SUBJECT: 600.03
AIRWAY MANAGEMENT:
SUPRAGLOTTIC AIRWAY DEVICES

ORIGINAL ISSUE: 5/08
LATEST REVISION: 2/15

King LTS-D Airway
The King LTS-D airway is a sterile, single-use device intended for airway management. It is 100% latex free. It consists of a curved tube with ventilation apertures located between two inflatable cuffs. Both cuffs are inflated using a single valve/pilot balloon. The distal cuff is designed to seal the esophagus, while the proximal cuff us intended to seal the oropharnyx.

Indications:
Airway management in patients over 4 feet in height.

Contraindications:
- Responsive patients with an intact gag reflex
- Patients with known esophageal disease
- Patients who have ingested caustic substances

Warnings:
- This device does not protect the airway from the effects of regurgitation and aspiration.
- High airway pressures may divert gas either to the stomach or to the atmosphere.
- Intubation of the trachea cannot be ruled out as a potential complication. After placement perform standard checks for breath sounds and utilize an appropriate carbon dioxide monitor.
- Lubricate only the posterior surface of the Kind LTS-D to avoid blockage of the aperture or aspiration of the lubricant.

Procedure:
1. Using the sizing information below, choose the correct King LTS-D size, based on the patient height.
   - **Size 3** 4-5 feet in height Inflation volume of 45-60mL
   - **Size 4** 5-6 feet in height Inflation volume of 60-80mL
   - **Size 5** gretater than 6 feet Inflation volume of 70-90mL
2. Test the cuff and inflation system using the inflation volumes as above. Remove all air from both cuffs prior to insertion.
3. Apply lubricant to the beveled distal tip and posterior aspect of the tube, taking care to avoid introduction of lubricant in or near the ventilatory openings.
4. Pre-Oxygenate if possible.
5. Position the head in the “sniffing position” if possible. If trauma related, keep head in the neutral position.

6. With the device in your dominant hand, use other hand to open mouth. Rotate the device 45-90° so that the blue orientation line is touching the corner of the mouth. Introduce the tip into the mouth and advance behind the base of the tongue.

7. As tube tip passes under the tongue, rotate it back to midline (blue orientation line faces chin).
8. Without exerting any excessive force, advance the tube until the base of the connector is aligned with teeth or gums.
9. Using the syringe provided, inflate the cuffs with the appropriate volume, as above.
10. Attach BVM and assess ventilation of patient, while withdrawing the King LTS-D until ventilation is easy and free flowing.
11. Confirm proper position by auscultation, chest movement, and CO_2 monitor. $ETCO_2$ and waveform capnography should be monitored and recoded/uploaded into the ePCR.
12. Readjust cuff inflation to just seal volume.
13. Secure the device to patient using tape or other accepted means. A bite block can be used if desired.

Removal of King LTS-D

- Once it is in the correct position, the King LTS-D is well tolerated until the return of protective reflexes.
- Removal should always be carried out in an area where suction equipment and the ability for rapid intubations are present.
- For King LTS-D removal, be sure to completely deflate both cuffs. It may require more than one filling of the syringe to completely evacuate the cuffs.

Of Note:

- Experience has indicated that a lateral approach in conjunction with the chin lift, facilitates placement of this device. Alternatively, a laryngoscope or tongue depressor can be used to lift the tongue anteriorly to allow easy advancement of the device into position.
- Insertion can also be accomplished via a midline approach by applying a chin lift and sliding the distal tip along the palate and into position in the hypopharynx. In this instance, head extension may also be helpful.
- Once the device is advanced around the corner in the posterior pharynx, it is important that the tip of the device is maintained at midline. Keeping this position assures that the distal tip is properly placed in the hypopharynx/upper esophagus.
- It is best to place the King LTS-D deeper (base of the connector is aligned with teeth or gums), inflating the cuffs and withdrawing until ventilation is optimized. With a deeper insertion, only withdrawal of the tube is required to realize a patent airway. A shallow insertion will require deflation of the cuffs to advance the tube farther.
- Ensure that the cuffs are not over inflated.
- When the patient is allowed to breathe spontaneously, airway obstruction can occur even though no obstruction was detected during assisted or positive pressure ventilation. During spontaneous ventilation, the epiglottis or other tissue can be drawn into the distal ventilatory opening, resulting in obstruction. Advancing the Kind LTS-D
  1-2 cm or initial deeper placement normally eliminates this obstruction.
- Removal of the King LTS-D is well tolerated until the return of protective reflexes. For later removal, it may be helpful to remove some of the air from the cuffs to reduce the stimulus during wake up.

I-Gel (LMA) Supraglottic Airway

Indication:

Apneic patient without a gag reflex who weighs at least 50 Kg

Contraindications:

- Responsive patients with an intact gag reflex
- Patients with known esophageal disease
- Patients who have ingested caustic substances

Warnings:

- This device does not protect the airway from the effects of regurgitation and aspiration.
- High airway pressures may divert gas either to the stomach or to the atmosphere.
- Improper placement may occur. After placement perform standard checks for breath sounds and utilize an appropriate carbon dioxide monitor.

Procedure:

- Determine which size I-Gel will be used.
  - Size 4: patients 50-90 Kg
  - Size 5: patients greater than 90 Kg
- Open the I-Gel package, and on a flat surface take out the protective cradle containing the device.
- Remove the I-Gel and transfer it to the palm of the same hand that is holding the protective cradle, supporting the device between the thumb and index finger. Place a small bolus of a water-based lubricant, such as K-Y Jelly, onto the middle of the smooth surface of the cradle in preparation for lubrication. Do not use silicone based lubricants.
- Grasp the I-Gel with the opposite (free) hand along the integral bite block and lubricate the back, sides and front of the cuff with a thin layer of lubricant. This process may be repeated if lubrication is not adequate, but after lubrication has been completed, check that no bolus of lubricant

remains in the bowl of the cuff or elsewhere on the device. Avoid touching the cuff of the device with your hands.

- Grasp the lubricated I-Gel firmly along the integral bite block. Position the device so that the I-Gel cuff outlet is facing towards the chin of the patient.
- The patient should be in the 'sniffing' position. The chin should be gently pressed down before proceeding to insert the I-Gel.
- Introduce the leading soft tip into the mouth of the patient in a direction towards the hard palate. Glide the device downwards and backwards along the hard palate with a continuous but gentle push until a definitive resistance is felt. At this point the tip of the airway should be located into the upper esophageal opening and the cuff should be located against the laryngeal framework. The incisors should be resting on the integral bite-block.
- Ventilate the patient and monitor for adequate chest rise and monitor the position of the device throughout transport.

STANDARD PRECAUTIONS MUST BE OBSERVED.