

EMERGENCY AIRWAY MANAGEMENT

PREPARE TEAM

Call for help!

What do we know?
What do we expect?
Assign roles

PREPARE PATIENT

CODE STATUS?

Position

- Head & torso elevated, if possible
 - Auditory meatus at sternal notch, with face parallel to ceiling/body
 - High BMI: ramp up, reverse Trendelenburg + foot rest
 - Dentures?
- IN** for BVM, **OUT** for intubation

Predict

HARD TO VENTILATE? BOOTS
Beard - Old - OSA - no Teeth - Stridor
HARD TO INTUBATE? LEMON

Look externally - Evaluate 3-3-2 - Mallampati - Obstruction - Neck movement

Pre-Oxygenate (goal > 95%)

- NP + NR Mask, both at 15 L/min
- deep breaths x 8, or 3 min. of regular breathing
- +/- BVM + PEEP to achieve target

RESUSCITATE BEFORE YOU INTUBATE!

HYPOXIA

NP @ 15 LPM
NRM @ 15LPM
+/- BVM + PEEP
Combative? -> DSI*

HYPOTENSION

- Give NS +/- Blood
- Push-dose pressor on hand
- NOREPI drip ready (+/- IO/Central line)

CHF/COPD/ASTHMA

IDEALLY,
DO NOT INTUBATE!
Try **NPPV** first
(+/- Ketamine sedation)

ELEVATED ICP

MUST AVOID:
SBP < 90
Sat < 90%
Hypercapnia
(aim for pCO2 35-40)

METABOLIC ACIDOSIS

NEVER LET THE PATIENT GO APNEIC!
Awake Intubation OR
Continue to ventilate during induction/paralysis (RR 12)
Once intubated, increase RR to 30

EQUIPMENT = "MIDSOLES"

Monitors (cardiac, pulse Ox, CO2, BP cycle q5min)
IV x 2, IO if need be
Drugs (see **MEDICATIONS FOR INTUBATION** sheet)
Suction x 2, under head of bed
O2 (NP + NRM @ 15 LPM, BVM + PEEP, KING Airway)
Laryngoscope +/- video-laryngoscope, tested
ET tubes (7.5 and 8.0 + 10mL syringe; test + lube cuffs)
Stylet & Securing device/tape for ET tube
Surgical airway equip. (#10 scalpel, Bougie, 6.0 ET tube)
For pediatric patients, use **Broselow Tape** or **Pedi STAT App**

*DSI = DELAYED SEQUENCE INTUBATION:

Ketamine 1mg/Kg (+ 0.5mg/Kg prn) to settle agitated patient, to facilitate resuscitation prior to intubation

COCKPIT CHECK: Patient positioned, O2 > 95%, BP optimized, equipment + meds ready?

VERBALIZE PLAN A, B, C & Perform the Laryngeal Handshake

NIPPV

INDICATIONS: CHF, COPD, Asthma

AVOID/CAUTION: reduced LOC, upper airway obstruction, face/skull #, untreated pneumothorax, hemodynamic instability

AVOID: peak inspiratory pressures > 20

Select NPPV on LTV 1200 Ventilator:
Press "Assist/Ctrl, SIMV/CPAP, NPPV" four times, until "NPPV" is flashing green and "SIMV/CPAP" is solid green.

For BPAP: start with "Pres. Support" (PS) = 5 and "PEEP" = 5 (note: IPAP = PS + PEEP = 10)

For CPAP: start with PEEP = 5

Set FiO2 and backup RR

RSI

PRETREATMENT?

Fentanyl 0.5-2mcg/Kg (increased ICP)
Lidocaine 1.5mg/Kg (increased ICP)
Atropine 0.02mg/Kg (< 1 yr old)

↓ **3 minutes**

INDUCTION

Ketamine 2mg/Kg (if hypotensive)
Propofol 1-2mg/Kg (if hypertensive)

↓ **1 minute**

PARALYSIS

Rocuronium 1.2mg/Kg

↓ **45-60 sec**

INTUBATION

↓ **confirm success**

POST-INTUBATION

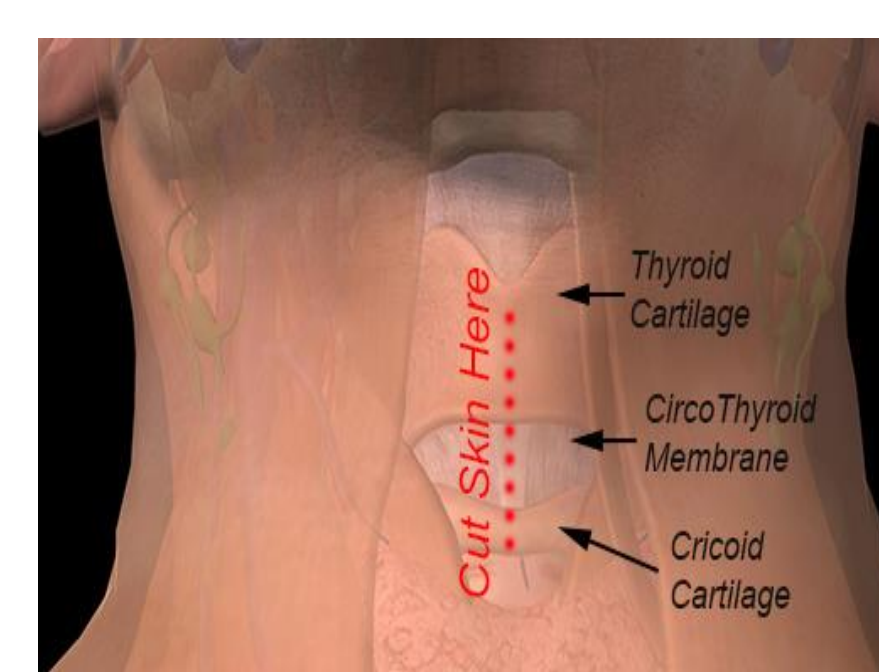
Analgesia > Sedation
Post-intubation checklist

AWAKE

For predicted difficult intubations, with a *cooperative* patient

1. Suction mouth and dry tongue with gauze
2. Trap tongue with gauze + pull out, then apply **1 inch of the 5% lidocaine ointment** with tongue depressor as posterior as possible so that it 'melts' down the posterior slope of the tongue
3. Spray the tongue, tonsillar regions, posterior pharynx generously with **atomized lidocaine 4%**
4. Repeat step 2 with another dose of **5% lidocaine ointment**
5. **Warn the patient** that the next bit of spray may make them feel short of breath. *Reassure them!*
6. **Preoxygenate, position +/- restrain arms**
7. Trap and pull out the tongue. Use **atomized 4% lidocaine** to spray the posterior tongue and glottis. Repeat x1.
8. Sedate with **IV ketamine 10-20 mg aliquots**
6. Visualize chords and perform **3 glottic/tracheal sprays during inspiration**
7. Insert **ETT or Bougie (then ETT)**, and fully sedate +/- paralyze patient

SURGICAL



1. Make generous **VERTICAL cut**, as depicted
2. **Feel** for cricothyroid membrane
3. Make **HORIZONTAL cut** through the membrane
4. **Feel** for tracheal lumen, **insert Bougie**
5. Insert **6-0 cuffed ET tube over Bougie**
6. Remove Bougie
7. Bag to **confirm position, secure ET tube**