Initial Adult Ventilator Settings

You have to start somewhere

- ✓ Fraction of inspired oxygen (FiO2)—100%
- ✓ Positive End Expiratory Pressure (PEEP)—5 cmH2O
- ✓ Respiratory Rate—12 breaths per minute
- ✓ Tidal Volume 6-8 ml per weight in kilograms (ideal body weight). Most adults will require at least 500 ml.

Mechanical Ventilation

Oxygenation and Ventilation

Oxygenation is based on PaO2 and/or SpO2

- To treat hypoxia, increase the FiO2 or Positive End Expiratory Pressure (PEEP)
- Start PEEP at 5 cmH2O. If not successful, increase the PEEP to 8, then 10. Wait 20 minutes between changes to allow recruitment of the alveoli.

Ventilation is based on PaCO2 and/or ETCO2

- To treat hypercapnia (elevated CO2), the alveolar minute ventilation needs to be increased.
- Increase the respiratory rate
- Increase the tidal volume

AARC (American Association of Respiratory Care) Guidelines to adjusting ventilator settings

- PaCO2 > 45 (or ETCO2 > 50)
  - Increase Respiratory Rate
  - Increase Tidal Volume
- PaCO2 < 35 (or ETCO2 < 30)
  - Decrease Rate
  - Increase Tidal Volume
- PaO2 < 60 (SpO2 < 90%)
  - Increase FiO2
  - Increase PEEP
- SpO2 > 95% (or appropriate oxygenation for patient)
  - Reduce FiO2
  - Reduce PEEP to 5

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REGIONAL WEST

4021 Avenue B | Scottsbluff, NE 69361 | 1.800.252.2215