

# VOLUME ASSIST/CONTROL VENTILATION

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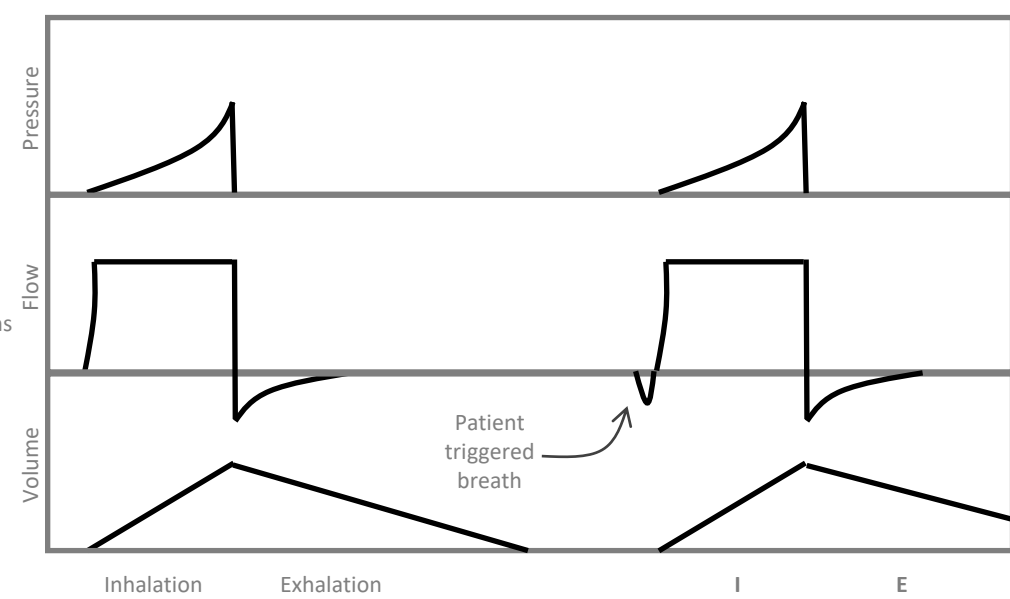
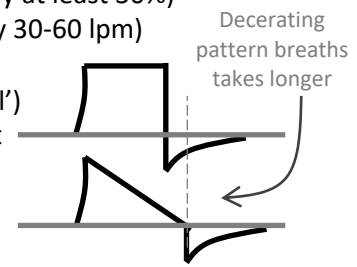


## How does this mode work?

- Delivers a set volume of air with each breath; patient triggered breaths are identical to machine triggered breaths
- Time and patient triggered, volume cycled, volume limited mode

## What are the variables I set?

- **RR** – respiratory rate
- **TV** – tidal volume (better to express in terms of cc/kg PWB than ccs)
- **PEEP** – positive end expiratory pressure (typically at least +5)
- **FiO2** – fraction of inhaled oxygen (typically at least 30%)
- $\dot{V}$  – (“v dot”) inspiratory flow rate (typically 30-60 lpm)
- **Flow pattern** – is the flow constant (e.g. square wave) or decelerating (“decel”)  
Decel may be more comfortable but it prolongs the inspiratory phase



## When should I use this mode?

- Ensures that a patient receives a minimum MV
- This is a good general-purpose mode; good for providing Lung Protective Ventilation (LPV)
- PRVC [may have lower peak pressures](#); pressure modes may be more comfortable for select patients

## What do I need to monitor?

- Need to make sure the peak pressure and plateau pressure do not exceed safe limits.  
→ If  $P_{plat}$  is too high decrease the  $T_v$
- You will also need to monitor MV. If the patient is triggering excessively (or auto-triggering), they can become alkalemic.

## Choosing Initial settings

- RR - Try to match the persons initial minute ventilation by selecting a rate to match their pre-intubation MV needs.
- TV - Use 8cc/kg PBW and adjust as needed. For patients with ARDS (or at high risk) consider starting at 6cc/kg PBW.
- Start with low PEEP and high FiO2 and wean to maintain SpO2 goal (typically > 90%).

ABG: pH / PCO<sub>2</sub> / PaO<sub>2</sub> / HCO<sub>3</sub>



SETTINGS: RR Tv PEEP FiO2

EXAMPLE: 12<sub>bpm</sub> 6<sub>cc/kg</sub> +5 50%

If you want to **increase** the pH → **increase** the minute ventilation (MV) by changing the RR and TV

If you want to **increase** the PaO<sub>2</sub> or SpO<sub>2</sub> **increase** the FiO<sub>2</sub> and PEEP

Advanced settings

