
VENTILATORY SUPPORT FOR MANAGING NEONATES WITH PULMONARY DISORDERS

Suggested Endotracheal (ET) Sizes and Depth of Insertion for Newborn Infants

Birth Weight/ Gestational Age	Internal Diameter (mm)	Distance from tip of tube to number on ET tube seen on lower lip
<1000/26-27	2.5	6-7 cm
1000/27-28	2.5-3.0	7 cm
2000/32-34	3.0-3.5	8 cm
3000/37-40	3.5-4.0	9 cm
4000/above 39	4.0	10 cm
Most useful ET tube: 3.0 mm internal diameter, 13 cm length 3.5 mm internal diameter, 13 cm length for full-term infants		

Modified from Tochen ML. J Pediatr 95:1050, 1979

PEEP

1. Every intubated patient should be on PEEP of 2 or greater. PEEP of zero may be indicated for patients with severe PIE.
 2. We rarely use greater than 6 cm H₂O PEEP for patients with RDS. Higher PEEP levels may be required for postoperative cardiac patients and those with tracheobronchomalacia.
 3. For patients with lung disease, the PEEP should roughly correlate with FIO₂.
30% - 3
40% - 4
50-100% - 5
 4. Intubated CPAP is not recommended for patients weighing less than 1500 grams. Intubated patients less than 1500 grams should always be supported by a minimum of 6 breaths/minute from the ventilator.
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RESPIRATORY RATE

1. For neonates with pulmonary disease on vecuronium, do not lower RR below 18/minute.
 2. On IMV, when weaning patient off the ventilator, you can decrease RR if pH and pCO₂ are within normal limits for patient and type of sample (CBG, venous, ABG).
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PAUSE TIME

1. Available only on volume ventilators.
 2. Rarely used; increases mean airway pressure by prolonging inspiratory time.
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MISCELLANEOUS

1. Patients with pulmonary disorders should be placed on time-cycled, pressure-limited ventilators (e.g., Sechrist).
 2. Patients without pulmonary disorders (e.g., CNS disorder) and those requiring surgery may be placed on time-cycled, volume-limited ventilators.
 3. Most patients are now being ventilated without using vecuronium. Rather, morphine sulfate, fentanyl, chloral hydrate, versed and/or ativan are being used for sedation.
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