

# **PENATALAKSANAAN JALAN NAFAS**

Yosy Budi Setiawan

# Definisi

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Jalan nafas sulit :

- Kondisi klinis jalan nafas dimana ventilasi sungkup muka dan intubasi trakea sulit dilakukan oleh anastesi yang terlatih dan berpengalaman

### Ventilasi sulit :

- Kesulitan untuk mempertahankan sat O<sub>2</sub> >90% dengan sungkup muka dan O<sub>2</sub> inspirasi 100%, dimana sebelum ventilasi sat O<sub>2</sub> normal

### Intubasi sulit :

- Intubasi yang dilakukan lebih dari 3 kali percobaan atau lebih dari 10 menit

# Indikasi / Pertimbangan Dilakukan Intubasi :

1. Kemungkinan pasien tsb tidak bisa mempertahankan jalan nafas (proteksi airway)
2. Kemungkinan pasien tidak bisa mempertahankan ventilasi yg adequate
3. Kemungkinan pasien terjadi perburukan (distres respirasi) beberapa waktu ke depan

# Persiapan :

- **STATICS**

S : scope

T : tube

A : airway device

T : Tape

I : introducer

C : connector

S : Suction

# Airway Devices



Oropharingeal Airway

Manual Ventilation



Ayre's T-Piece

Laryngoscope



# Airway Devices

## Oro-pharyngeal tube



Jangan dipakai jika reflex muntah masih (+)  
(Derajat A dan V dari AVPU atau GCS > 10)

## Naso-pharyngeal tube



Tidak merangsang muntah  
Hati-hati pada pasien dengan fraktura basis cranii  
Ukuran u/ dewasa 7 mm atau jari kelingking kanan



## Airway Equipment



Macintosh blade  
with handle

Wisconsin blade

Miller blade

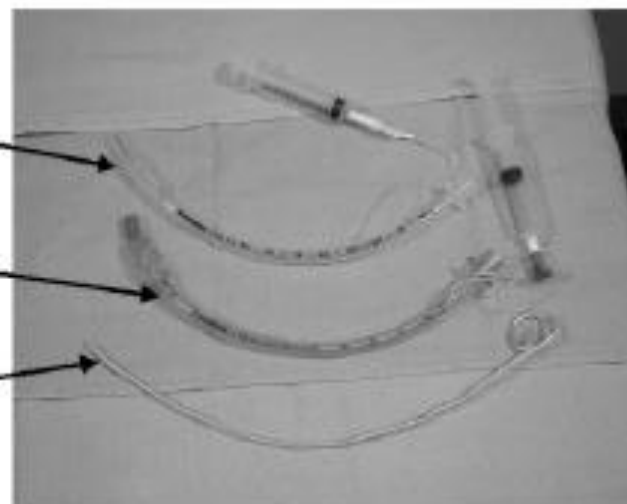
# Airway Equipment

## Airway Equipment

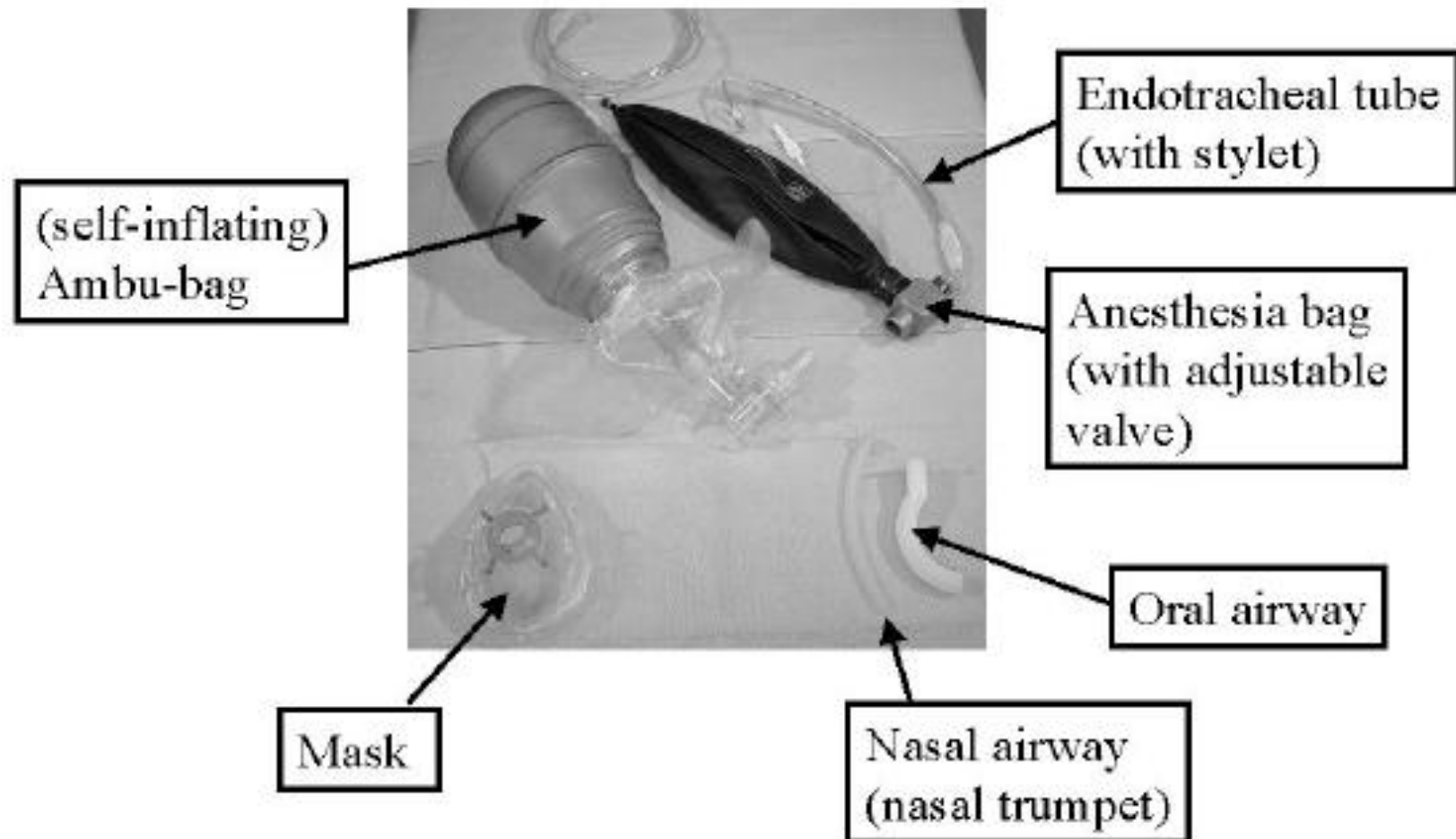
Standard cuffed  
endotracheal tube

Spiral cuffed  
endotracheal tube

Endotracheal  
tube stylet



# Airway Equipment



# Mask Ventilation



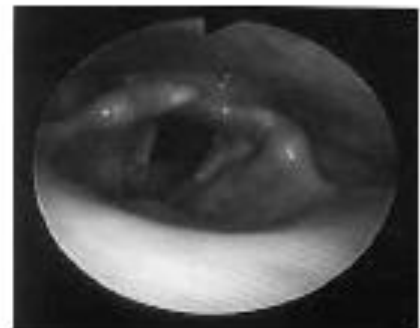
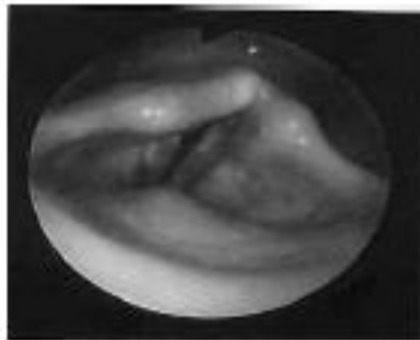
# Langkah-Langkah Intubasi :

1. Preoksigenasi O<sub>2</sub> 100%
2. Posisi pasien optimal untuk ventilasi dan intubasi
3. Buka mulut pasien
4. Pegang laringoskop/handle dgn tangan kiri
5. Masukkan blade menyusuri lidah sebelah kanan
6. Inseri ETT melewati vocal cord dan cabut laringoskop
7. Konfirmasi ETT dan fiksasi

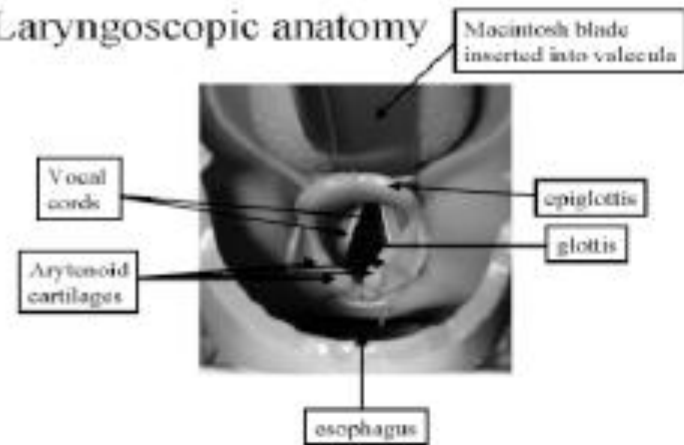
# Trachea Intubation







## Laryngoscopic anatomy

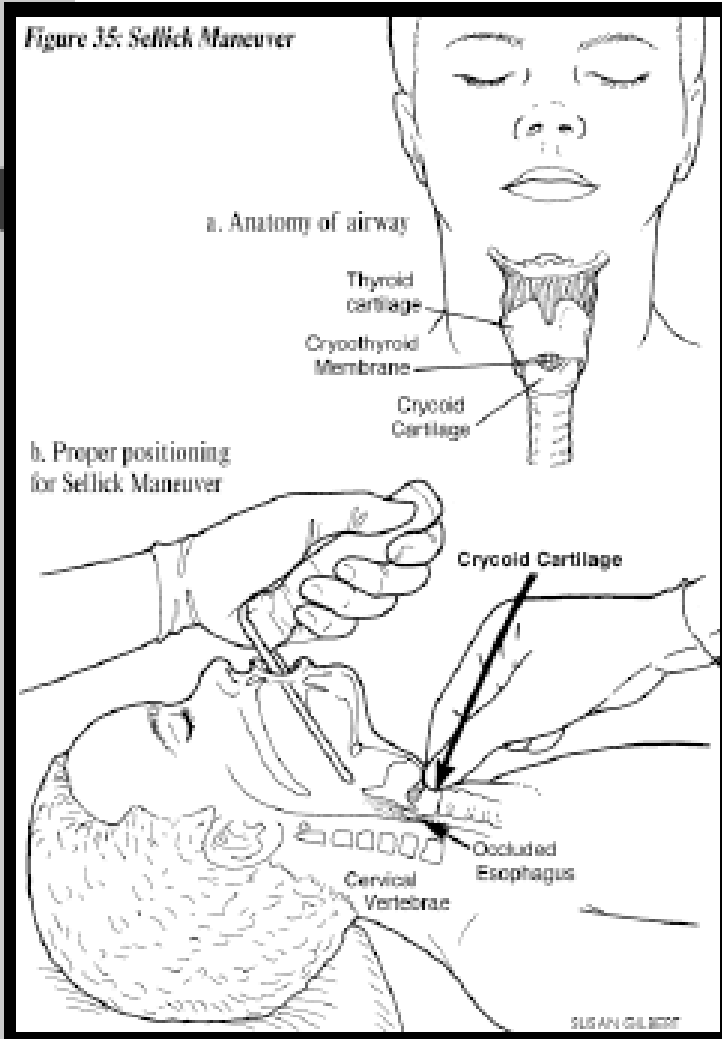






# Sellick's Manuever

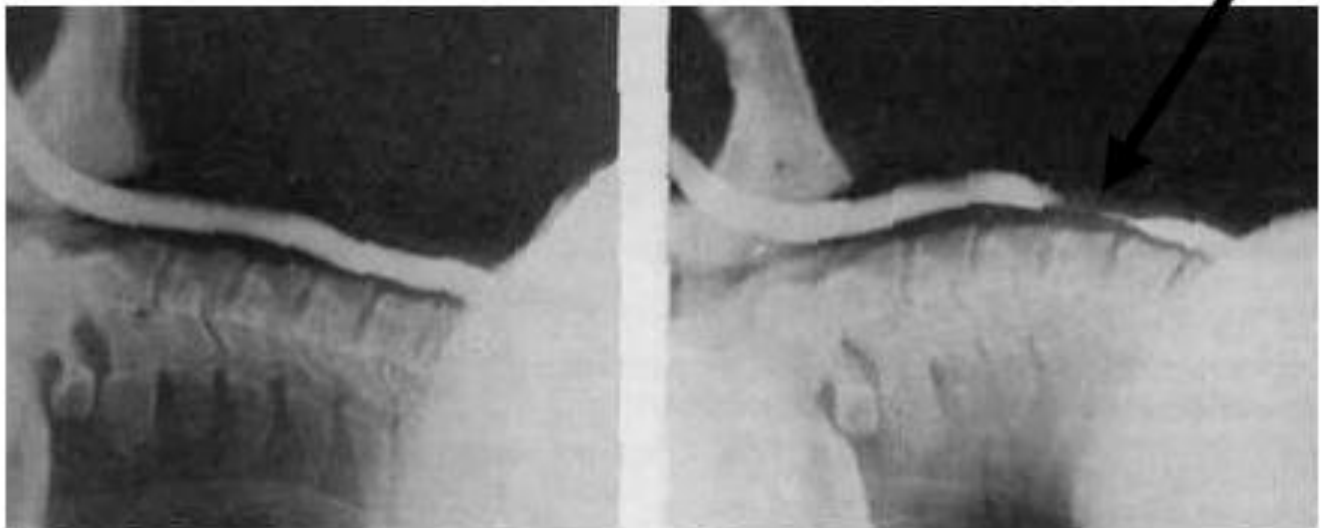
Figure 35: Sellick Maneuver



- Used to prevent gastric distention that can accompany intubation and ventilation
- Technique
  - Apply slight pressure anteriorly over cricoid cartilage
  - Closes off esophagus



## Sellick's Manuever



# Evaluasi Kesulitan Ventilasi

Kriteria ventilasi sulit (Langeron et al) 2 dari:

**OBESE**

1. Obese (BMI > 26 kg/m<sup>2</sup>)
2. Bearded
3. Elderly (> 55 th)
4. Snorers
5. Edentulous

# Evaluasi Kesulitan Intubasi

Kriteria :

- Skala LEMON atau MELON
- LM MAP
- 4 D
- Wilson Risk Scale
- Magboul 4M

# Skala LEMON atau MELON

Look externally

Evaluate 3-3-2-1 rule

Mallampati

Obstruction

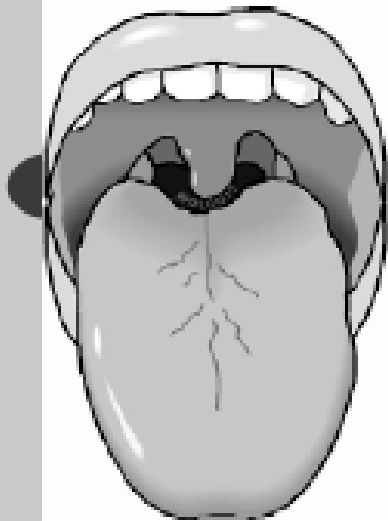
Neck mobility

# Tabel Skala LEMON

Physical signs	Less difficult airway	More difficult airway
Look externally	<ul style="list-style-type: none"> <li>• Normal face and neck</li> <li>• No face or neck pathology</li> </ul>	<ul style="list-style-type: none"> <li>• Abnormal face shape</li> <li>• Sunken cheeks</li> <li>• Edentulous</li> <li>• "Buck teeth"</li> <li>• Receding mandible</li> <li>• "Bull-neck"</li> <li>• Narrow mouth</li> <li>• Obesity</li> <li>• Face or neck pathology</li> </ul>
Evaluate the 3-3-2 rule	<ul style="list-style-type: none"> <li>• Mouth opening <math>&gt; 3F</math></li> <li>• Hyoid-chin distance <math>&gt; 3F</math></li> <li>• Thyroid cartilage-mouth floor distance <math>&gt; 2F</math></li> </ul>	<ul style="list-style-type: none"> <li>• Mouth opening <math>&lt; 3F</math></li> <li>• Hyoid-chin distance <math>&lt; 3F</math></li> <li>• Thyroid cartilage-mouth floor distance <math>&lt; 2F</math></li> </ul>

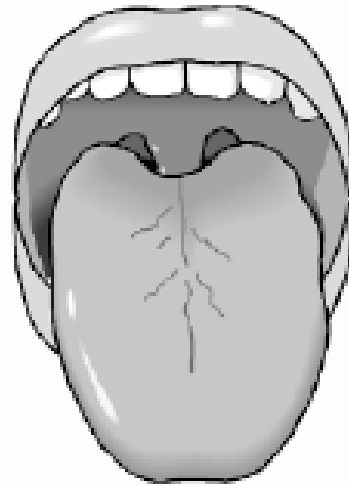
<b>Mallampati</b>	<ul style="list-style-type: none"><li>• Class I and II (can see the soft palate, uvula, fauces +/- facial pillars)</li></ul>	<ul style="list-style-type: none"><li>• Class III and IV (can only see the hard palate +/- soft palate +/- base of uvula)</li></ul>
<b>Obstruction</b>	<ul style="list-style-type: none"><li>• None</li></ul>	<ul style="list-style-type: none"><li>• Pathology within or surrounding the upper airway (e.g. peritonsillar abscess, epiglottitis, retropharyngeal abscess)</li></ul>
<b>Neck mobility</b>	<ul style="list-style-type: none"><li>• Can flex and extend the neck normally</li></ul>	<ul style="list-style-type: none"><li>• Limited ROM of the neck</li></ul>

## Mallampati Scoring



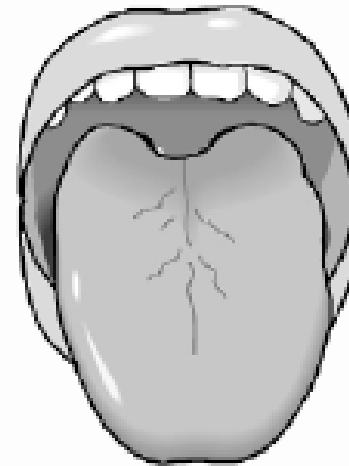
***Class 1***

Visualization of the soft palate, fauces, uvula, anterior and posterior pillars.



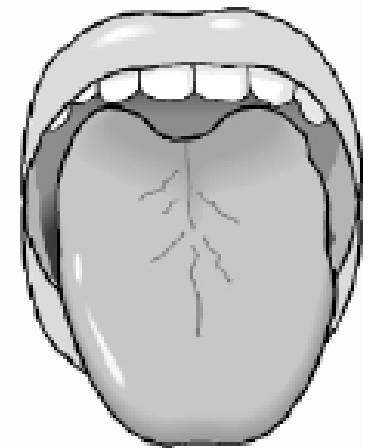
***Class 2***

Visualization of the soft palate, fauces and uvula.



***Class 3***

Visualization of the soft palate and the base of the uvula.



***Class 4***

Soft palate is not visible at all.