



# Neptune 3 in anesthesia

## The state of surgical suction in anesthesia today

Currently, there are no universally accepted standards for suction pressure in surgical field or anesthesia suction. However, it's commonly understood that surgeons and anesthesiologists need high-volume and high-flow rate vacuum to "clear secretions, blood, or debris efficiently and effectively," and for endotracheal intubation and extubation. What's more, recommendations surrounding surgical suction state to set suction pressure as low as necessary to achieve the desired clinical result.<sup>1</sup>



## Setting a new bar for safety

### Consistency matters

Advanced technology within the vacuum pump and regulator assemblies help maintain consistent suction at your desired setting.

- Each canister is controlled by separate regulator valves designed to maintain their respective suction level at the selected suction setting
- Vacuum regulator is designed to compensate for changes in pressure to achieve and maintain the suction setting

### Efficiency matters

Neptune's LCD touchscreen, infinity dial knobs and highly calibrated electrical components give you peace of mind to achieve the suction setting you need, when you need it.

- A dedicated vacuum pump allows for quick, responsive adjustments to the selected suction setting
- The suction level setting defaults to 0 each time a new manifold is inserted, mitigating risk of the suction starting at too high of a threshold
- A simple manifold change for each case enables fluid stacking, eliminating the need to turn over and set up canisters between cases

### Accuracy matters

Neptune's 4L lighted canister offers meticulous fluid accuracy of  $\pm 50\text{mL}$  with only  $\pm 1.25\%$  error at full scale.

- Fluid volumes are displayed in increments of 10mL on the 4L canister
- Suction setting can be controlled in 5mm-Hg increments from 50-120mm-Hg, and 20mm-Hg increments from 120-520mm-Hg
- Read-outs of collected fluid volumes are viewable on one of Neptune's two displays
- Volumes can be easily reset as needed
- Top canister empties into bottom canister with the push of a button

Help take the guess work out of accuracy

**"We are the compilers of the guesstimates."**

**Anesthesiologist**

American Society of Anesthesiologists Focus Group

## Learn more

**For more information or to schedule a product trial, please contact your Surgical sales representative or call 800 253 3210. For CE classes related to hazardous waste, visit [strykerlearn.com](http://strykerlearn.com) and [neptunewastemanagement.com](http://neptunewastemanagement.com)**

**Warning:** The Neptune 3 Waste Management system lists **direct connection to** tracheal tubes as a Warning. Risks of use exist with any negative pressure vacuum system. The healthcare professional performing any procedure is responsible for determining the appropriateness of this equipment and the specific technique used for each patient. Stryker, as a manufacturer, does not recommend surgical procedure or technique.

The American Association for Respiratory Care (AARC) Clinical Guidelines state that "suction pressure should be set as low as possible and yet effectively clear secretions. Negative pressure less than 150mmHg in adults has been recommended."

### ETS (Endotracheal suctioning) 7.0

Endotracheal suctioning is a necessary procedure for patients with artificial airways. Most contraindications are relative to the patient's risk of developing adverse reactions or worsening clinical condition as a result of the procedure. When indicated, there is no absolute contraindication to endotracheal suctioning, because the decision to withhold suctioning in order to avoid a possible adverse reaction may, in fact, be lethal.

The following recommendations are made following the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) criteria: (1) It is recommended that endotracheal suctioning should be performed only when secretions are present, and not routinely; (2) It is suggested that pre-oxygenation be considered if the patient has a clinically important reduction in oxygen saturation with suctioning; (3) Performing suctioning without disconnecting the patient from the ventilator is suggested; **(4) Use of shallow suction is suggested instead of deep suction;** (5) It is suggested that routine use of normal saline instillation prior to endotracheal suction should not be performed; (6) The use of closed suction is suggested for adults with high FIO<sub>2</sub>, or PEEP, or at risk for lung derecruitment; ... (8) Avoidance of disconnection and use of lung recruitment maneuvers are suggested if suctioning-induced lung derecruitment occurs in patients with *acute lung injury*; **(9) It is suggested that a suction catheter is used that occludes less than 50% the lumen of the endotracheal tube in adults;** **(10) It is suggested that the duration of the suctioning event be limited to less than 15 seconds.**



1. AARC Clinical Practice Guideline: Endotracheal Suctioning of Mechanically Ventilated Patients With Artificial Airways: 2010. <<http://www.aarc.org/resources/clinicalresources/clinical-practice-guidelines/>>

## Surgical Technologies

This document is intended solely for the use of healthcare professionals. A surgeon must always rely on his or her own professional clinical judgment when deciding whether to use a particular product when treating a particular patient. We do not dispense medical advice and recommend that surgeons be trained in the use of any particular product before using it in surgery.

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