

Airway Management

Unomedical Colour Coding System

Risks of tracheobronchial suctioning

Suction procedures can cause impairment in gas exchange and lung mechanics including serious effects such as alveolar collapse, hypoxemia and desaturation.

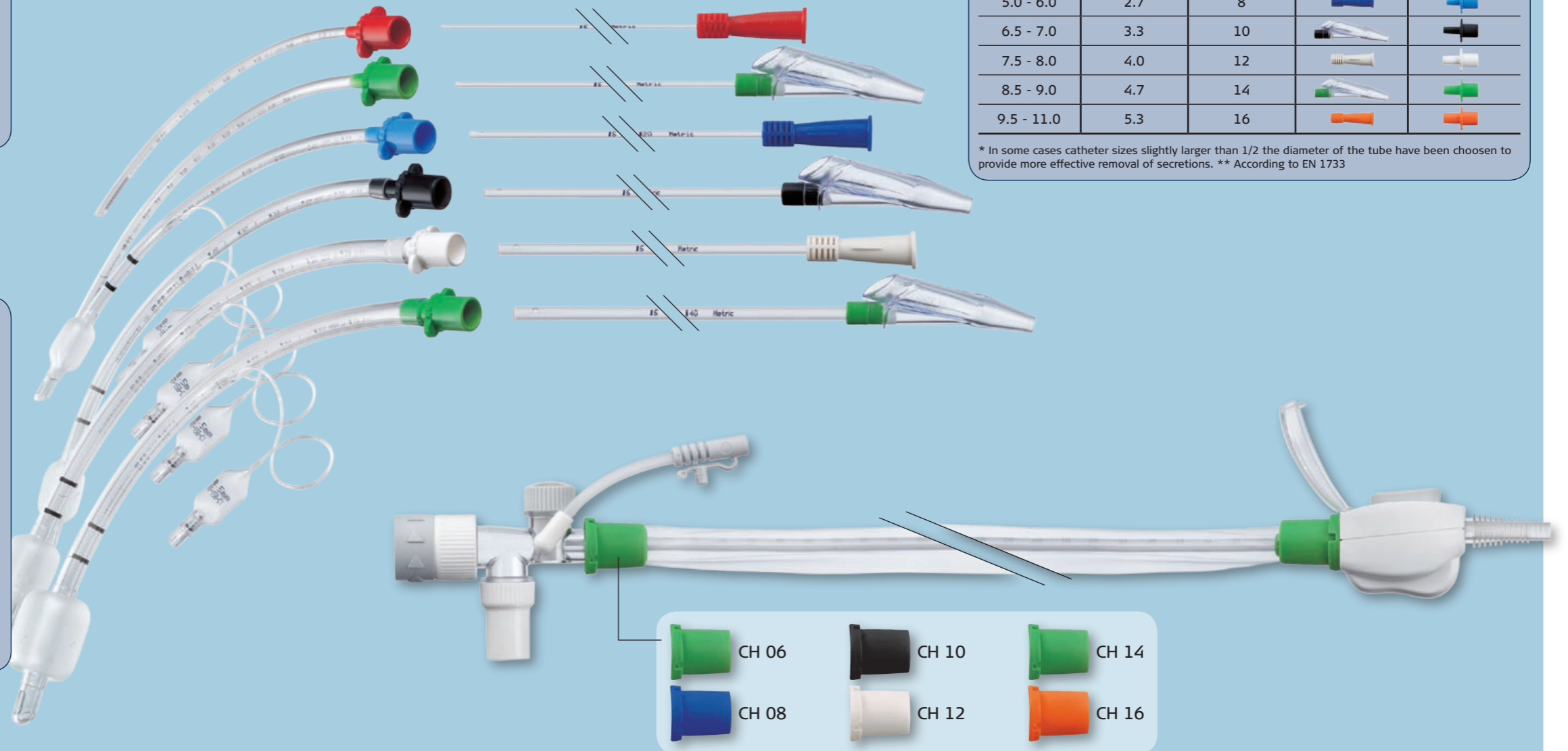
Amongst other factors, such as ventilation mode and suction force used, the size of the suction catheter chosen can significantly influence the incidence of such effects.

Minimising the risk

In order to minimise such effects, the calibre of the suction catheter should be chosen in relation to the inner diameter of the endotracheal/tracheostomy tube.

The diameter of the suction catheter should be close to half the inner diameter of the airway used in order to provide sufficient room for ambient air to flow in.

Since endotracheal tubes are identified by inner diameter (I.D.) and suction catheters by their Charrière (CH) or French (F) size, indicated by their colour coding, making the right choice is not always easy.



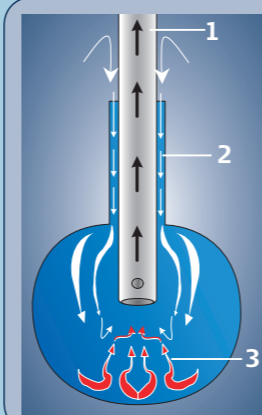
Tube/Cannula	Recommended Catheter size*		Colour Code	
	I.D. (mm)	O.D. (mm)	Suction Catheters**	Unomedical Tubes/Cannulas
3.0 - 3.5	1.3	4		
4.0 - 4.5	2.0	6		
5.0 - 6.0	2.7	8		
6.5 - 7.0	3.3	10		
7.5 - 8.0	4.0	12		
8.5 - 9.0	4.7	14		
9.5 - 11.0	5.3	16		

* In some cases catheter sizes slightly larger than 1/2 the diameter of the tube have been chosen to provide more effective removal of secretions. ** According to EN 1733

The Unomedical Colour Coding System - Always the right choice

Unomedical's Colour Coding System clearly indicates the appropriate suction catheter size, eases the choice for the medical professional and increases overall safety during suction procedures.

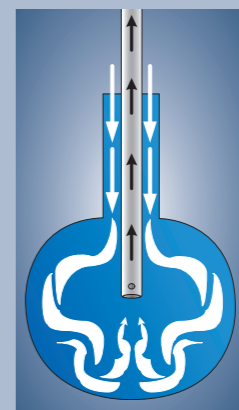
All Unomedical Airways are equipped with a colour coded 15 mm connector reflecting the standardised** colour code of the recommended suction catheter.



Airway/Lung model illustrating the reason for adverse effects when using a too large suction catheter calibre.

During suctioning, the suction catheter (1) creates a negative suction force, causing sub atmospheric pressure in the lower airways/lung (3).

Portion of inflowing air through the Endotracheal tube/ upper airways (2) is too poor to compensate since the suction catheter is blocking most of the lumen, inducing potential alveolar collapse.



In case a suction catheter with an appropriate size has been chosen, enough room for ambient air to flow in and to minimise the effect of negative pressure is provided.

References: Stenqvist O, Lindgren S, Karason S, Sondergaard S, Lundin S. Warning! Suctioning. A lung model evaluation of closed suctioning systems. Acta anaesthesiologica Scandinavica VOL:45(2); p.167-72/2001
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