LMA™
Better by Design

LMA Supreme™ Second Seal™

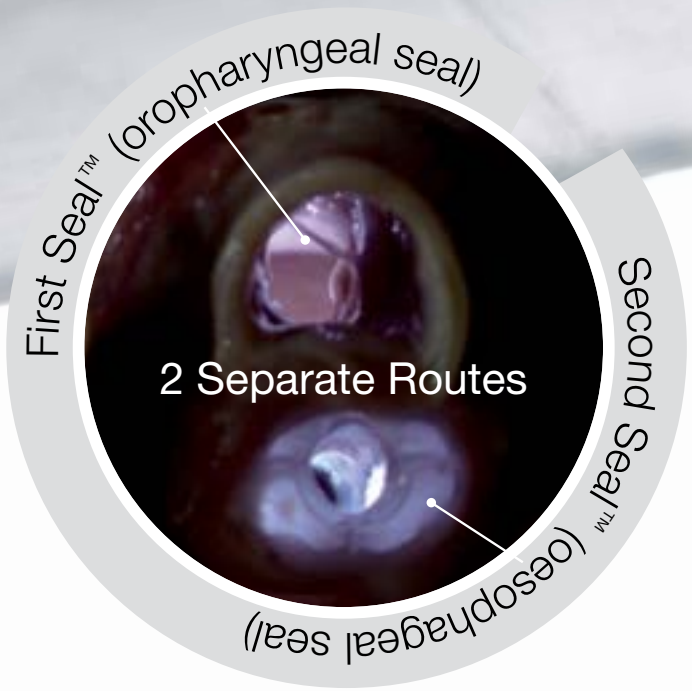
Maintain the airway. Manage gastric contents.
Meet NAP4 recommendations.

Teleflex

A proven double seal

The importance of the Second Seal™ (oesophageal seal) is significant: it can minimise gastric insufflation and reduce the risk of aspiration[1,2]. Nevertheless, most research focuses on the First Seal™ (oropharyngeal seal) at the glottic inlet.

LMA Supreme™ is a second generation, gastric access airway with an effective First Seal™ and Second Seal™. The Second Seal™ can be easily established and verified, elevating safety and delivering a new standard of care for both routine and more advanced procedures.



First Seal™

LMA Supreme™ delivers measured oropharyngeal leak pressures up to 37 cm H_2O.[3]

The First Seal™ is important for:

- Ventilation performance
- Advanced uses of the device such as in patients with decreased thoracic compliance, in mild-to-moderately obese patients, and in certain procedures requiring mechanical ventilation where higher seal pressures are required

Second Seal™

LMA Supreme™ enables passive drainage or active management of digestive tract contents independent of ventilation.[1]

The Second Seal™ is designed to:

- Improve safety vs a first generation device
- Secure the distal tip of the LMA Supreme™ at the upper oesophageal sphincter to maintain the patency of the drain tube
- Reduce the risk of insufflation during ventilation
- Reduce the risk of regurgitated gastric content leaking around the tip of the mask

Scan the QR code or visit **www.youtube.com/LaryngealMaskAirway** to find out more:

Second generation SADs come highly recommended

Second generation devices, such as LMA Supreme™, come highly recommended in the recently published NAP4 audit[4] conducted by the Royal College of Anaesthetists and the Difficult Airway Society, UK.

Recommendations:

If tracheal intubation is not considered to be indicated but there is some (small) increased concern about regurgitation risk, a second generation supraglottic airway is a more logical choice than a first generation one.

In patients considered to be at low-risk of aspiration who have other factors that mean that use of a SAD is at the limits of normality (e.g. patient position, access to the airway, patient size) consideration should be given to use of a second generation SAD.

In view of the above recommendations, and the frequency of these circumstances, it is recommended that all hospitals have second generation SADs available for both routine use and rescue airway management.

"The combination of improved sealing and the presence of a drain tube improves efficacy and creates functional separation of the gastrointestinal tract from the respiratory tract (like an artificial larynx). This is likely to improve safety (though this is very hard to prove) and several recent publications have suggested use of supraglottic airway devices (SADs) with effective drain tubes should become a 'standard of care'."

NAP4 report, 2011

SAD = supraglottic airway devices

For routine use with the added benefit of gastric access

LMA Supreme™ can be used in any procedure where you would usually use a laryngeal mask airway and in situations where endotracheal intubation is precluded.*

LMA Supreme™

When compared with first generation devices, LMA Supreme™ delivers additional benefits in routine procedures:

High First Seal™ pressures[3]

up to **37 cm H_2O**

Effective gastric access that:

- Enables passive and active removal of gastric content[1]
- Is designed to reduce gastric insufflation during ventilation[1]
- Offers the potential to reduce the risk of aspiration in both adult and paediatric patients[2,6]

> "We conclude that the LMA Supreme™ may be a useful alternative to the LMA Unique™ in children, with its higher airway leak pressures, lower incidence of gastric insufflation, and easy gastric access.
>
> The overall clinical performance of both devices was similar, but clinicians may find the LMA Supreme™ advantageous when the evacuation of gastric contents is required during anaesthesia."
>
> Jagannathan N. et al., 2012

The LMA Evolution Curve™ facilitates rapid insertion

5 sec Insertion times as low as 5 seconds from picking up the device to connection to the anaesthetic circuit.[5]

97% First time insertion success.[5]

100% Overall insertion success.[5]

*Due to lack of available expertise or equipment, or when attempts at tracheal intubation have failed.

A viable option in more advanced procedures

Laparoscopic cholecystectomy (n=100)[7]

"In conclusion, the LMA Supreme™ is an effective ventilation device for laparoscopic cholecystectomy. This device supports airway pressures greater than those reached during the surgery and provides very low morbidity in the postoperative period."

Beleña J.M. et al., 2011

- 91% first time insertion success
- 100% overall insertion success
- 100% gastric tube insertion success
- Median (range) stomach size on insertion of the laparoscope and change in stomach size during surgery did not interfere with the procedure in any patient
- No episodes of laryngeal stridor, laryngospasm, bronchospasm, hypoxia, cough, regurgitation or aspiration (12 patients experienced mild sore throat)

Retropubic radical prostatectomy (n=100)[8]

"With respect to postoperative pulse oximetry and lung function tests, the LMA Supreme™ seems to be advantageous versus ET. The use of LMA Supreme™ appears to be a safe and valuable alternative to ET for this type of surgery."

Roiss M. et al., 2011

- > 3 hours length of procedure
- 0 cases of aspiration
- Significantly fewer events of intraoperative coughing and coughing or choking during extubation: LMA Supreme™ vs ETT
- Peripheral oxygen saturation was significantly higher with LMA Supreme™ at 1 hour at PACU and at 24 hours after surgery vs an ETT

Prone position (n=205)[9]

"In conclusion, our findings suggest that the LMA Supreme™ is a useful alternative to tracheal intubation for surgery in fasted patients in the prone position, as it is easily inserted in the anaesthetized patient in the prone position and could be easily re-inserted in the prone position."

Sharma V. et al., 2010

- 90% first time and 100% overall insertion success
- Minor airway problems rectified in prone position
- 199 patients successfully managed with PPV
- No increase in the incidence of problems in obese patients
- Regurgitation of gastric content via the drain tube in 4/205 patients with no evidence of aspiration
- Successful in procedures of up to five hours in duration

Gynaecological laparoscopy (n=138)[10]

"We demonstrated that choosing an LMA Supreme™ was an efficient pharyngolaryngeal morbidity sparing strategy. Moreover, we showed that the LMA Supreme™ and the ETT were equally effective airways for a routine gynecological laparoscopy procedure."

Abdi W. et al., 2010

- LMA Supreme™ is equally as effective as the ETT in gynaecological laparoscopy but results in significantly lower post-operative pharyngolaryngeal morbidity
- Significantly lower hoarseness of voice, dysphagia and sore throat during ward evaluation prior to discharge (LMA Supreme™ vs ETT, $p<0.05$)

Now available for paediatric procedures

"Neonatal LMA Supreme™ is superior to LMA ProSeal™ in terms of time to establish effective ventilation; furthermore, maximal inflation pressure and quality perceived by the operator are higher with neonatal LMA Supreme™ than with LMA Classic™ and LMA ProSeal™."

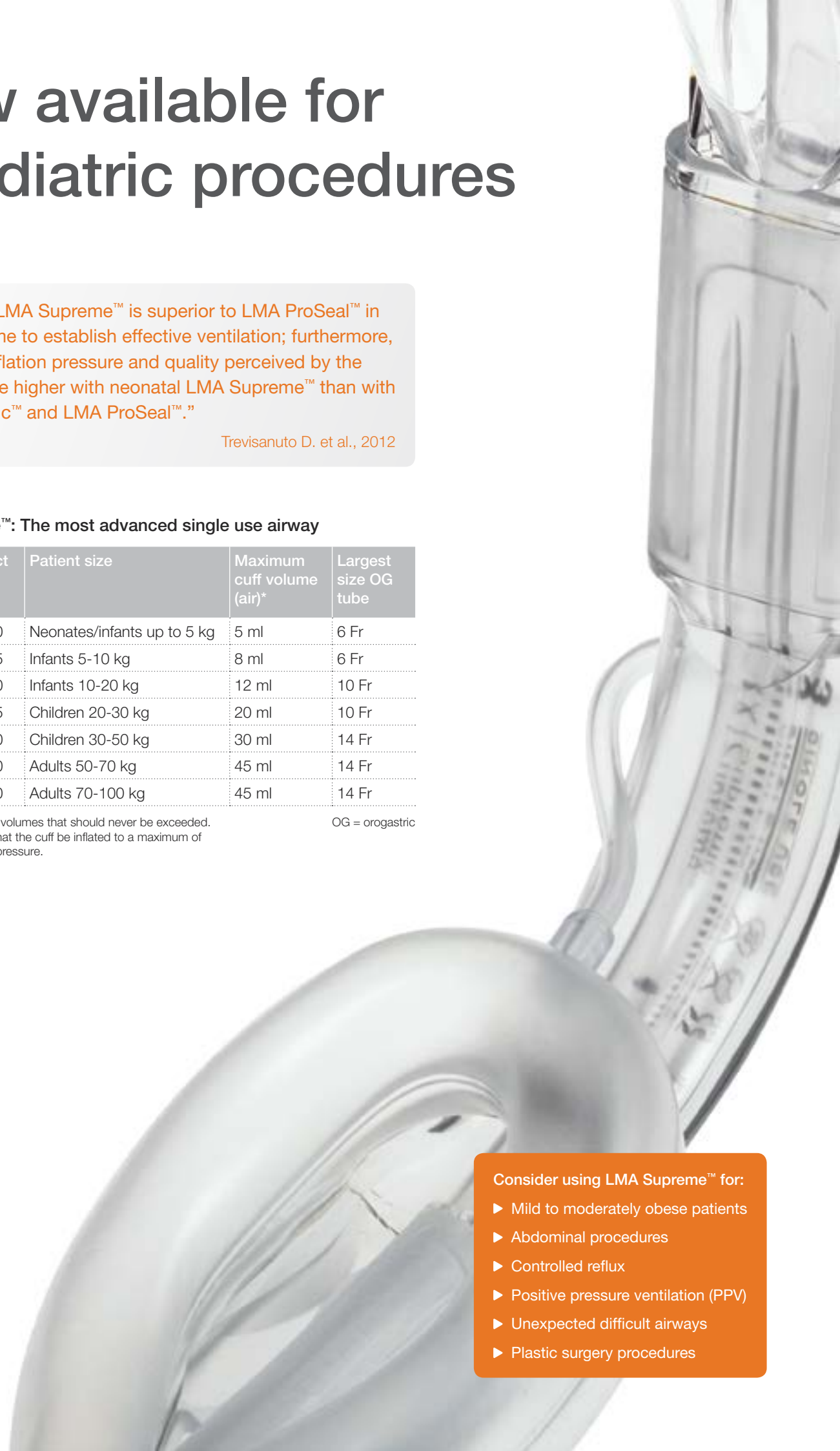
Trevisanuto D. et al., 2012

LMA Supreme™: The most advanced single use airway

Mask size	Product code	Patient size	Maximum cuff volume (air)*	Largest size OG tube
1	175010	Neonates/infants up to 5 kg	5 ml	6 Fr
1.5	175015	Infants 5-10 kg	8 ml	6 Fr
2	175020	Infants 10-20 kg	12 ml	10 Fr
2.5	175025	Children 20-30 kg	20 ml	10 Fr
3	175030	Children 30-50 kg	30 ml	14 Fr
4	175040	Adults 50-70 kg	45 ml	14 Fr
5	175050	Adults 70-100 kg	45 ml	14 Fr

*These are maximum volumes that should never be exceeded. It is recommended that the cuff be inflated to a maximum of 60 cm H_20 intracuff pressure.

OG = orogastric



Consider using LMA Supreme™ for:

- Mild to moderately obese patients
- Abdominal procedures
- Controlled reflux
- Positive pressure ventilation (PPV)
- Unexpected difficult airways
- Plastic surgery procedures

Find out more about LMA Supreme™ and the Second Seal™

Clinical evidence

For the latest clinical evidence on LMA Supreme™ visit **www.lmaco.com/evidence**

Second Seal Confidence

For more information on LMA Supreme™ and the Second Seal™, visit **www.secondsealconfidence.com**

YouTube

For the latest digital case reports, educational videos and clinician testimonials on the benefits of LMA Supreme™, visit **www.youtube.com/LaryngealMaskAirway**

For the latest news from LMA, like us on **www.facebook.com/LMAInternational**

LMA™ Better by Design

For product information and access to product instructions for use, visit **www.lmaco.com**

Teleflex

For information on other products within the Teleflex product portfolio, visit **www.teleflex.com**

References:

1. Cook T.M. et al. Anaesthesia 2009; **64**: 555-562.
2. Cook T.M., Howes B. Continuing Education in Anaesthesia Critical Care and Pain 2011; **11**: 56-61.
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4. 4th National Audit Project of the Royal College of Anaesthetists and the Difficult Airway Society: Major Complications of Airway Management in the United Kingdom. Report and findings: March 2011. Editors: Dr Tim Cook, Dr Nick Woodall and Dr Chris Frerk.
5. Verghese C., Ramaswamy B. BJA 2008; **101** (3): 405-410.
6. Jagannathan N. et al. Anaesthesia 2012; **67** (2): 139-144.
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8. Roiss M. et al. Poster presented at the American Association of Anesthesiologists, Annual Meeting 15-19th October 2011, Chicago.
9. Sharma V. et al. BJA 2010; **105** (2): 228-232.
10. Abdi W. et al. Acta Anaesthesiol Scand. 2010; **54** (2): 141-146.
11. Trevisanuto D. et al. Resuscitation 2012; **83**: 97-100.

For the complete list of LMA Supreme™ references, visit **www.lmaco.com/lmasupreme**

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TELEFLEX HEADQUARTERS INTERNATIONAL, IRELAND
Teleflex Medical Europe Ltd., IDA Business and Technology Park, Dublin Road, Athlone, Co Westmeath, Ireland
Phone +353 (0)9 06 46 08 00 **Fax** +353 (0)14 37 07 73
orders.intl@teleflex.com

Manufactured by:
The Laryngeal Mask Company Limited
Le Rocher, Victoria, Mahé, Seychelles

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www.LMACO.com

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