Helping Reduce the Tracheal Impact of Intubation

ENDOTRACHEAL TUBES WITH TAPERGUARD™ CUFF TECHNOLOGY IN THE OPERATING ROOM
Securing Airways with a Gentle Touch

You aim to keep patients safe and comfortable, so they have their best chance at a positive postsurgical outcome. The equipment you choose for intubation in the OR can help make a difference.1-7

WHY YOUR TOOLS MATTER

Friction or pressure between the tracheal cuff and the trachea’s sensitive mucosa can lead to irritation, ischemia and tracheal trauma.6,12

It doesn’t take long for excess pressure to cause damage. Poorly controlled cuff pressures have been associated with postsurgical sore throat,6,7 cough, hoarseness and blood-streaked expectoration, even after procedures of only one to three hours.6
GETTING PRESSURE RIGHT

Many factors play into cuff pressures, from the cuff volume and material, to the tracheal diameter,\textsuperscript{1,5} which varies with each patient’s size and age.\textsuperscript{13}

High-volume, low-pressure (HVLP) cuffs were introduced to help avoid tracheal damage.\textsuperscript{12,14} However, the surface of a HVLP often fold to fit within the trachea and has demonstrated a less uniform pressure exertion against the tracheal wall.\textsuperscript{5}

Newer, taper-shaped cuffs can both enhance fit* across patients and reduce pressure impact on the trachea.\textsuperscript{3,5,15,16}

“Lateral wall pressure generated by the endotracheal cuff is thought to be the most important factor in tracheal morbidity due to intubation with cuffed endotracheal tubes.”

— Seegobin and van Hasselt, 1986\textsuperscript{14}

* Compared with traditional high volume low pressure cuffs.
TaperGuard™ Cuff Technology:
The Low-Impact, Low-Pressure Endotracheal Tube

Endotracheal tubes with TaperGuard™ cuff technology have features that may help reduce the tracheal impact of intubation with a unique, taper-shaped cuff design that provides a smaller area of contact with the patient’s airway than traditional barrel-shaped cuffs.¹⁶

**TAPERED-CUFF ADVANTAGES**

Unique TaperGuard cuff design:

- Reduces the area of tracheal impact by 50% or more versus cylindrical PVC cuffs³,⁵,¹⁵
- Reduces intracuff pressure required to obtain an adequate seal compared to Mallinckrodt™ Hi-Lo cuffs¹⁷
- Provides more uniform pressure distribution than Mallinckrodt Hi-Lo cuffs at equivalent intracuff pressures⁵
- Reduces microaspiration by as much as 90% compared to Mallinckrodt™ Hi-Lo cuffs¹⁸

“Proper control of [cuff] pressure…helped reduce…postprocedural respiratory complications such as cough, sore throat, hoarseness, and blood-streaked expectoration even in procedures of short duration (1-3 hours).”

— Liu et al., 2010⁶
Cuff design can influence the tracheal impact of intubation.\textsuperscript{5,16}

The unique taper-shape of the TaperGuard cuff may help you avoid mucosal ischemia and reduce the incidence of tracheal injury,\textsuperscript{3} for less risk of post-operative irritation\textsuperscript{4} compared to standard PVC cuffs.
References