

► Esophageal Airway (King LTS-D)

The Esophageal Airway, or King LTS-D, is a single-use device intended for airway management. It can be used as a rescue airway device when other airway management techniques have failed, or as a primary device when advanced airway management is required in order to provide adequate ventilation. The esophageal airway does not require direct visualization of the airway or significant manipulation of the neck.

Its main use is in cardiac arrest situations (pulseless and apneic patients). In some patients it may be preferable to use initially (e.g. patients who are obese or with short necks, patients with limited neck mobility, difficult visualization due to access to the patient, or blood or emesis in the airway). It is not necessary to attempt endotracheal intubation before opting for the esophageal airway.

Because it is not tolerated well in patients with airway reflexes, it should not be used in patients with perfusing pulses unless all other methods of ventilation have failed.

Two intubation attempts with the esophageal airway are permissible. Ventilations should be interrupted no more than 30 seconds per attempt. Between attempts, patients should be ventilated with 100% oxygen for one minute via bag-valve mask device.

The King LTS-D is available in three sizes and cuff inflation varies by model:

- Size 3 – Patient between 4 and 5 feet tall (55 ml air)
- Size 4 – Patient between 5 and 6 feet tall (70 ml air)
- Size 5 – Patient over 6 feet tall (80 ml air)

» **Indications**

- Cardiac arrest (of any cause)
- Inability to ventilate non-arrest patient (with BLS airway maneuvers) in a setting in which endotracheal intubation is not successful or unable to be done

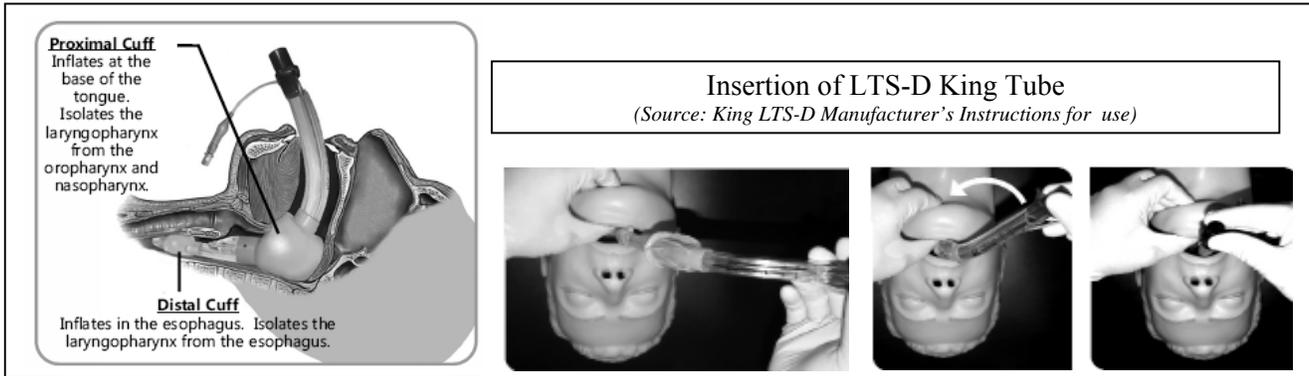
» **Contraindications**

- Presence of gag reflex
- Caustic ingestion
- Known esophageal disease (e.g. cancer, varices, stricture, others)
- Laryngectomy with stoma (can place ET tube in stoma)
- Height less than 4 feet

Note: Airway deformity due to prior surgery or trauma may limit the ability to adequately ventilate with this device (may not get adequate seal from pharyngeal cuff)

» **Equipment**

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|------------------------------------|----------------------------------|
| ✓ Suction | ✓ Stethoscope |
| ✓ King LTS-D Kit (Size 3, 4, or 5) | ✓ End-tidal CO2 detection device |
| ✓ Bag-Valve-Mask | |



» Procedure

- 1) Assure an adequate BLS airway (if possible).
- 2) Select appropriately sized esophageal airway.
- 3) Test cuff inflation by injecting recommended amount of air for tube size into the cuffs. Remove all air from cuffs prior to insertion.
- 4) Apply water-based lubricant to the beveled distal tip and posterior aspect of tube, taking care to avoid introduction of lubricant in or near ventilatory openings.
- 5) Have a spare esophageal airway available for immediate use.
- 6) Oxygenate with 100% oxygen.
- 7) Position the head. The ideal head position for insertion is the “sniffing position.” A neutral position can also be used (e.g. spinal injury concerns).
- 8) Hold mouth open and apply chin lift unless contraindicated by cervical spine injury or patient position.
- 9) With tube rotated laterally 45-90 degrees such that the blue orientation stripe is touching the corner of the mouth, introduce tip into mouth and advance behind base of tongue. **Never force the tube into position.**
- 10) As the tube tip passes under tongue, rotate tube back to midline (blue orientation stripe faces chin).
- 11) Without exerting excessive force, advance tube until base of connector aligns with teeth or gums.
- 12) Inflate cuff to required volume.
- 13) Attach bag-valve to airway. While gently bagging the patient to assess ventilation, simultaneously withdraw the airway until ventilation is easy and free flowing.
- 14) Confirm proper position by auscultation, chest movement, and verification of CO₂ by capnography. Do not use esophageal detector device with esophageal airway.
- 15) Secure the tube. Note depth marking on tube.
- 16) Continue to monitor the patient for proper tube placement throughout prehospital treatment and transport. **Capnography should be done in all cases.**
- 17) Document airway placement and results of monitoring throughout treatment and transport.

Troubleshooting:

- If placement is unsuccessful, remove tube, ventilate with BVM and repeat sequence of steps.
- If unsuccessful on second attempt, BLS airway management should be resumed.

Additional Information:

- The key to insertion is to get the distal tip of the airway around the corner in the posterior pharynx, under the base of the tongue. It is important that the tip of the device is maintained at the midline. If the tip is placed or deflected laterally, it may enter the piriform fossa and cause the tube to appear to “bounce back” upon full insertion and release.