

# Initial Clinical Guidelines for HFOV 3100B in Adults



These guidelines are recommendations only and are based on data collected from clinical trials with the Model 3100B. As for any treatment, each physician must determine the appropriateness of these guidelines as they apply to specific patients.

1. Set initial mPaw at 5 cmH<sub>2</sub>O pressure above the conventional ventilator mPaw.
  - You may consider a recruitment maneuver first if patient is extremely hypoxic by applying 40 cmH<sub>2</sub>O for 40-60 sec.
  - If oxygenation worsens, increase mPaw in 3 - 5 cmH<sub>2</sub>O increments Q 30 min until maximum setting. (Note: oxygenation typically may worsen in the first 30 minutes of recruitment in severe ARDS)
  - Check a chest-x-ray within 1 - 4 hrs of initiating HFOV to assess lung volume.
2. Set power at 4.0 and rapidly increase to achieve chest wiggle. (visual vibration from shoulders to mid-thigh area).
  - Transcutaneous monitoring for TcCO<sub>2</sub> should be done.
  - If PaCO<sub>2</sub> worsens (but pH > 7.2), increase the power setting to achieve a change of amplitude in 10 cmH<sub>2</sub>O pressure increments Q 30 minutes up to a maximum setting.
  - If pH is < than 7.2, consider buffering pH.
  - An abrupt rise in PaCO<sub>2</sub> in an otherwise stable patient should be considered an obstruction of the endotracheal tube, until proven otherwise.

- 3 Set Hz at a range of 5 - 6 initially.
  - May decrease the Hz if unable to control the PaCO<sub>2</sub> with amplitude.
  - Decrease the Hz by 1 at a time Q 30 min until you reach a level of 3 Hz.
- 4 Set IT at 33%.
  - May increase up to 50% IT if unable to ventilate by increasing amplitude or by first decreasing frequency.
- 5 If severe hypercapnea with pH > 7.2, consider decreasing the endotracheal tube cuff inflation to produce a leak.
  - Reduce the inflation of the cuff until you see a drop in the mPaw by 5 cmH<sub>2</sub>O. Readjust the bias flow to correct the mPaw level.
  - Rule out obstruction in endotracheal tube with bronchoscopy.
- 6 Initial FiO<sub>2</sub> at transition to HFOV should be set at 100%.
- 7 As oxygenation improves, gradually wean FiO<sub>2</sub> to 40%, then slowly reduce mPaw 2 - 3 cmH<sub>2</sub>O Q 4 - 6 hrs until mPaw is in a 22 - 24 cmH<sub>2</sub>O range.
- 8 When the above goal is met (but no sooner than 24 hours), switch to PCV. Initial settings:
  - PIP titrated to achieve delivered TV of 6 - 8 ml/kg
  - Pplat < 35 cmH<sub>2</sub>O.
  - I:E of 1:1.
  - PEEP - 12 cmH<sub>2</sub>O.
  - Rate 20 - 25 / min.
  - mPaw should be 20 cmH<sub>2</sub>O (± 2 cmH<sub>2</sub>O)



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