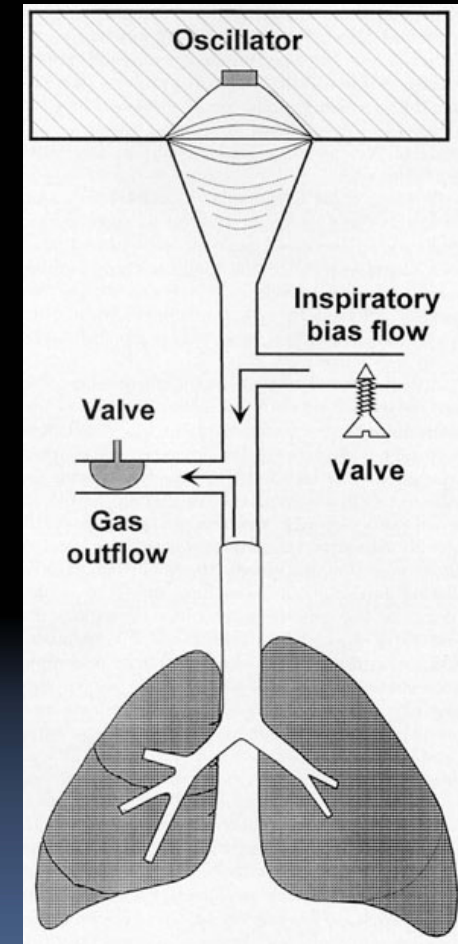


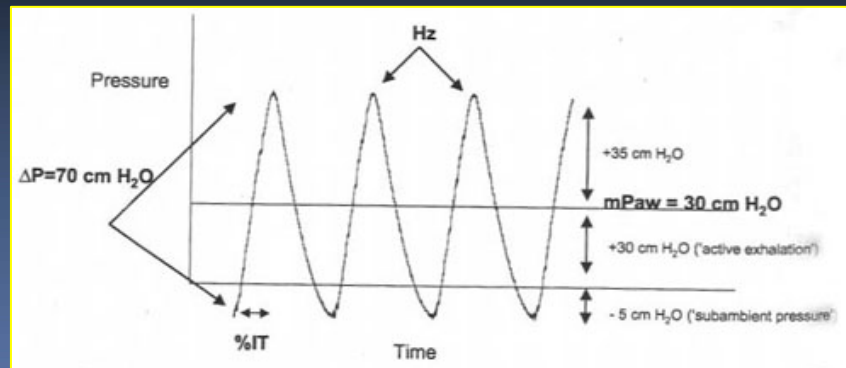
Components of HFOV

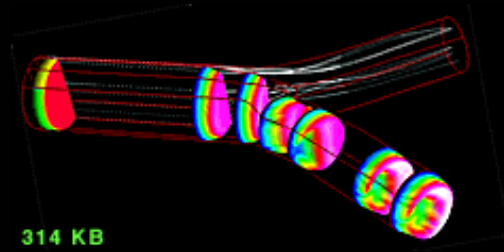
- Driving system
 - Oscillating pump or diaphragm
- Bias flow system
 - Deliver fresh gas
- Transmission link



Physiology of HFOV

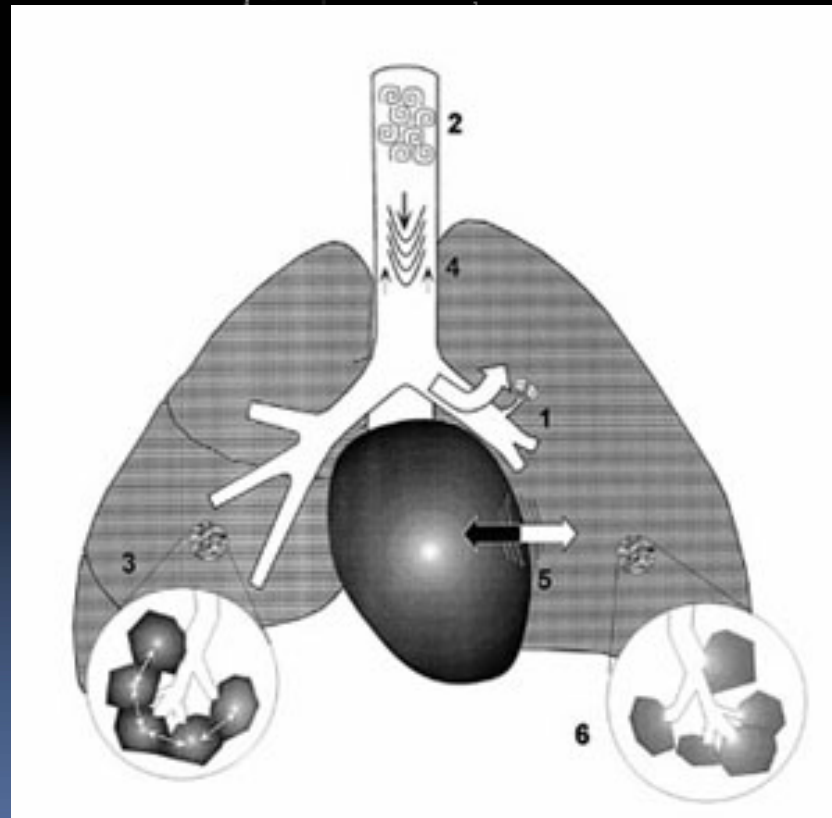
- Sinusoidal wave form
- High mean airway pressure (P_{aw})
- Active expiratory phase
 - Equal positive and negative pressure generation
 - Symmetric flow pattern
 - Blurs dead space and alveolar ventilation





HFOV

Gas transport mechanisms



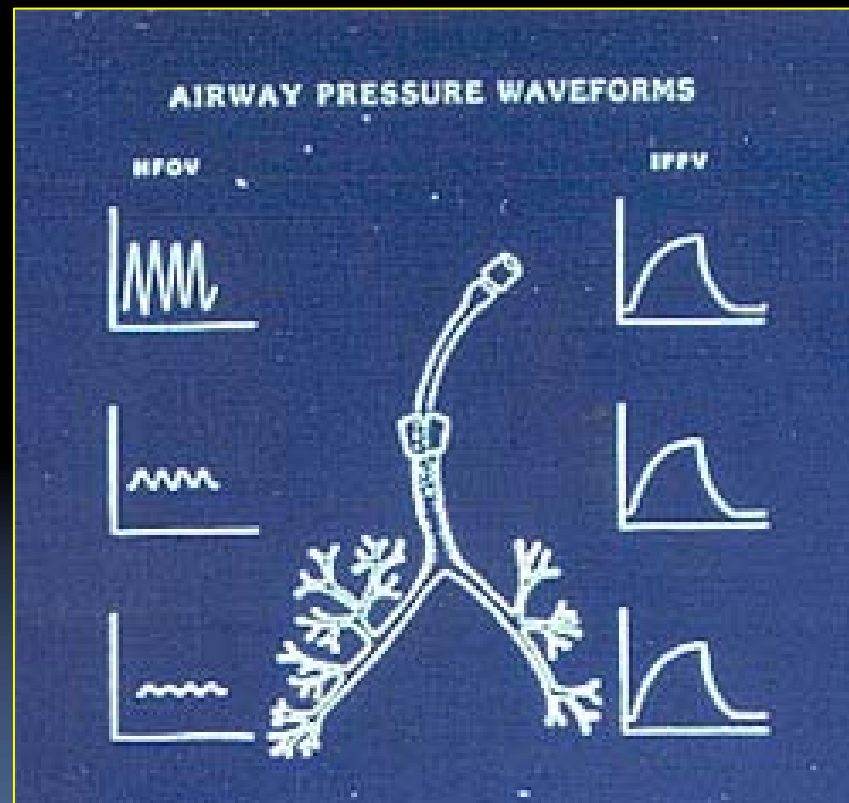
ARDS

HFOV

- “HFOV - Caring for the Baby in Adults”
 - Baby Lung Sitting on Top of a Consolidated Lung
 - Tidal Volumes of 6-10 ml/kg based on weight
 - Tidal Volumes of 20-50 ml/kg based on open lung units
 - Histology is similar to infant lung injury



Proximal and Alveolar Pressures HFOV vs CMV



Gerstmann D.