

39th Annual Sports Medicine Symposium

Airway Adjuncts

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Disclosures

- No Conflicts or Financial Disclosures

Goals & Objectives

- Develop proficiency in the correct techniques for the insertion and placement of noninvasive airway adjuncts, such as oropharyngeal airways (OPA), nasopharyngeal airways (NPA) and supraglottic airways.
- Demonstrate the ability to safely and effectively secure these devices to maintain a patent airway in various clinical scenarios
- Gain a comprehensive understanding of the indications for using noninvasive airway adjuncts in different patient populations and clinical situations
- Identify contraindications and scenarios where the use of specific adjuncts may be inappropriate or pose potential risks.

At the end of this session/activity, the participant/attendee will be able to:

- Demonstrate mastery of noninvasive airway adjunct techniques.
- Describe indications and contraindications.
- Integrate noninvasive airway adjunct into emergency airway management.

BASIC AIRWAY MANEUVERS

Modified Jaw-Thrust, Head-Tilt/Chin Lift

BASIC MECHANICAL AIRWAYS

Oropharyngeal Airway

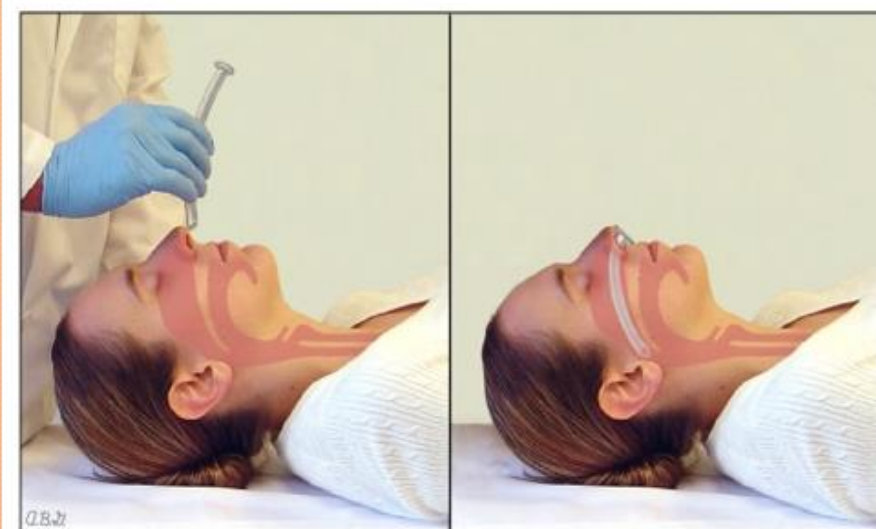
Nasopharyngeal Airway

Extraglottic Airways

King LT, LMA,
I-gel

NPA's & OPA's

Nasopharyngeal airway insertion



The nasopharyngeal airway (NPA) should be coated with water-soluble lubricant or anesthetic jelly. The device is then inserted along the floor of the naris into the posterior pharynx behind the tongue. Clinicians should note that the floor of the naris inclines in a caudad orientation approximately 15 degrees. The tube can be rotated slightly if resistance is encountered.

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- Goal:
 - Create a patent airway by preventing the tongue from occluding the airway
- Indications:
 - Unresponsive Patients
- Insertion/placement
 - Measurement / appropriate technique
- Contraindications
 - Intact airway reflexes

Oropharyngeal airway insertion



When inserting an oropharyngeal airway (OPA), the clinician must avoid pushing the tongue into the posterior pharynx. This can be accomplished by starting with the curve of the OPA inverted (ie, directed cephalad) and then rotating it 180 degrees as its tip reaches the posterior pharynx.

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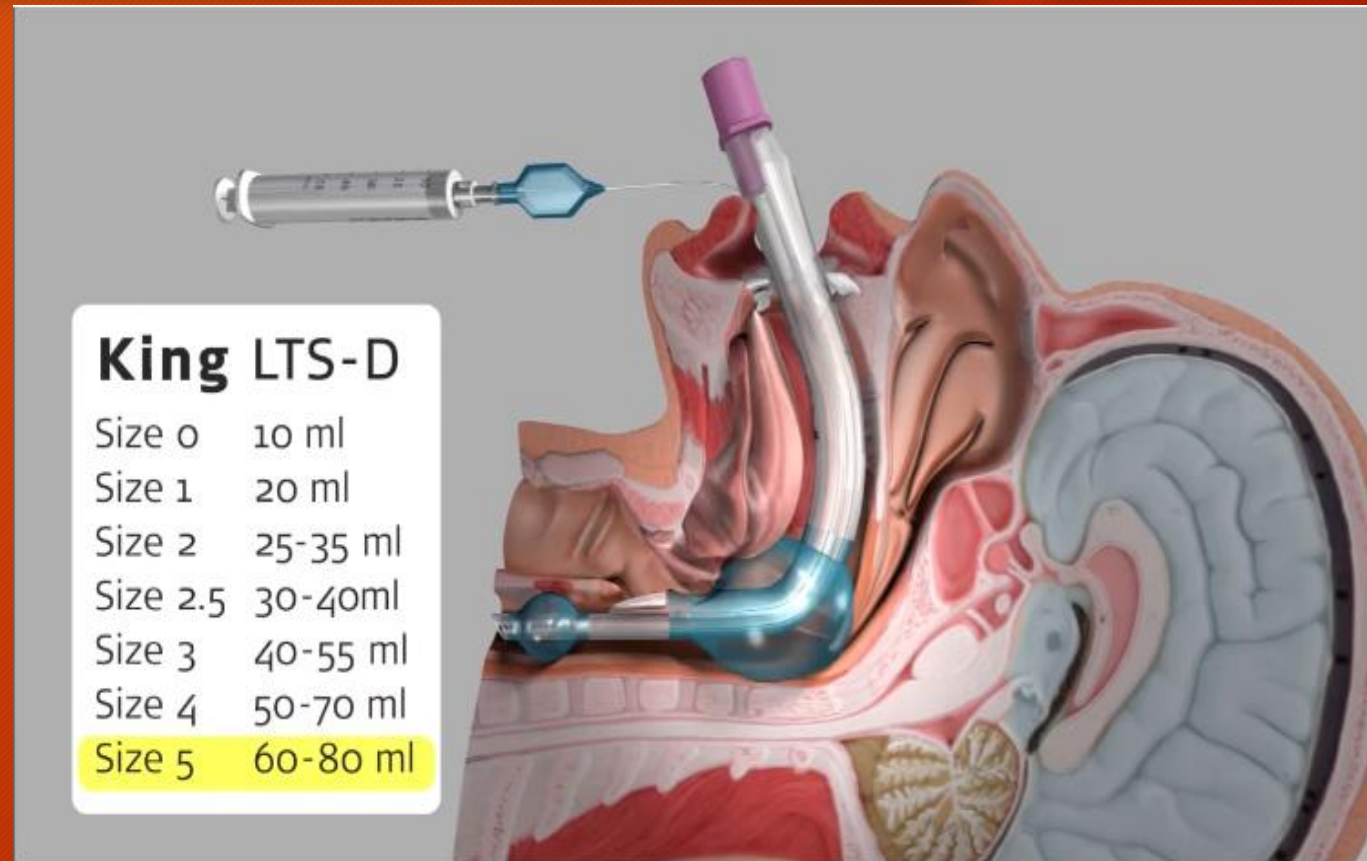
Supraglottic / Retroglottic Airways

- Goals: Maintaining a patent airway while reducing the risk of gastric insufflation and aspiration
- Indications: Unresponsive patient
- Insertion/placement:
 - Blind insertion technique
 - Isolates glottic opening for ventilation
- Contraindications¹
 - Intact Airway Reflexes
 - Caustic ingestion
 - Esophageal varices
 - Foreign body obstruction
- Complications⁴
 - Airway trauma (edema)(bleeding)
 - Air leak(hypoventilation)
 - Varying aspiration protection



Retroglottic Airway - King LT

- Pharyngeal cuff and an esophageal cuff with an airway port in between
- One lumen and one inflation valve to inflate both cuffs
- Placement:
 - Test bulbs and lubricate
 - Sniffing position
 - Insert 90 degrees to the mouth opening until the device is behind the tongue and rotate midline
 - Line up the 15mm connector with gums
 - Inflate the cuff's
 - Begin ventilation while withdrawing the device until there is clear chest rise.
 - Secure the device

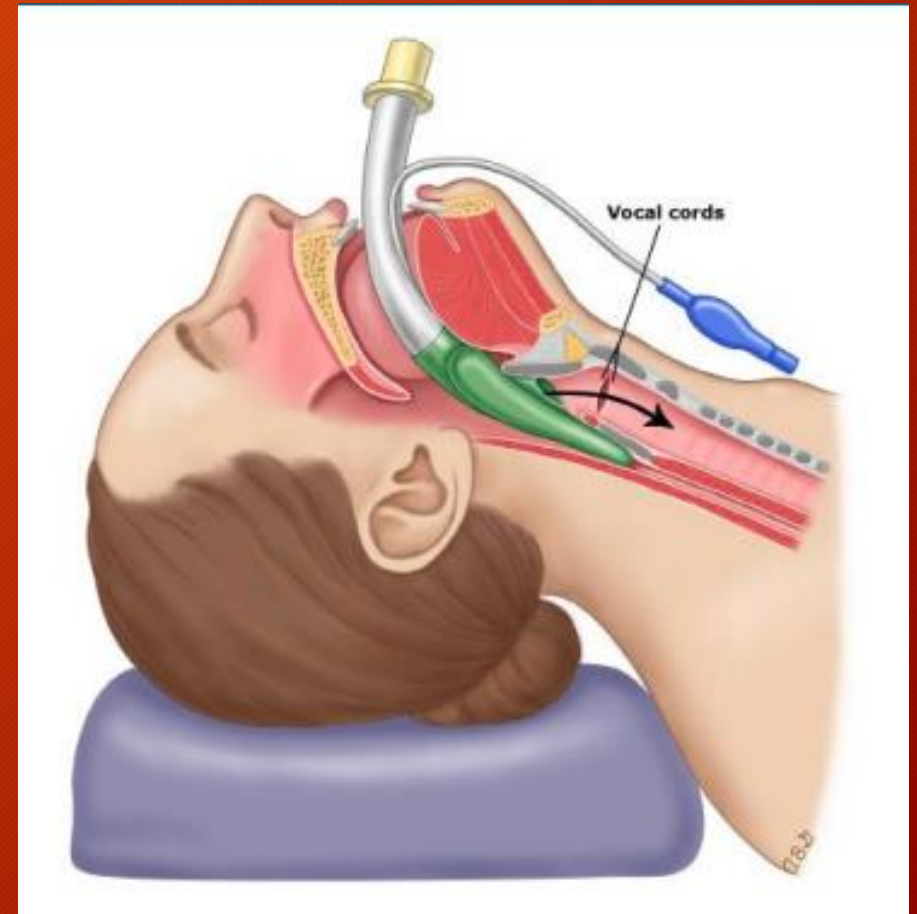


Supraglottic Airways - LMA

- One inflatable distal cuff⁶
 - The proximal portion of the cuff covers the glottis. The distal portion of the cuff rests at the esophagus.
 - One oxygen outlet covers the tracheal opening.

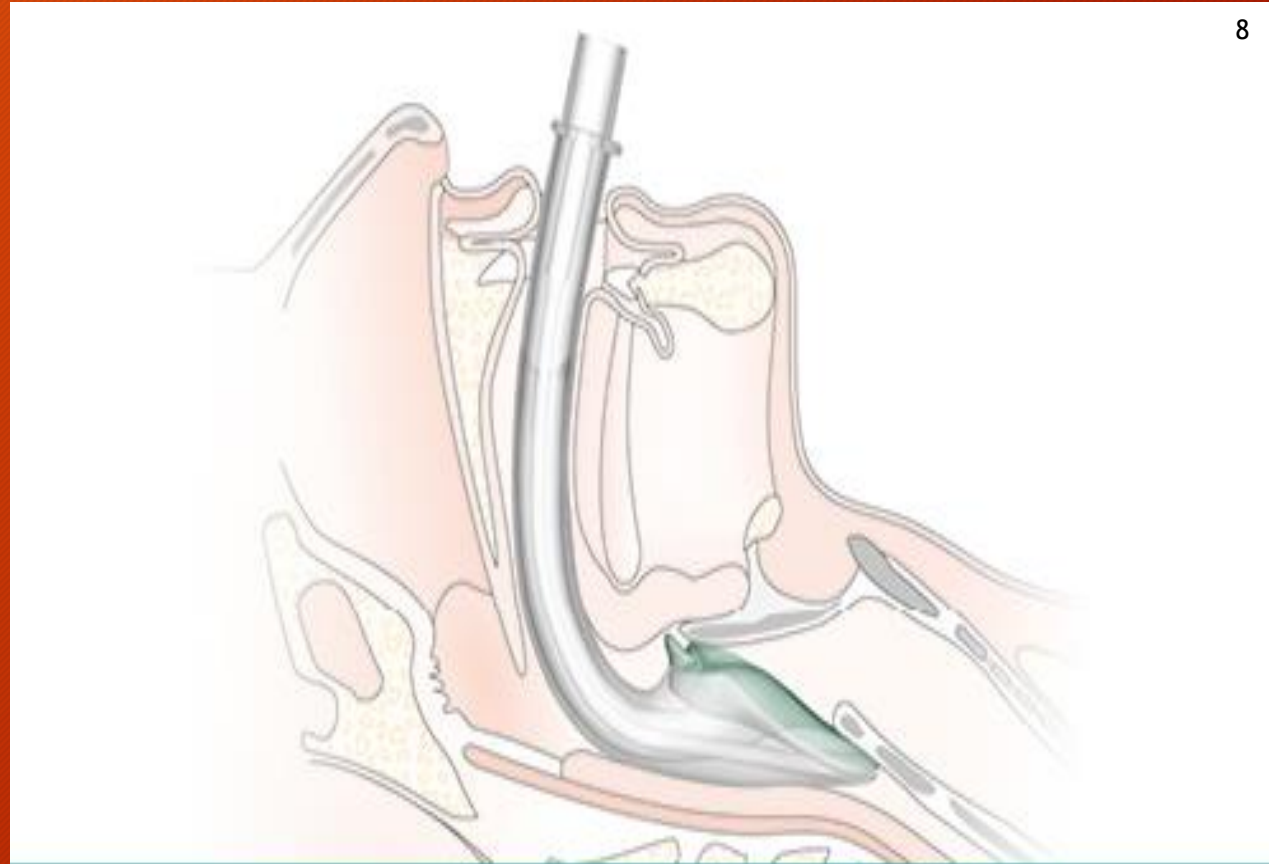
Placement²

- Test Bulb / lubricate
- Sniffing position
- Enter midline / pressing the cuff against the hard palate
- Once definitive resistance is met inflate the cuff to manufacturer recommendations to obtain optimal seal
- Secure the device



Supraglottic Airways - I-gel

- Alternative type of LMA that uses a non inflatable ‘gel-like’ cuff.
- “Second generation” LMA
- Includes a bite block and gastric ventilation⁵
- Placement:
 - Lubricate
 - Sniffing Position
 - Guide the leading soft tip against the hard palate
 - Apply Downwards and backwards pressure until definitive resistance is met
 - Secure device



Resources

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- 3) Wittles, K. A. (2022, January 21). *Basic Airway Management in Adults*. UpToDate. https://www.uptodate.com/contents/basic-airway-management-in-adults?search=nasopharyngeal%20airway&ionRank=1&usage_type=default&anchor=H11&source=machineLearning&selectedTitle=1-53&display_rank=1#H11
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- 5) Anaesth, S. A. (2019, September 13). *Does prewarming of i-Gel improve insertion and ventilation in anaesthetised and paralysed patients? a prospective, randomised control trial*. PubMed Central. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6625302/#ref8>
- 6) Bosson, N., MD. (2021, October 12). *Laryngeal Mask Airway: Overview, indications, contraindications*. <https://emedicine.medscape.com/article/82527-overview>
- 7) *King LTS-D - Insertion*. (2019, June 10). Ambu-external. <https://video.ambu.com/king-lts-d-insertion>
- 8) *i-gel® supraglottic airways*. (n.d.). <https://www.intersurgical.com/info/igel>
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- 10) *Intersurgical Supraglottic Airway I-GEL® Gray / Clear Small Pediatric - M-1048433-1215 - Case of 10*. (n.d.). Axiom Medical Supplies. https://axiommedical.com/products/intersurgical-supraglottic-airway-i-gel-r-gray-clear-small-pediatric-m-1048433-1215-case-of-10?variant=40040481259709&gad_source=1&gclid=CjwKCAiA8sauBhB3EiwAruTRJmOL5NTNrRTOeYf8RljHvkGsTUaDuqg_CjGDT0WZFv4GE59CTHguxxoCeakQAvD_BwE