

Initiation Ventilator Settings and Adjustments in the ICU

Following intubation, lung protective ventilation is recommended. One example is tidal volume of 6mL/kg based on the patient's ideal body weight (height and sex), PEEP between 8 and 12 cm H2O, respiratory rate of 16-20, and FiO2 titrated to SaO2 ≥92%.

After 15-30 minutes an arterial blood gas (ABG) should be obtained and an inspiratory pause should be attempted to measure plateau pressure (see Ventilator Tracings Figure).

ABG: The respiratory rate (RR) should be increased if the pH is <7.2. Following any increase in RR, the ventilator tracing should be evaluated for auto-PEEP (see Ventilator Tracings Figure). The FiO2 should be titrated for a PaO2 between 55-80mmHg.

Plateau pressure: If the plateau pressure is >30, or the driving pressure is >15, a recruitment maneuver and increase in PEEP should be used to see if the recruitment improves the plateau pressure. If not, tidal volumes should be decreased slowly to 4mL/kg IBW or until the plateau is <30. These changes may require an increase in the RR to maintain pH>7.2.