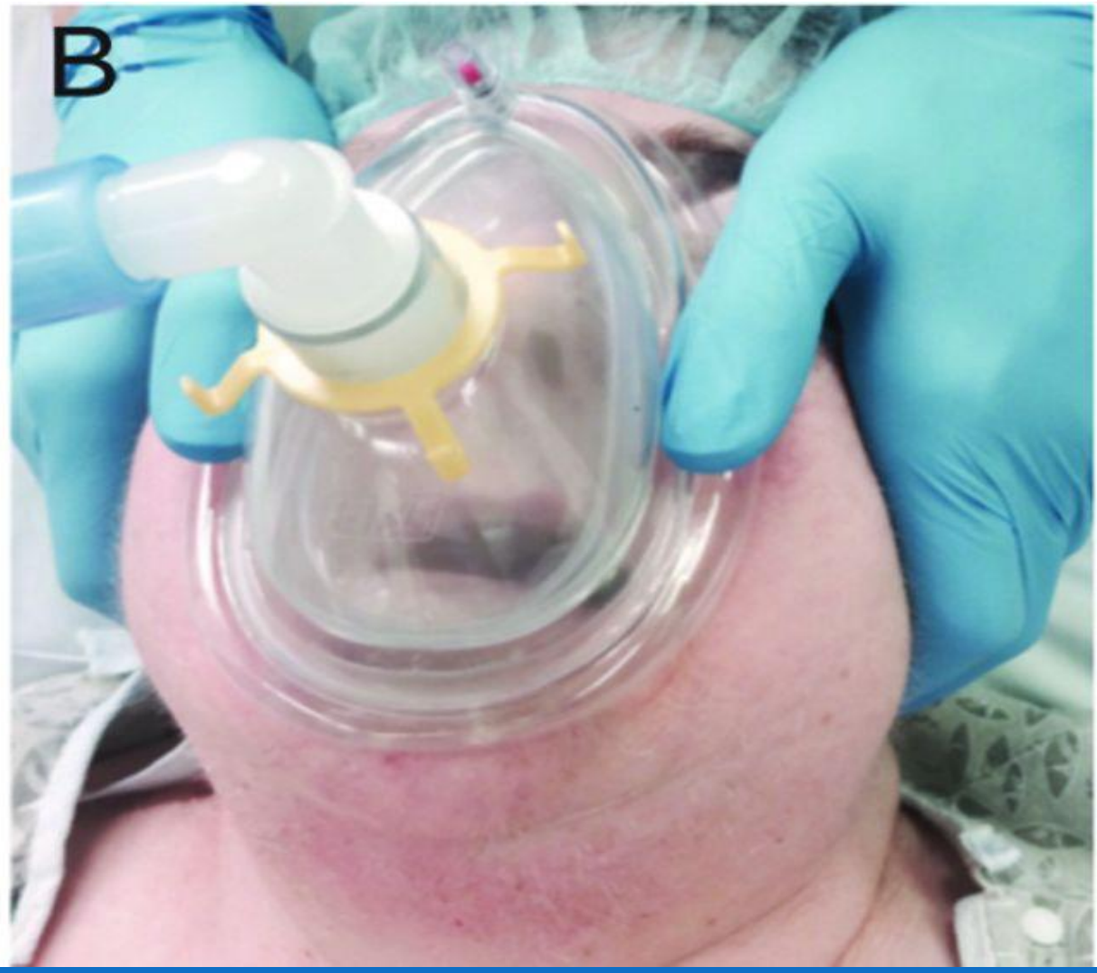
- ✓ The thumb & index finger of the left hand are place on mask body on opposite sides of connector push downward to prevent leak .
- ✓ the remaining 3 finger are placed on the mandible such the middle finger is applied to the mentum, ring finger on body of mandible & little finger at angle of mandible to give jaw thrust anteriorly



Source: Butterworth JF, Mackey DC, Wasnick JD: *Morgan & Mikhail's Clinical Anesthesiology*, 5th Edition: www.accessmedicine.com

2- Two handed method:

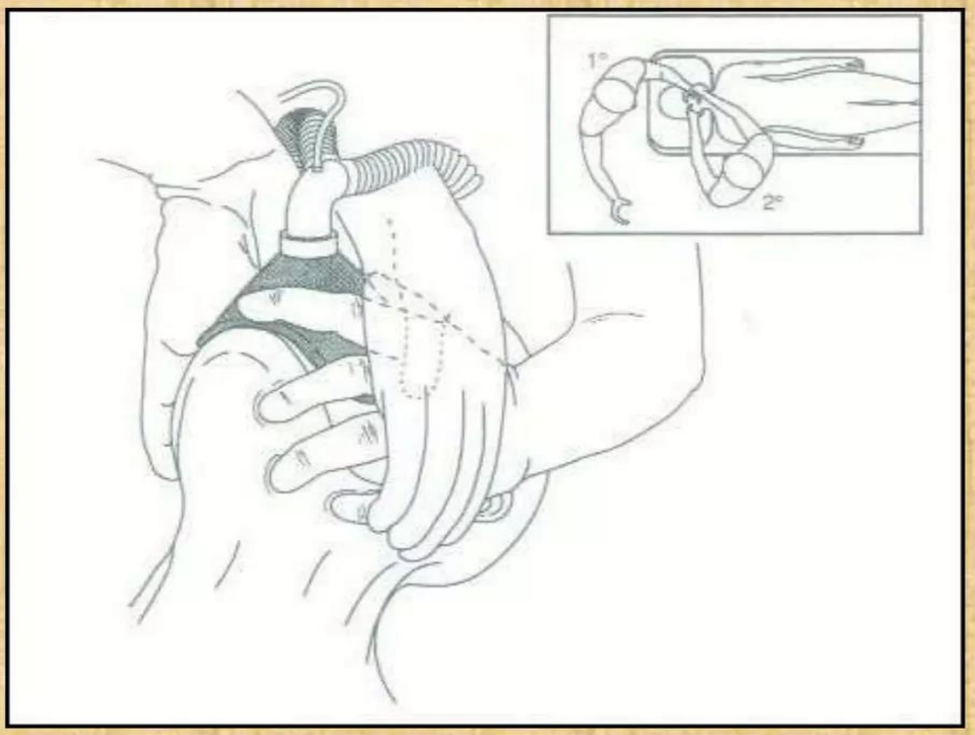
- ✓ As it requires both hands ,a 2nd person is necessary for assisted or controlled ventilation.
- ✓ Here thumbs are placed on either side of body of mask
- ✓ index fingers are placed under the angles of jaw , mandible is lifted & head is extended If a leak is present, downward pressure on mask can be increased



3-Two handed jaw thrust:

Two Handed Jaw Thrust –

- 1 person stands at head end of pt & performs jaw thrust with his left hand at angle of left mandible while his right hand compresses the reservoir bag.
- The 2nd person stands at pts shoulder facing 1st person. This persons Rt hand covers the Lt hand of the 1st person & the Lt hand achieves Rt sided Jaw thrust & mask seal.



Advantages:

1-Lower incidence of sore throat.

2-Required less anesthetic depth than tracheal tube or supraglotic device.

3-No need of muscle relaxant.

4-The face mask may be the most cost efficient method for short cases.

Disadvantages:

1-Anesthesiologist hand are tied up.

2-higher fresh gas flow are often needed.

3-often more episodes of oxygen desaturation &require more intraoperative airway manipulation.

Complications:

1-skin problems ,dermatitis and pressure necrosis.

2-Nerve injury.

3-Eye injury ,eyelid edema&corneal injuries.

4-Gastric inflation.

5-Latex allergy.

6-Lack of co-relation between arterial & end tidal CO2.

7-Jaw pain & user fatigue

Thank you for listening