

# High Frequency Jet Ventilator: Basic Management Strategies

- Monitor CXR for proper inflation 9 - rib expansion
- Most patients should have:  
**Initial High Frequency Rate set at 420 BPM (7 Hz)**  
**Inspiratory Time on the JET set at 0.020 sec = 20 milliseconds**  
**Sigh Breaths: Rate 3 BPM, PIP = PEEP + 6 cm, IT = 0.4 seconds. Increase PIP, Rate or IT to improve oxygenation.**  
**Tidal Volume is primarily determined by the  $\Delta P$  and oxygenation primarily by the MAP**

		Oxygenation		
		Inadequate or Poor (Increase $FiO_2$ )	Adequate or Good	Too Good (Decrease $FiO_2$ )
<b>Ventilation</b>	<b>Over Ventilated</b> <b>CO<sub>2</sub> is too Low</b>	Increase PEEP while keeping PIP constant. This increases MAP while decreasing $\Delta P$ to prevent hypocarbia.	Decrease $\Delta P$ by decreasing PIP and consider increasing PEEP if needed to keep the MAP constant to prevent atelectasis. If over inflated just decrease PIP to decrease TV	Decrease PIP until CO <sub>2</sub> is acceptable. If still over inflated decrease PIP and PEEP by the same amount
	<b>Appropriate Ventilation</b> <b>CO<sub>2</sub> is Adequate</b>	Increase both PIP and PEEP by the same amount to keep $\Delta P$ unchanged while increasing the MAP.	<b>No Changes</b>	Decrease PEEP and PIP by the same amount to decrease MAP to avoid over inflation. This keeps $\Delta P$ unchanged.
	<b>Under Ventilated</b> <b>CO<sub>2</sub> is too High</b>	Increase both MAP and $\Delta P$ by increasing PIP until CO <sub>2</sub> is acceptable. If oxygenation is still poor increase both PIP and PEEP by the same amount to keep $\Delta P$ constant while increasing MAP.	Increase $\Delta P$ by Increasing PIP	Increase $\Delta P$ by decreasing PEEP to avoid over inflation until CO <sub>2</sub> is acceptable. If still over inflated decrease both PIP and PEEP by the same amount to decrease Map.