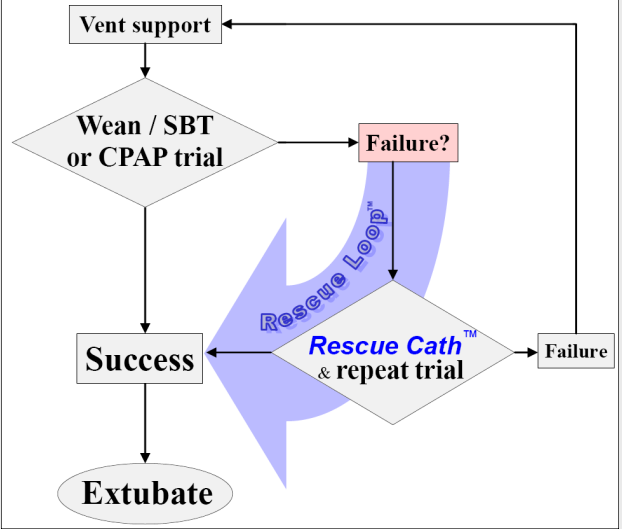


$$R \propto \frac{\eta \cdot L}{r^4}$$

Partial ET tube obstructions increase  $WOB_{Imp}$  and delay vent weaning. Even *small* reductions in ET tube radius ( $r$ ) can increase airflow resistance ( $R$ ) significantly.\*

You could **Rescue** someone from 'weaning failure' today.



# CAM Rescue Cath™

Complete Airway Management Catheters

“AIRWAY CONTROL BEYOND INTUBATION”



## Simple

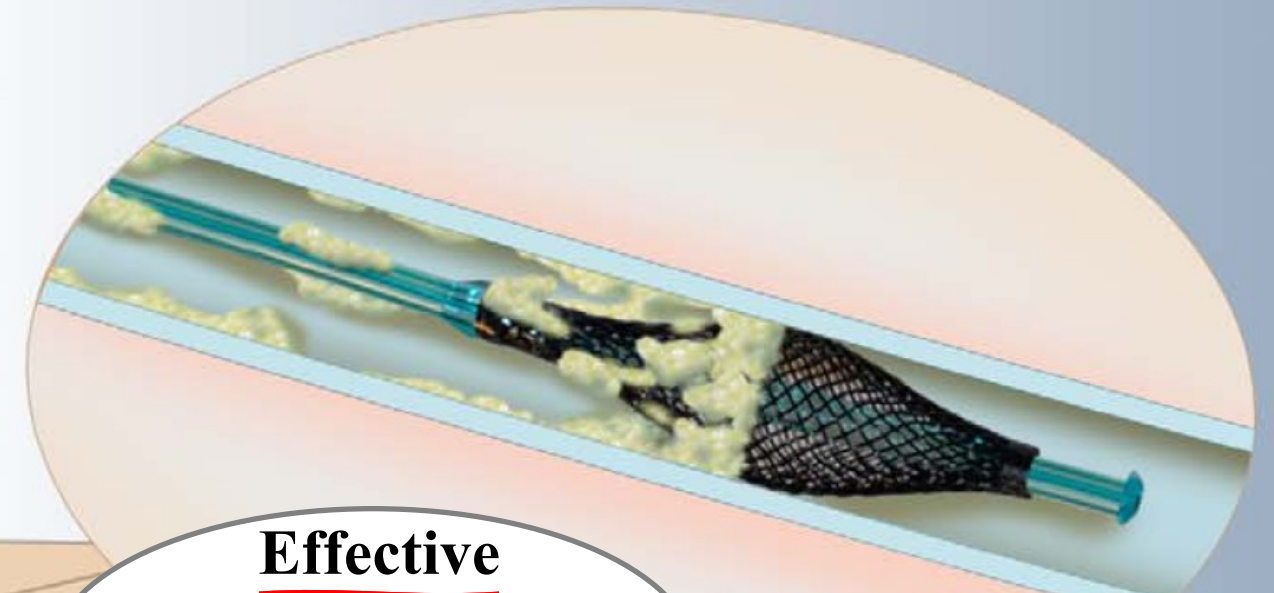
- Handle-mounted controls, single hand use
- Syringe regulates balloon inflation
- Finger push tab for depth indicator
- Suction port

## Safe

- Design minimizes sterile catheter contact
- Calibrate to ET tube with distance markers
- Depth indicator locks to prevent slippage
- Hands-on airway control at all times during use
- Balloon-tipped catheter similar to the time-tested safety of embolectomy catheters

## Effective

- *MaxFLO<sub>2</sub>*™ cleaning assembly wipes secretions from ET tube lumen more effectively than suctioning alone\*
- No need to irrigate or replace ET tube



The **CAM Rescue Cath™** does not push ET tube secretions distally. Note how secretions remain on the proximal side of the *MaxFLO<sub>2</sub>*™ cleaning assembly.

Copyright Omneotech™. All rights reserved, 2010.

Endotracheal intubation is *only the first step* in airway control.



### Scenario A

The ventilator alarms with high peak inspiratory pressures and your patient desaturates. You feel resistance when you try to advance the suction catheter down the endotracheal tube (ETT), which you suspect is obstructed with respiratory secretions. You can:

- Emergently extubate the patient
- Emergently reintubate the patient
- Rescue** the ETT by removing the obstructing plug

### Scenario B

An endotracheally intubated patient is failing to wean from mechanical ventilatory support and appears to have increased work of breathing. You suspect the ETT lumen may be narrowed by accumulated secretions. You can:

- Increase the level of ventilator support
- Perform a tracheostomy
- Clear the ETT secretions with a **Rescue Cath™**

### Scenario C

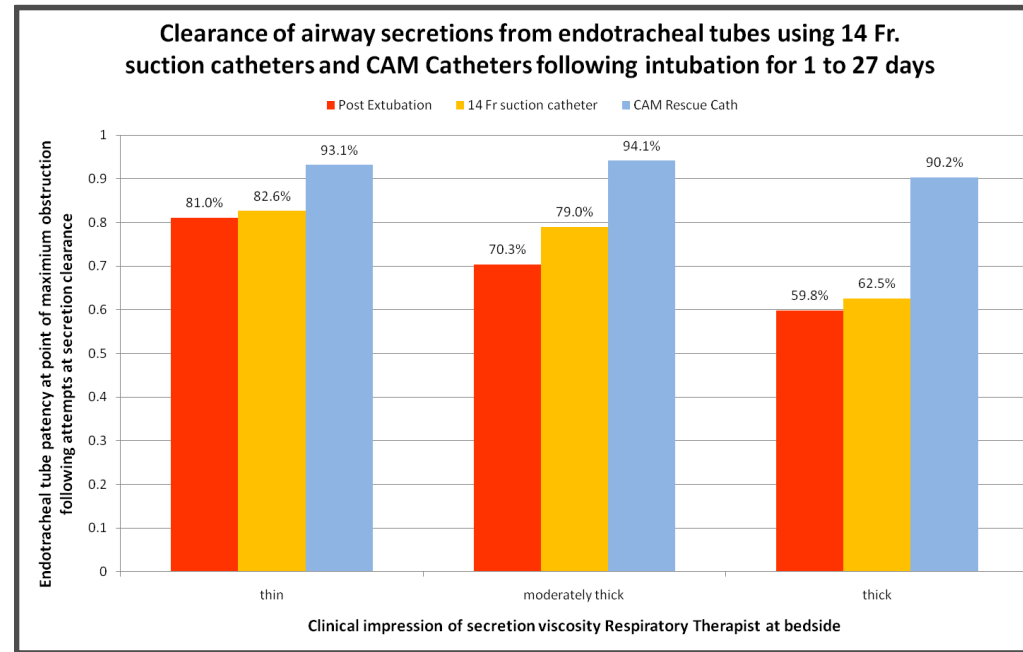
A endotracheally intubated patient has copious secretions that you can hear ‘rattling’ in his ETT, but repeated suctioning fails to remove them. You can:

- Aggressively ‘lavage’ the ETT with saline irrigant
- Attempt to suction them out via bronchoscopy
- Remove the ETT secretions with a **Rescue Cath™**

### Scenario D

Bronchoscopy on an intubated patient with pneumonia reveals that the ETT lumen is coated with a thick layer of secretions and biofilm. You are concerned that this may prolong the need for ventilatory support. In addition to systemic antibiotic therapy, you can:

- Attempt bronchoscopic clearance of the ETT
- Perform a tracheostomy
- Clear the ETT with a **Rescue Cath™**



In ET tubes that had been routinely suctioned with a standard 14 Fr. suction catheter during mechanical ventilation for 1 - 27 days, the **CAM Rescue Cath™** significantly improved ET tube patency at the narrowest point in each ET tube (determines WOB<sub>imp</sub>). This marked improvement in patency following **CAM Rescue Cath™** use (blue) compared to suctioning (yellow) was noted in all categories of secretion viscosity (determined prior to extubation).\*\*\*

#### \*References

1. AARC Clinical Practice Guideline: Removal of the Endotracheal Tube—2007 Revision & Update. Respiratory Care. 2007 Jan;52(1):81-93
2. Adair CG, Gorman SP, Feron BM, Byers LM, Jones DS, Goldsmith CE, Moore JE, Kerr JR, Curran MD, Hogg G, Webb CH, McCarthy GJ, Milligan KR. Implications of endotracheal tube biofilm for ventilator-associated pneumonia. Intensive Care Med. 1999 Oct;25(10):1072-6
3. American Thoracic Society Documents. Guidelines for the Management of Adults with Hospital-acquired, Ventilator-associated, and Healthcare-associated Pneumonia. Am J Respir Crit Care Med Vol 171. Pp 388-416, 2005
4. Banner MJ, Kirby RR, Blanch PB. Differentiating total work of breathing into its component parts. Essential for appropriate interpretation. Chest. 1996 May;109(5):1141-3
5. Blackwood B. Normal saline instillation with endotracheal suctioning: primum non nocere (first do no harm). J Adv Nurs. 1999 Apr;29(4):928-34
6. Boque MC, Gualis B, Sandiunenge A, Rello J. Endotracheal tube intraluminal diameter narrowing after mechanical ventilation: use of acoustic reflectometry. Intensive Care Med. 2004 Dec;30(12):2204-9. Epub 2004 Oct 2
7. Glass C, Grap MJ, Sessler CN. Endotracheal tube narrowing after closed-system suctioning: prevalence and risk factors. Am J Crit Care. 1999 Mar;8(2):93-100
8. Hagler DA, Traver GA. Endotracheal saline and suction catheters: sources of lower airway contamination. Am J Crit Care. 1994 Nov;3(6):444-7
9. Inglis TJ. New insights into the pathogenesis of ventilator-associated pneumonia. J Hosp Infect. 1995 Jun;30 Suppl:409-13
10. Kapadia FN. Factors associated with blocked tracheal tubes. Intensive Care Med. (2001) 27: 1679-80
11. Kaufman L, Garrigos S, McLachlan J, Adams-Cheever J. Endotracheal Tube Obstruction in Adult ICU Population. Crit Care Med 1995;23:A122
12. Lewis RM. Airway clearance techniques for the patient with an artificial airway. Respir Care. 2002 Jul;47(7):808-17
13. Morejón O, Bricknell S, Stone R. Endotracheal Tube Obstruction After Brief Intubation and Pilot Trial of Secretion Clearance using CAM Catheter. Crit Care Med. 2007;35(12):A234
14. Niederman MS. Gram-negative colonization of the respiratory tract: pathogenesis and clinical consequences. Semin Respir Infect. 1990 Sep;5(3):173-84
15. Safdar N, Crnich CJ, Maki DG. The pathogenesis of ventilator-associated pneumonia: its relevance to developing effective strategies for prevention. Respir Care. 2005 Jun;50(6): 725-741
16. Shah C, Kollef MH. Endotracheal tube intraluminal volume loss among mechanically ventilated patients. Crit Care Med. 2004 Jan;32(1):120-5
17. Sottile FD, Marrie TJ, Prough DS, Hobgood CD, Gower DJ, Webb LX, Costerton JW, Gristina AG. Nosocomial pulmonary infection: possible etiologic significance of bacterial adhesion to endotracheal tubes. Crit Care Med. 1986 Apr;14(4):265-70
18. Wilson AM, Gray DM, Thomas JG. Increases in Endotracheal Tube Resistance Are Unpredictable Relative to Duration of Intubation. Chest. 2009;136:1006-1013

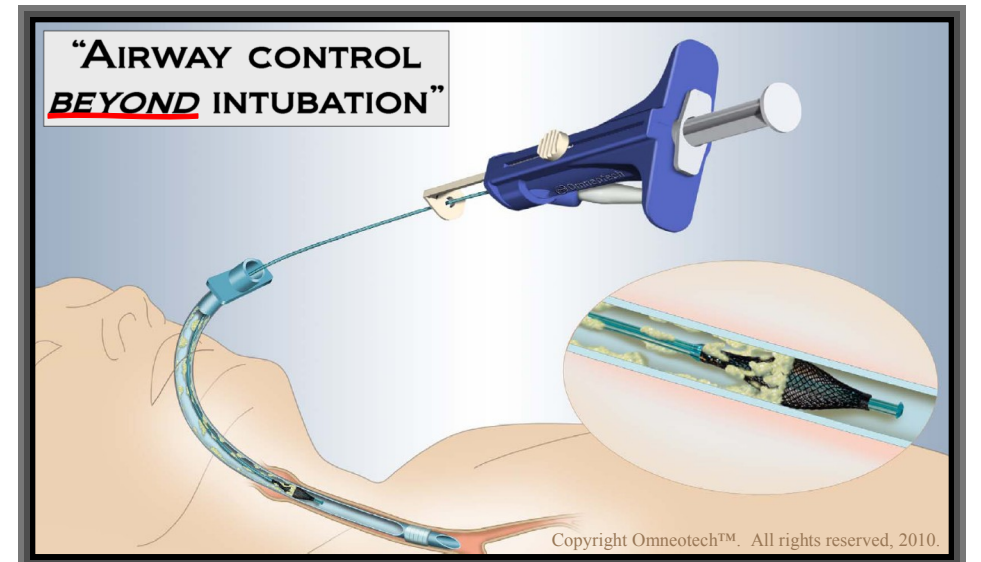
\*\* Source on file.

\*\*\* Data on file.

Complete Airway Management (CAM) Catheters™, CAM Rescue Cath™ and MaxFLO<sub>2</sub>™ are trademarks of Omneotech®. Copyright Omneotech®, 2010. All rights reserved.

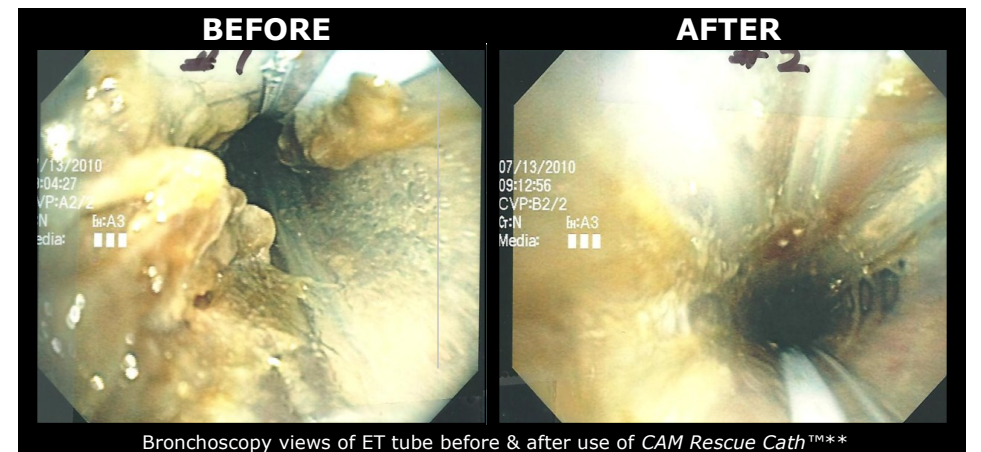
# CAM Rescue Cath™

Complete Airway Management Catheters



ET tube secretions may result in which of the following?

- A. Failure to wean from the ventilator\*
- B. Life-threatening ET tube obstruction\*
- C. Biofilm that may cause VAP\*



Bronchoscopy views of ET tube before & after use of CAM Rescue Cath™\*\*

 **Omneotech®**  
"From zero to infinity"  
[www.omneotech.com](http://www.omneotech.com)  
info@omneotech.com (800) 493-0911

For product inquiry, contact Omneotech® or your local distributor.