

Al Mustaqbal University

College of Health and Medical Techniques

Department of Anesthesia

Practical Anesthesia

Stage Two

Lecture 8

Suctioning

By Lectures

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Suctioning

Medical vacuum and suction

Medical vacuum is used in suction devices throughout the hospital, usually from a central vacuum plant. Portable vacuum units are also available. Pressures are typically described in gauge pressure; negative pressures are therefore relative to atmospheric pressure.

A medical vacuum system should be capable of creating a **pressure of -53 kPa (-400 mmHg) with a flow of 40 l.min $^{-1}$** . It is therefore a high-pressure, low-flow system.

Suction vacuum systems incorporate bacterial filtration and drainage to dispose of aspirated body fluids.

Excess suction may result in inadequate patient ventilation, and insufficient suction levels may result in failure to evacuate waste anesthetic gases.

Uses

The **immediate availability of a functioning suction apparatus is mandatory for safe anesthesia** and is used to **clear secretions, vomitus, and blood from the airway**. Suction is also required for most surgical procedures and for a wide array of other uses, such as bronchoscopy and cell salvage.

Advantages

- Essential for safe anaesthesia.
- Centralized vacuum supplies are highly reliable.
- Collection systems are simple, cheap and disposable.

Disadvantages

- Disconnections and leaks in collection system are common, limiting suction pressure and flow.
- Battery life in portable units is limited



