

APPENDIX: 04**TITLE: SUPRAGLOTTIC AIRWAY PROCEDURES****REVISED: November 1, 2017**

I. BACKGROUND: Supraglottic airways (SGA) offer an alternative to Endotracheal Intubation in a number of circumstances. Currently there are two Supraglottic Airways in the ACCESS/ACP system: The Laryngeal Mask Airway (LMA) *Supreme* and the KING LTS-D. This document provides general guidance on procedure, with the understanding that specific circumstances may necessitate some variance from standard procedure.

II. Indications and Contraindications**General Indications**

- Cardiopulmonary arrest
- Respiratory arrest
- Comatose with non-maintainable airway
- Pronounced hypoxia
- Inadequate ventilation by BVM or other airway device.

STRONGLY CONSIDER WITH

- As an alternative (i.e. a “rescue airway device”) to other airway devices/interventions in actual or anticipated difficult airway situations
- After unsuccessful endotracheal intubation attempts, or where endotracheal intubation is not available or feasible.
- Any patient with a decreased level of consciousness with compromised ability to manage their airway
- Those patients who fail to respond to positive pressure ventilation/airway support
- Anticipated clinical course such as impending respiratory or airway failure

Absolute Contraindications

- Intact gag reflex
- Inadequate mouth opening to allow placement

Relative Contraindications

- Known/suspected esophageal disease such as Esophageal Varices or Esophageal cancer
- Known or suspected ingestion of a caustic substance
- Edema of the airway such as burns or anaphylaxis

Cautions

- Morbid Obesity (LMA – Increased risk of aspiration, increased difficulty ventilating)
- Obstructive and reactive airway disease (LMA - airway pressures needed may exceed mask/cuff pressure)
- Pregnancy > 14 weeks (LMA - increased risk of aspiration)
- If airway problems persist or ventilation is inadequate, the SGA should be removed and an airway established by some other means

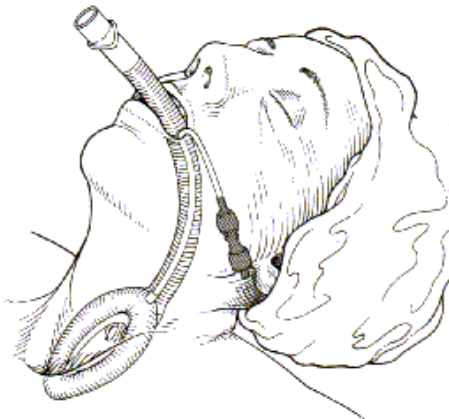
III. Procedure**LMA Supreme****Procedure**

- Place patient in supine position if possible.
- Pre-oxygenate patient to attain SpO₂ of > 94% if possible.
- Chose the correct size
 - NOTE: The LMA is selected based on Patient size (weight) not Height)

LMA Size	Patient estimated or actual Size	Maximum Cuff volume*	Maximum OG size
1	Neonates/Infants up to 5 kg (11 pounds)	5 ml	6 fr.
1.5	Infants 5- 10 kg (11-22 pounds)	8 ml	6 fr.
2	Infants 10-20 KG (22-44 pounds)	12 ml	10 fr.
2.5	Children 20-30 KG (44-66 pounds)	20 ml	10 fr.
3	Children 30-50 KG (66-110 pounds)	30 ml	14 fr.
4	Adults 50-70 kg (110-154 pounds)	45 ml	14 fr.
5	Adults 70-100 kg (154-220 pounds)	45 ml	14 fr.

*These are maximum volumes that should never be exceeded. It is recommended that the cuff be inflated no more than a maximum of 60 cm H₂O intracuff pressure if known .

- Chose an appropriate size LMA.
 - For normal adults, use the size 4 device as a first choice.
 - an approximate estimate of suitable sizing can be made by holding each device against the side of the patient's face in the position corresponding to that shown below.



- Inspect the cuff for damage or tears.
- Check the cuff for proper inflation/deflation. *Deflate* the cuff completely using at least 50 cc of aspiration and watch for re-inflation (indicates there is a leak)
- Apply a water based lubricant to the DORSAL/POSTERIOR aspect of the LMA, including the shaft.
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- Insert the LMA into the hypopharynx until resistance is met.



- Connect the LMA to the desired ventilation device /method and ventilate the patient.
- Use as many as possible of the following confirmation techniques:
 - Misting in the tube
 - Quantitative and Qualitative end tidal CO₂ (EtCO₂)
 - Maintain at 35-45 mmHg
 - Monitor Waveform
 - Auscultation of gastric region *and* bilateral chest
 - Equal chest rise with assisted ventilations
 - No Epigastric sounds
 - Recovery/maintenance of SpO₂
- Record depth markings
- Secure
- Place c-collar
- Reassess frequently

KING LTS-D

Procedure:

- Place patient in supine position if possible.
- Pre-oxygenate patient to attain SpO₂ of > 94% if possible.
- Choose the correct KING LTS-D size, based on patient's height:
 - **Size 3** = 4-5 feet in height
 - **Size 4** = 5-6 feet in height
 - **Size 5** = greater than 6 ft in height

SUPRAGLOTTIC AIRWAY PROCEDURES

- Test cuff inflation system.
 - 60-90 ml air based on device size
 - If no leaks are detected, deflate the cuffs being certain to remove all air
- Apply a water based lubricant to the beveled distal tip
- Position the head; ideal position is the sniffing or neutral head angle
- Hold the KING LTS-D at the connector with dominant hand, hold the mouth open and apply the jaw lift technique
- Rotate the KING LTS-D laterally 45-90° (clockwise) such that the blue orientation line is touching the corner of the mouth and then introduce the tip into the mouth and advance behind the tongue, **never force the tube**
- As the tube passes under the tongue, rotate tube 45-90° (counter-clockwise) back to midline such that the blue orientation line will now be facing the chin
- Advance the KING LTS-D until the proximal opening of the gastric access lumen is aligned with the teeth or gums
- Inflate the KING LTS-D cuffs with minimum volume
 - **Size 3:** 45-60 ml
 - **Size 4:** 60-80 ml
 - **Size 5:** 70-90 ml
- Attach the BVM and assess for proof of placement
- Use as many as possible of the following confirmation techniques:
 - Misting in the tube
 - Quantitative and Qualitative end tidal CO₂ (EtCO₂)
 - Maintain at 35-45 mmHg
 - Monitor Waveform
 - Auscultation of gastric region *and* bilateral chest
 - Equal chest rise with assisted ventilations
 - No Epigastriic sounds
 - Recovery/maintenance of SpO₂
- Record depth markings
- Secure
- Place c-collar