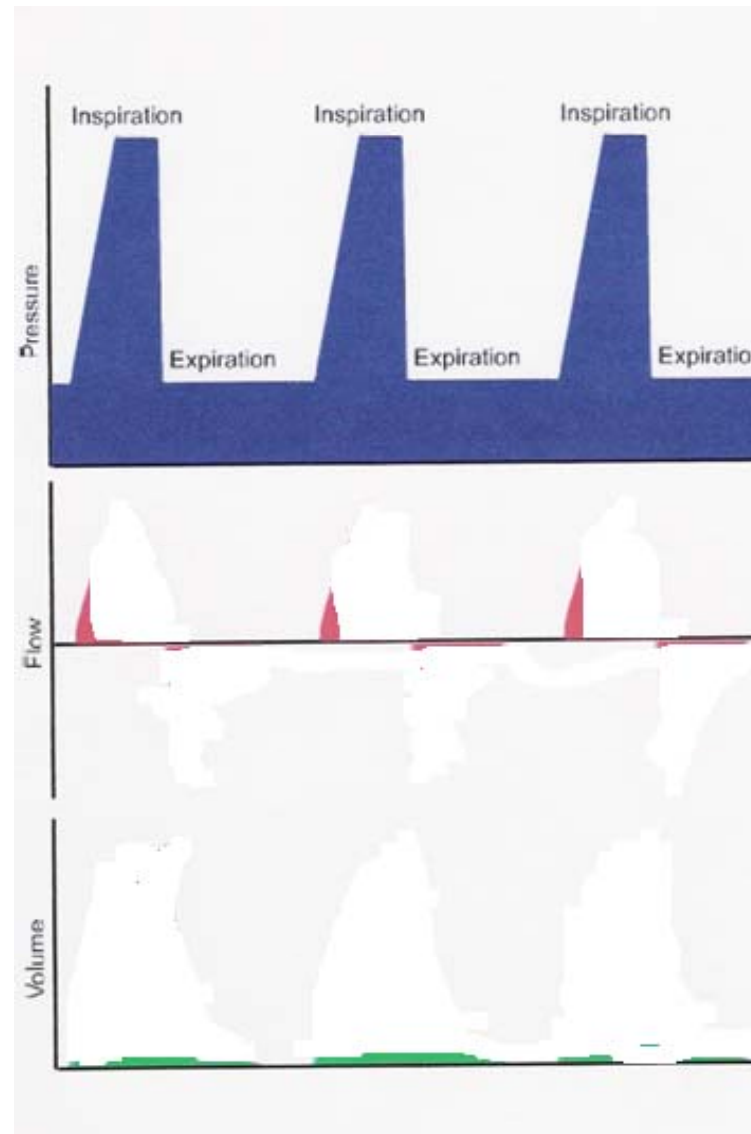


Test yourself

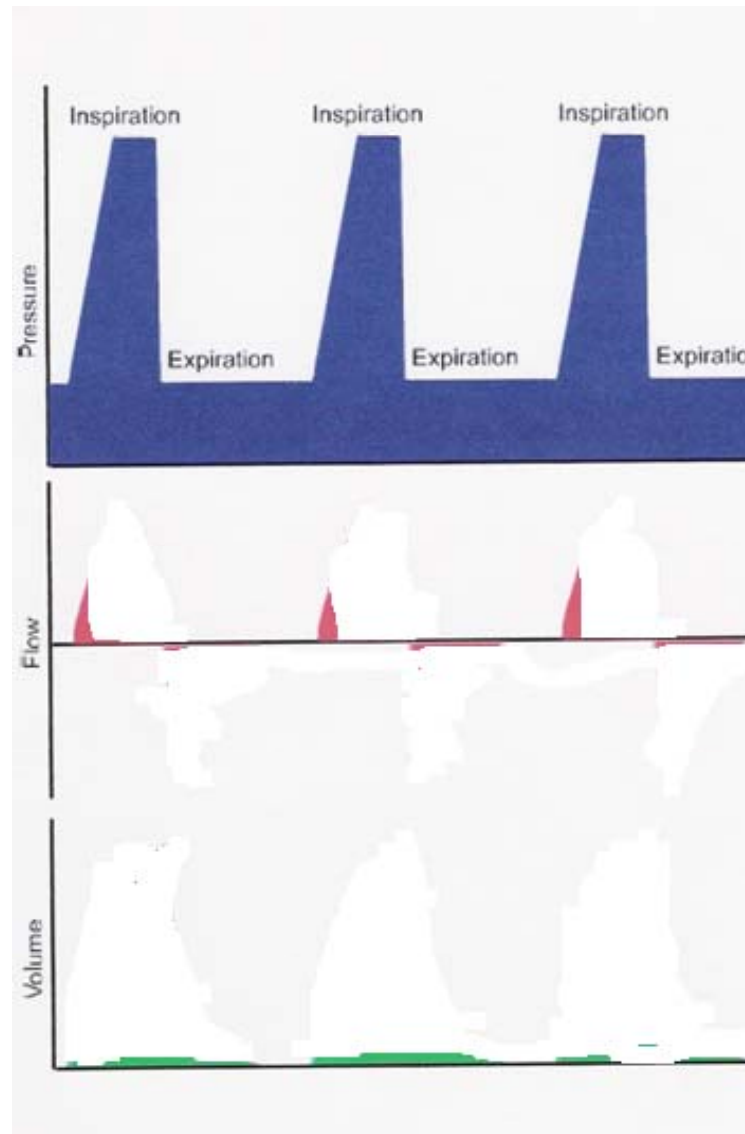
Test yourself #1

- You are caring for a patient who is intubated and ventilated on pressure control ventilation.
- The ventilator alarms and you look up to see these scalars



What is the most likely cause?

- a) Endotracheal tube has become dislodged.
- b) Endotracheal tube is blocked.
- c) Leak in the ventilator circuit.
- d) Endotracheal tube is too small.



Test yourself #2

You are caring for a patient being ventilated in pressure regulated volume control mode (PRVC). Which of the following is true of this mode

- a) Volume is constant until the high pressure alarm is reached.
- b) Pressure is constant unless compliance increases.
- c) Volume is constant unless airway resistance increases.
- d) Decelerating flow as long as pressure remains in the target range.

Test yourself #3

A one year old and a 12 year old both develop tracheal edema post extubation. If they both develop a 2mm reduction in tracheal diameter, which of the following statements is true:

- a) The airway resistance will increase by 2 X in the 1 year old.
- b) There is no difference in the airway resistance because the inspiratory flow is lower in the 1 year old.
- c) The airway resistance will increase by 4 X in the 1 year old.
- d) The airway resistance will increase by 16 X in the 1 year old.

Test yourself #4

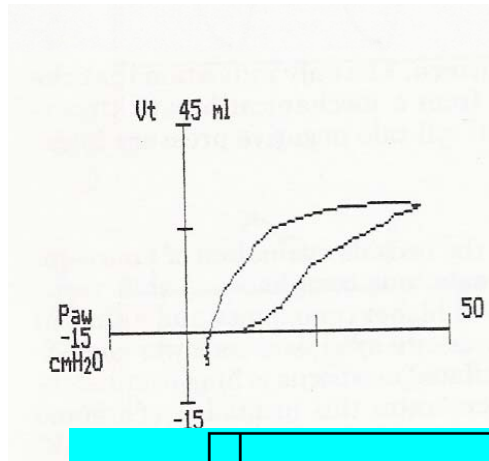
Who is/are the best candidates for NIV?

- a) An 18 year old admitted with narcotic overdose who is unconscious and has shallow respirations requiring support.
- b) An alert, anxious 60 year old with cardiogenic pulmonary admitted to the ED with SpO₂ of 65% on a non rebreathing mask at 15 l/m
- c) An alert 6 year old with Duchene's Muscular Dystrophy who presents with pneumonia and increasing pCO₂.
- d) An 80 year old with dementia and respiratory failure secondary to interstitial pulmonary fibrosis.

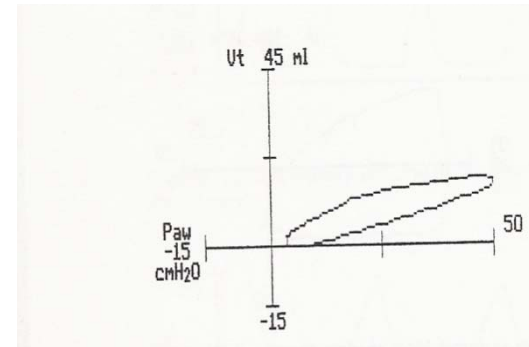
Test yourself #5

You are caring for a ventilated patient with a diagnosis of ARDS. Which of the following pressure volume graphs demonstrates typical decrease in compliance found in ARDS?

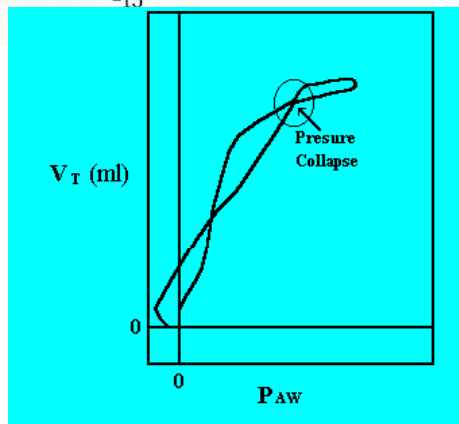
a)



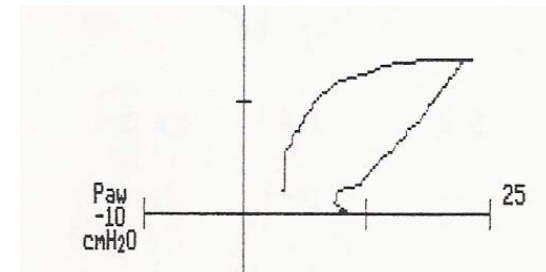
b)



c)



d)

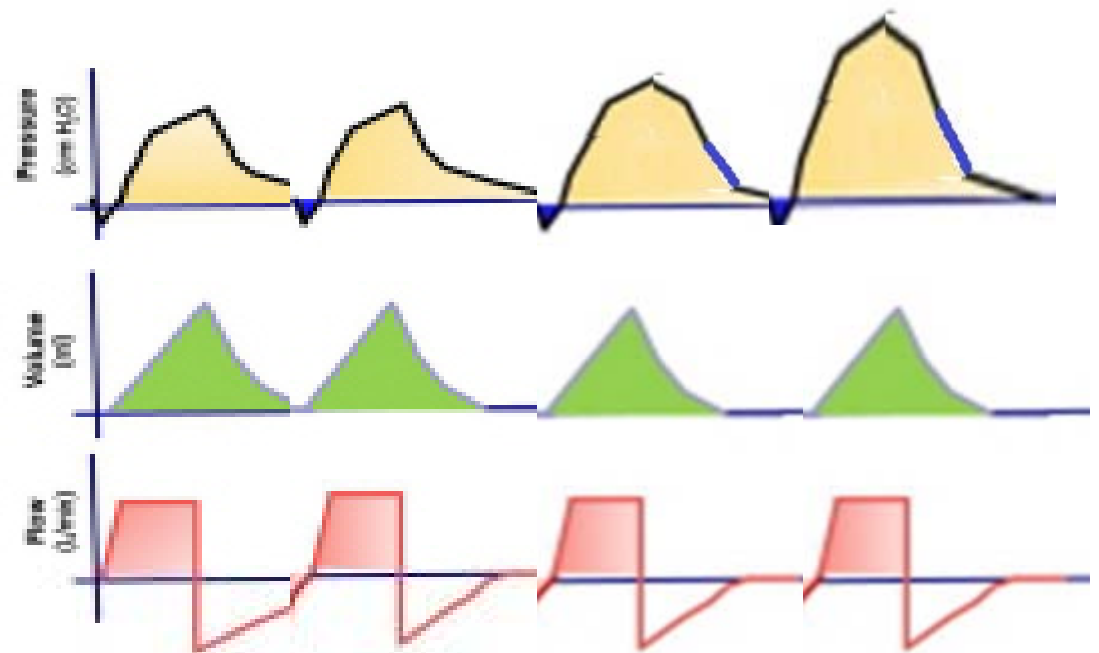


Test yourself #6

You are caring for a patient post-op bowel obstruction.

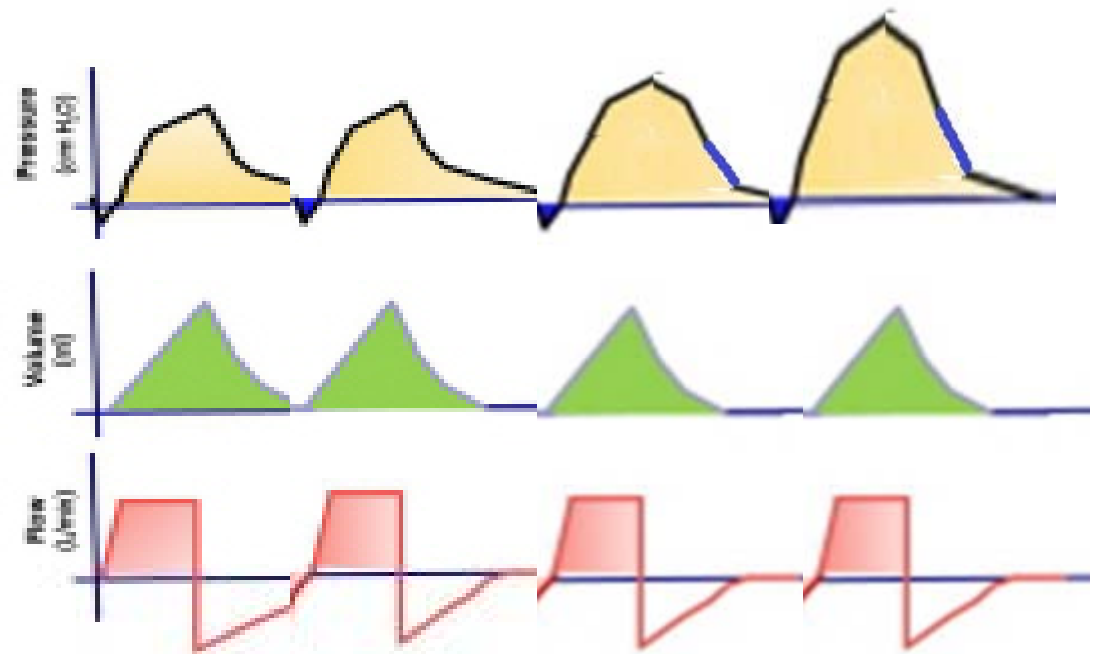
The patient is being ventilated in a volume control mode.

The ventilator alarms and you look up to see the following scalars:



What is the most likely cause?

- a) Decrease in lung compliance.
- b) Increase in patient triggering.
- c) Decrease in airway resistance.
- d) Leak in patient circuit.



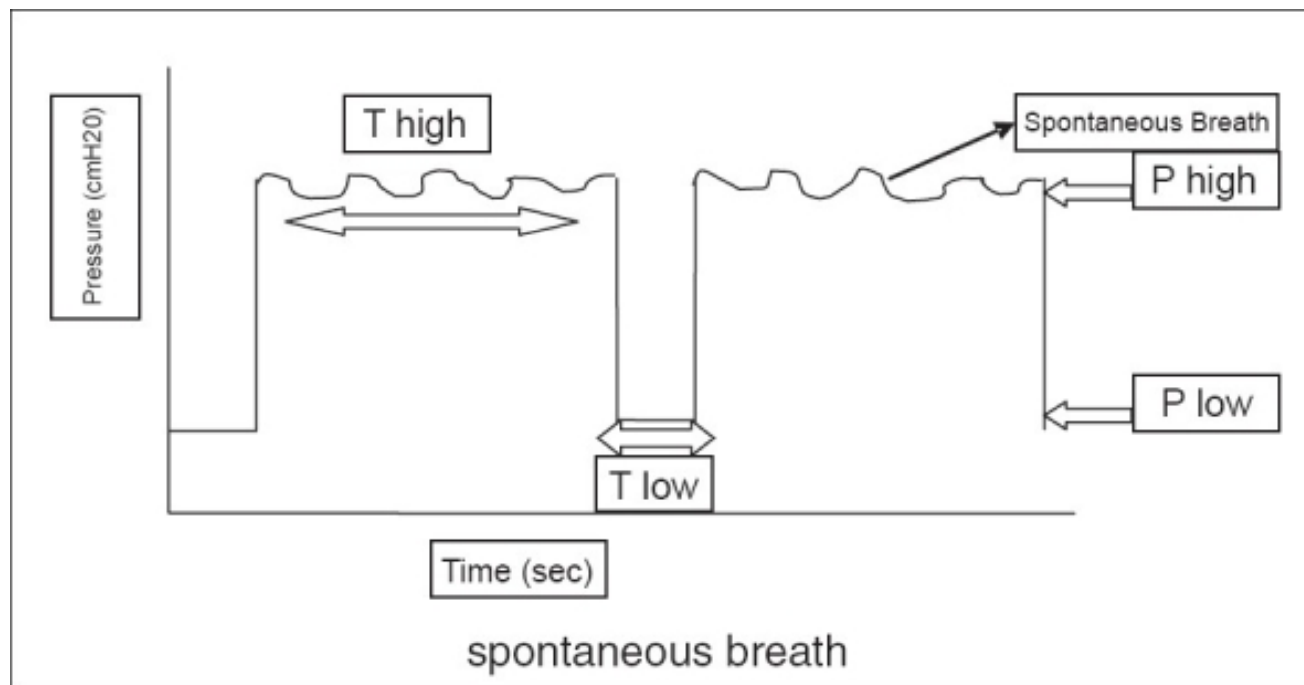
Test yourself #7

In high frequency oscillatory ventilation, the mean airway pressure acts most like:

- a) Peak inspiratory pressure
- b) PEEP
- c) Pressure limit
- d) Volume control

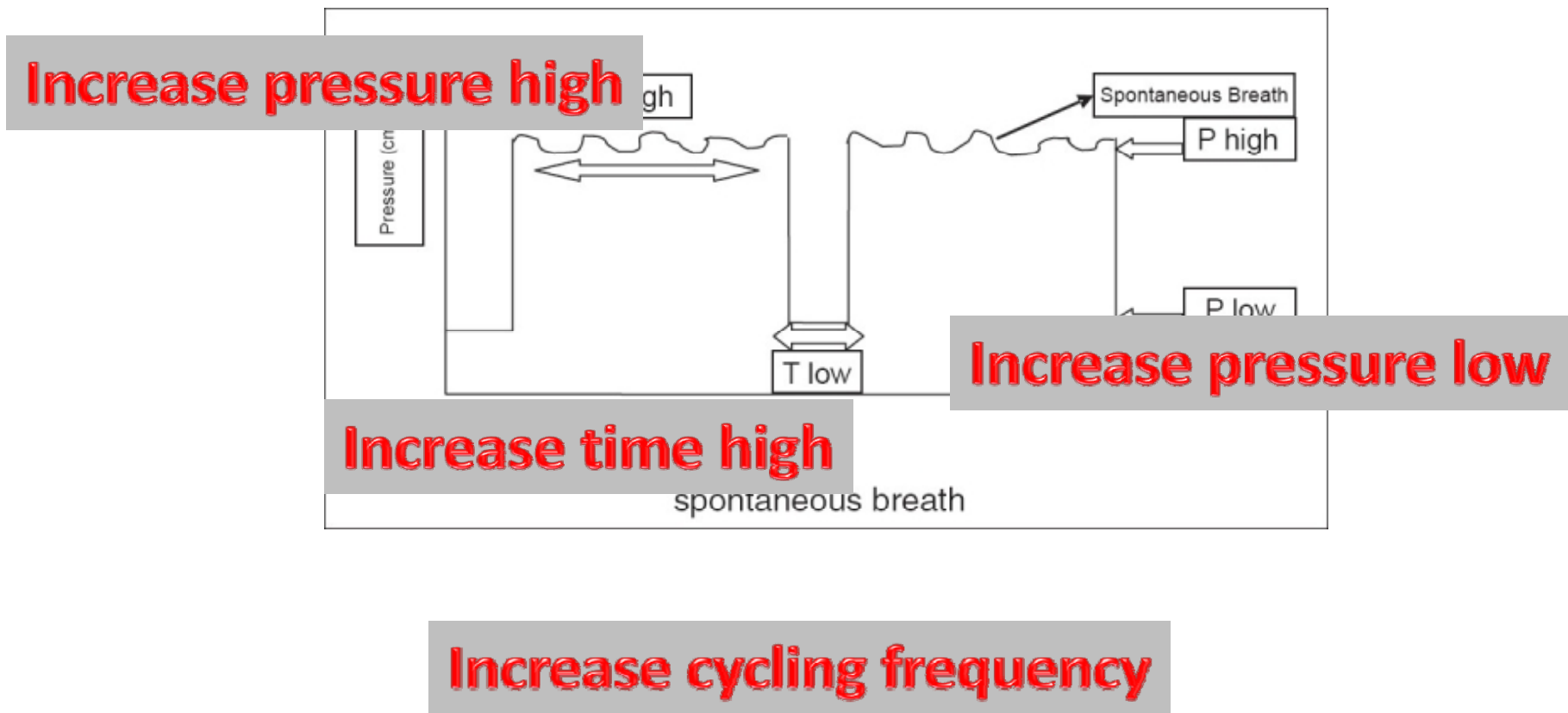
Test yourself #8

In APRV, the ventilator cycles from time high/pressure high to time low/pressure low.



Test Yourself #8

To increase ventilation and reduce pCO₂, which of the following would be the best approach?



Test yourself #9

Which of the following NIV modes would be the best approach to providing support for a patient who has lost functional lung volume and has poor inspiratory effort?

- a) BiLevel
- b) CPAP
- c) HHFNC
- d) NIV not appropriate

Test yourself #10

Which of the following is a factor in determining oxygen concentration using nasal prongs?

- a) Use of heated humidity
- b) FiO_2 from the oxygen source
- c) Expiratory obstruction
- d) Pulmonary blood flow

Test Yourself #11

- What part of the lungs is responsible for the most Airways Resistance (R_{aw}) in the respiratory system
 - a) Vocal cords
 - b) Trachea
 - c) Bronchi
 - d) Bronchioles

Test Yourself #12

- What is the most common cause of Type I Respiratory Failure
 - a) Drug overdose
 - b) Hypercapnia
 - c) ↑ Shunt
 - d) ↑ Dead space

Test Yourself #13

- What is the best ventilator strategy for someone with Type II Respiratory Failure
 - a) PRVC
 - b) CPAP
 - c) NIPPV
 - d) PSV

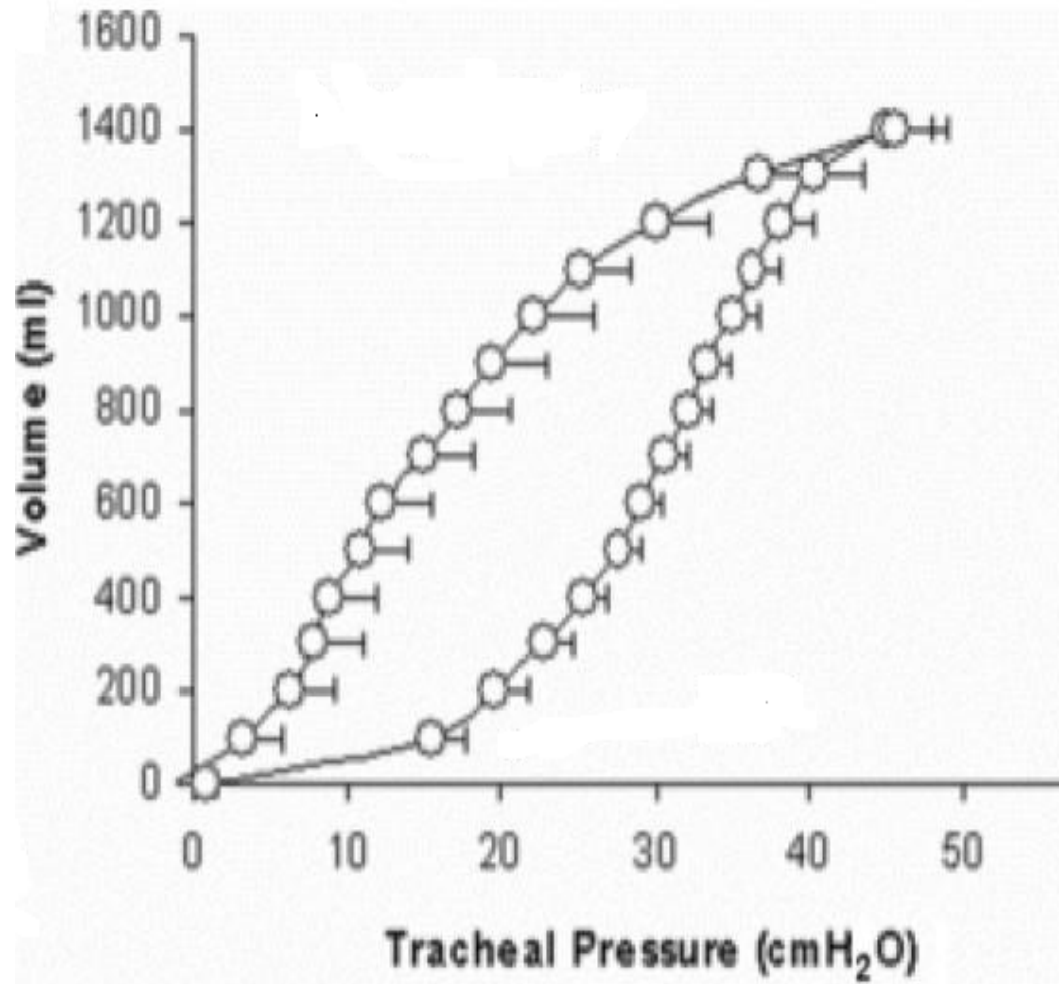
Test Yourself #14

- What are components of the Open Lung Concept?
 - a) HFO / CPAP + PS / Permissive hypercapnia
 - b) Prone positioning / APRV / LRM
 - c) APRV / permissive hypercapnia / CPAP + PS
 - d) High PEEPs / LRM / HFO

Test Yourself #15

Based on the Pressure
Volume Loop, What
Is the BEST PEEP for
This patient?

- a) 5 cmH₂O
- b) 10 cmH₂O
- c) 15 cmH₂O
- d) 20 cmH₂O



Test Yourself #16

- What ventilation strategies have been shown to improve survival?
 - a) APRV
 - b) HFO
 - c) VT 6 mls/kg
 - d) VT 8 mls/kg

Test Yourself #17

- What mode would you expect to have the best patient:ventilator synchrony?
 - a) A/C
 - b) CPAP+PS
 - c) PRVC
 - d) SIMV

Test Yourself #18

- How does VILI lead to Multi-organ failure?

Test Yourself #19

- How may PPV lead to a decrease venous return?
 - a) ↓ intrathoracic pressure
 - b) ↑ RV compression
 - c) ↓ venous return
 - d) ↑ venous tone

Test Yourself #20

- Approximately what % of ICU patients with ARDS and Sepsis have recovered fully enough to return to work after 1 year?
 - a) 10%
 - b) 25%
 - c) 50%
 - d) 75%