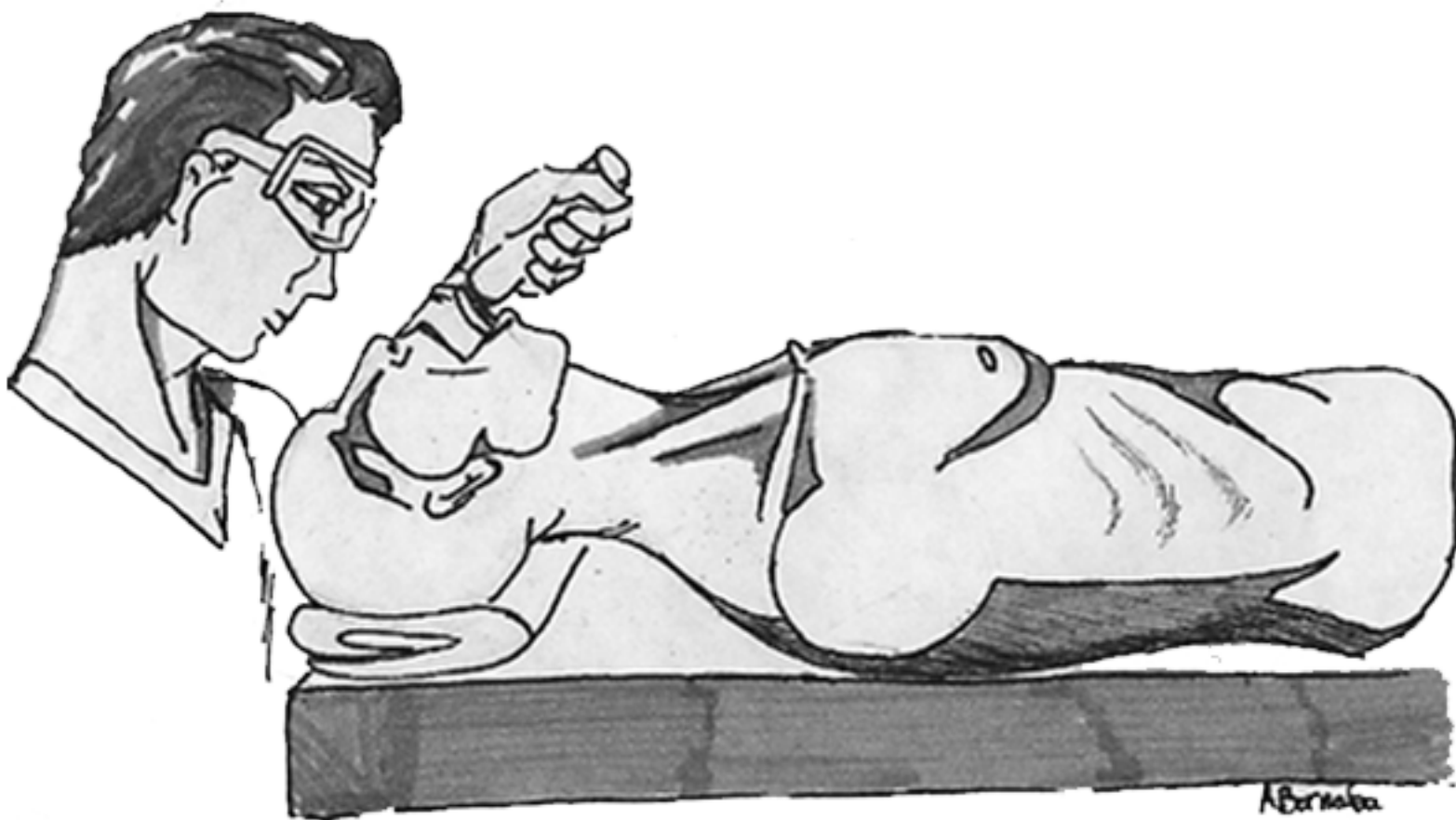


INTUBATION MANUAL

A GUIDE TO THE AIRWAY MANAGEMENT WORKSHOP

by the UC Irvine Emergency Medicine Interest Group



ENDOTRACHEAL INTUBATION

INDICATIONS:

- Inadequate oxygenation not relieved by O₂ mask or cannula.
- Inadequate ventilation (increased PCO₂)
- To control or remove bronchopulmonary secretions
- Obtunded/unconscious patient who is unable to protect airway (no gag reflex)
- Multiply injury/intoxicated/combatative patient uncooperative with emergent studies

CONTRAINDICATIONS (RELATIVE):

- Distorted facial or airway anatomy - due to massive facial trauma, severe facial burns, or significant soft tissue / penetrating injury to neck that prevents passage of ETT

EQUIPMENT:

- It would be ideal to have the following items ready before starting
 - BMV, O₂, suction, nasal/oral airway, end tidal CO₂ detector
 - Laryngoscope (make sure light is working)
 - ET tube, syringe for inflating cuff

Age	ET tube size
Infant	2.5
3-18 mo	3-4
18 mo - 3 years	4-5
3-5 yrs	5-6
5-7 yrs	6-6.5
8-14 yrs	7-8
Adult	7-9

POSITIONING:

- Place patient in "sniffing position"
 - Supine, neck extended, occiput elevated, and towel under neck.
- If this is a trauma patient with neck collar, do not reposition. When ready, get someone to manually stabilize c-spine after collar is removed.

PROCEDURE:

- Preoxygenate with 100% O₂ for several minutes
- Premedicate with sedative of choice:

Agent	Dosing
Etomidate	0.3 mg/kg
Methohexital	0.5-1 mg/kg
Midazolam	0.1-0.3 mg/kg
Fentanyl	1-5 µg/kg
Ketamine	1-2 mg/kg
Thiopental	1-4 mg/kg

- Paralyze: succinylcholine 1-2 mg/kg.
- Initiate cricoid pressure (BURP) and stop BMV ventilation
- Observe for fasciculation and apnea
- Intubate
- Advance ETT only about 2cm past glottis in the infant & up to 5cm in older children. The black vocal cord guide should be aligned at the level of or just past the cords.
- Begin ventilating
- Inflate ET tube cuff, release cricoid pressure
- Confirm tube position by bilateral chest auscultation and CO₂ detector (later confirm placement by x-ray - tube must be 2-3cm above the carina; adjust as necessary)
- Secure ET tube
- Provide additional sedation/paralysis if needed

COMPLICATIONS:

- Potential succinylcholine side effects: increased intragastric pressure, increased intraocular pressure, increased intracranial pressure, hyperkalemia (patients with neuromuscular disease, major burns, trauma), malignant hyperthermia (rare)

ALTERNATIVES:

- Laryngeal mask airway
- Cricothyroidotomy
- Tracheotomy
- Fiberoptic intubation

