



**You Should Never Use an SGA for Longer Than 2 Hours: CON**



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**Disclosures:**


- Consultant for AMBU

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**You should not use a SGA for more than two hours??**




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**No supraglottic airway manufacturer recommends limiting use to two hours in product data sheets**

- LMA North America/Teleflex- no comments
- AMBU- no comments
- Solus- no comments
- Air-Q- no comments
- I-Gel-use for procedures lasting less than four hours



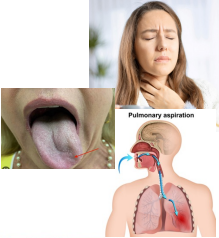
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**Potential concerns with case duration greater than 2 hours**

- Sore throat
- Cranial nerve neuropraxia
- Regurgitation and aspiration



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**Sore throat affects up to 49% of patients after SGA use**

Incidence affected by:

- Type of SGA +/-
- Ease of insertion/technique
- Post-insertion management
- Younger age
- History of chronic pharyngitis
- Duration of surgery



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## Minimizing risk of sore throat...

- Avoid endotracheal intubation!
- No clear “winner” between various SGA devices
- Use appropriately sized SGA
- Monitor cuff pressure regularly, especially if using N2O-should not exceed 60 cm H2O

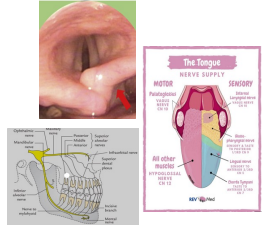


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## Cranial Nerve Neuropraxias

- Documented case reports of various cranial n injuries
- 2015 Thiruvankatarajan et al. published a comprehensive review of literature case reports:
  - Lingual n=22
  - Recurrent laryngeal n=17 (arytenoid dislocation)
  - Hypoglossal n=11
  - Glossopharyngeal n=3
  - Infraorbital (branch of maxillary) n=1
  - Inferior alveolar (branch of mandibular) n=2



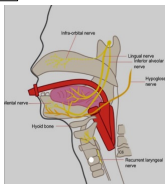
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## Cranial nerve injuries with supraglottic airway devices: a systematic review of published case reports and series

V. Thiruvankatarajan,<sup>1,2</sup> R. M. Van Wijk<sup>3,4</sup> and A. Rajbhoj<sup>1,2</sup>

- Incidence of neuropraxia after supraglottic airway use unknown; also occurs with ETTs
- Duration of surgery did not predict development of nerve injuries
- Authors recommendations:
  - Select LMA size based on multiple factors, not just weight
  - Measure cuff pressure to ensure <60 cm H2O



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## Aspiration Risk with Supraglottic Airways

- Incidence of aspiration associated with LMA
  - Meta-analysis of 547 publications, 1993
  - Incidence of 2.3:10,000 patients having elective surgery, similar to risk with ETT (1.7-2:10,000)
  - Another large series in unconventional use 1996 0.84:10,000 incidence aspiration
- Risk of pulmonary aspiration with LMA and ETT using PPV

	ETT	LMA	Statistical Index
Incidence of aspiration	1.7-2.0	2.3	NS
Incidence of pulmonary aspiration	0.84	0.84	NS

The incidence of aspiration associated with the laryngeal mask airway: a meta-analysis of published literature  
[Chinnappa S, Libby](#)

Survey of laryngeal mask airway usage in 11,910 patients: safety and efficacy for conventional and nonconventional usage  
[Lynch J, Hildebrandt](#)

Risk of pulmonary aspiration with laryngeal mask airway and tracheal tube during positive pressure ventilation  
[Lynch J](#)


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## ASA Closed Claims Database

- Closed claims analysis of pulmonary aspiration
  - 5% of all claims between 2000-2014
  - 105 cases of regurgitation and aspiration, 92 of them with GA; only 14 (15%) of the 92 involved SGA
  - Majority (61%) of the patients who aspirated had either gastrointestinal obstruction or acute intra-abdominal processes
  - 60% happened at the time of induction

Pulmonary Aspiration of Gastric Contents: A Closed Claims Analysis  
 Mark A Warner, Karen L Meyerhoff, Mary E Warner, Karen L Rosen, Linda Stephens, Karen E Dworkin




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## Risk comparison with failed airway

- Inability to adequately manage airway is responsible for 30% of anesthetic-related deaths
- Between 2006-2011, in almost a million patient encounters the rate of difficult and failed intubation 1.6:1000 and 0.6:10,000
- Ten-fold greater risk of difficult intubation than is the risk of aspiration

Temporal Trends in Difficult and Failed Tracheal Intubation in a Regional Community Anesthetic Practice  
 Rebecca Schroeder MD, Robert Pofford MD, John Chiu MD, Tracy Carter MD, Steven Aronow MD, Katherine O'Brien MD, William Barrow MD, Melissa Rank MD, Ph.D., Joseph P. Mathew MD, Mark Pogorelec MD, Chiu, Ph.D.



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## Second-generation SGAs


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British Journal of Anaesthesia 125 (5): 973-975 (2021)  
Advance Access published 28 May 2021 | doi:10.1093/bja/abz116

**Time to abandon the 'vintage' laryngeal mask airway devices and adopt second-generation supraglottic airway devices as first choice**

T. M. Cook and F. E. Kelly  
Anaesthetics and Intensive Care Medicine, Royal United Hospital, Cranfield Park, Bath BA1 3SQ, UK

- Have separate gastric emptying port
- In cadavers, they withstand higher esophageal pressures before "leaking"
- Some experts have called for preferential use of second-generation SGAs
- No definitive studies that document improved safety, and unlikely to be performed due to high number of patients required




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## Benefits of Supraglottic Airways

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- Lower risk of sore throat than ETT
- Equivalent risk of aspiration
- Decreased likelihood of re-intubation post-operatively
- Decreased incidence of laryngospasm and coughing
- Improved hemodynamic stability




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## No evidence for arbitrary time restrictions on SGA use!

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