Quick Reference Card Ventrain® and Tritube®



This quick reference card does not replace the instructions for use of Ventrain and Tritube.

Workflow for ventilation with Ventrain and Tritube | elective use | adult patient

- 1 Inflate cuff check for leakage deflate cuff.
- 2 Lubricate cuff (for instance with lidocain gel 4%) and fold cuff around Tritube.
- 3 Visually assess larynx and remove secretions if present.

4 Oral intubation

- Bend tube in curve required for intubation.
- Local anesthetics may be applied topically to pharynx.
- Advance Tritube from stylet after the tip has passed the vocal cords.

Nasal intubation

- Remove stylet.
- Local anesthetics may be applied topically to nasal cavity.
- Intubate Tritube.
- 5 Flush pressure lumen with saline/air to ensure absence of any obstructions.
- 6 Set gas flow at 15 L/min using a pressure compensated flow regulator.
- **7** Connect Ventrain (orange connector) and manometer (grey connector) to Tritube.
- 8 Suggested: perform 2-3 ventilation cycles with deflated cuff to confirm (limited) pressure readings on manometer.





- 9 Inflate cuff.
- 10 Continue ventilation:
 - Observe the patient's chest excursions.
 - Ventilate between PEEP and Peak pressure.
 - Flush pressure / ventilation lumen with saline followed by air, in case of (near) obstruction.
 - Note that exhaled gases (and potentially secretions) exit via the thumb hole.
 - Volumes may be calculated based on flow and time (see table below).
 - Remove thumb and index finger from Ventrain (equilibration) in case of distraction or any doubt. Ventrain is functionally switched off, allowing passive expiration.

Flow (L/min)	6	10	12	15
Volume (mL) in 1 second	100	167	200	250

See next page for capnometry, extubation and materials >>

Capnometry

Note that a reliable etCO₂ measurement requires gas sampling during an equilibration phase and a sealed airway (inflated cuff):

- 1 Perform capnography via the side port of Ventrain.
- 2 A filter may be used to avoid contamination of the capnometer.
- 3 Insufflate to aimed intratracheal Peak pressure.
- 4 Start equilibration phase.



- 5 Read CO₂ value from curve when a plateau is nearly reached (taking approx. 5-8 seconds).
- 6 Resume ventilation.

Extubation

- 1 Stop TIVA.
- **2** Perform oral/pharyngeal suctioning to remove secretions if needed.
- 3 Deflate cuff, while continuing Ventrain ventilation and monitoring intratracheal pressures.
 An open airway results in less pronounced pressure build-up.
 Intratracheal pressure build-up may appear during wakening, indicating an increased glottic functioning.
- 4 After wakening, confirm patient's ability to cough and inhale upon request (if not done spontaneously).
- **5** Extubate Tritube after confirmed stability of patient and his/hers airway.

See next page for workflow ventilation Ventrain and Tritube >>

Materials

- Ventrain
- Tritube
- Manometer
- Lubricant (e.g. 4% lidocaine gel)
- Syringe with saline
- Syringe empty
- Side stream capnometer with liquid trap and/or filter
- Capnometer tubing with male Luer slip connector
- High pressure oxygen source with pressure compensated flow regulator
- TIVA



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