

NICU JET First Intention and Management Guidelines



First intention Jet Ventilation as primary lung protective ventilation measure for extremely low birth infants born less than 27 weeks birth GA and/or BW 800 grams

	Initiation	When to Increase	When to Decrease	Weaning Prior to Extubation
HFJV PIP	22-24cm H2O	Hypercarbia	Hypocarbia	Decrease PIP to 20 cm H2O
To change PaCO ₂ ± 2 - 4 mm Hg adjust PIP by 2 cm H2O To change PaCO ₂ ± 5 - 9 mm Hg adjust PIP by 4 cm H2O Look for change in servo pressure of around 33% for adequate response to PIP change				
HFJV rate	300 (<24w with RDS) 360 (24-26w with RDS)	Persistent hypercarbia despite high PIP and no PIE/air leak	PIE/Air leak Weaning vent/auto PEEP	Decrease to 240
CMV rate (Sigh breaths)	No prophylactic sigh breaths For reversing atelectasis: Start at 3/4 with i-time 0.4	Persistent atelectasis,	Airleak/PIE/ auto PEEP	Decrease to 0
CMV PIP	6-10 above PEEP for atelectasis	not >10 above PEEP	Airleak/PIE	Decrease to 6 above PEEP
PEEP (on CMV)	5 cm H2O	Improve oxygenation	Lung hyperinflation, Hemodynamic compromise	Decrease to 7 cm H2O
Inspiratory time	0.02 seconds	Do not adjust	Do not adjust	Do not adjust

References:

1. Watkins PL, Dagle JM, Bell EF, Colaizy TT. Outcomes at 18 to 22 Months of Corrected Age for Infants Born at 22 to 25 Weeks of Gestation in a Center Practicing Active Management. *J Pediatr* 2020;217:52-8
2. Clinical resources, Bunnell Jet ventilation. www.bunl.com
3. Muniraman H, Biniwale M, Rangasamy R. Invasive Ventilation in Newborns. Chapter 25. The handbook of Neonatology. Second edition. Indian Journal of Pediatrics. New Delhi. 2020
4. <https://uichildrens.org/health-library/management-strategies-high-frequency-jet-ventilation-neonates>

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