

# Endotracheal Tube Provides Protection Against Microaspiration



Covidien (NYSE: COV) announces that a new in vivo study concluded that the Mallinckrodt™ TaperGuard™ endotracheal tube provides significant protection from microaspiration and lung damage compared to the Mallinckrodt™ Hi-Lo endotracheal tube. The findings were presented at the annual International Symposium on Intensive Care and Emergency Medicine (ISICEM) Meeting, in Brussels, Belgium.

The study—Do Endotracheal Tubes Prevent Microaspiration?—was conducted by Peter Lichtenthal, M.D., University of Arizona, Department of Anesthesiology; Ulf Borg, Respiratory and Monitoring Solutions, Covidien; and Donald Maul, Preclinical Research Services in Fort Collins, Colorado.

The study compared the Hi-Lo tube, with a barrel-shaped cuff, and the new TaperGuard tube, which features a taper-shaped cuff. In the study, subjects were intubated prior to surgery with either the Hi-Lo or TaperGuard tubes. Blue dye was injected above the tubes, and afterward, the subjects' trachea and lungs were evaluated for dye leak, bronchitis, ulceration and hemorrhagic pneumonia. The researchers found that the TaperGuard tube significantly outperformed the Hi-Lo tube in reducing dye leak and bronchitis, and also offered improved, potentially clinically significant, protection in the remaining categories.

By providing a more effective fluid seal, the TaperGuard tube with its taper-shaped cuff reduces the risk of microaspiration among intubated patients. Microaspiration refers to aspiration of fluid, secretions and other materials that have leaked past the endotracheal tube cuff and into the lungs – a common problem in intubation that may lead to pulmonary complications, including ventilator-associated

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pneumonia (VAP) and post-operative pneumonia.

Ventilator-associated pneumonia (VAP) is the most common hospital-acquired infection and the leading cause of morbidity and mortality in the intensive care unit.<sup>1</sup> VAP is also associated with longer hospital stays and increased healthcare costs.<sup>2</sup>

For more information, visit [www.covidien.com](http://www.covidien.com) [1]

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