Incentive Spirometry (IS)

- Increases $P_L$ and lung volume by _________ pleural pressure
- Basic maneuver is a sustained maximal inspiration (SMI), followed by an inspiratory pause and a normal, relaxed expiration
- Uses devices that provide visual clues (________) to the patient that volume goal has been attained
- Goal is determined by predicted values or observation of initial performance – should be realistic and attainable

Incentive Spirometry (IS)

- Indications
  - Presence of _______________ (treatment)
  - Presence of conditions predisposing to atelectasis (prophylaxis)
    - Upper abdominal surgery
    - Thoracic surgery
    - Surgery in patients with COPD
  - Presence of _______________ lung defect associated with quadriplegic and/or dysfunctional diaphragm
Incentive Spirometry (IS)

• Contraindications
  – General contraindication
  – Patient unable to understand or follow instructions
  – Patient unable to generate adequate inspirations
    • VC < ______ ml/kg
    • IC < ____/____ predicted

Incentive Spirometry (IS)

• Hazards and complications
  – Hyperventilation
  – Discomfort, secondary to inadequate pain management
  – Pulmonary __________
  – Exacerbation of bronchospasm
  – Fatigue

Incentive Spirometry (IS)

• Equipment
  – Simple and relatively _______________
  – Use some sort of visual means to show volume
  – Volume-oriented
    • Use some sort of volume displacement mechanism
  – Flow-oriented
    • Use some sort of flow measuring mechanism – volume must be calculated
Incentive Spirometry (IS)

• Administration
  – Instruction prior to __________ is recommended
  – Initial goal should be attainable, but require some moderate effort – use predicted normals as a starting point
  – Instruct patient to
    • inspire at low to moderate flows, from FRC to (ideally) TLC
    • incorporate an inspiratory pause of ____-____ seconds
    • exhale in a normal and relaxed manner

• Number of SMI maneuvers per session will vary by patient ability and condition
• Normal number of sighs is 6/hour – IS therapy should strive to provide 5-10 SMIs/hour
• Patient should be monitored at first – later IS can be done without supervision
• When charting, include
  • ________________
  • ________________
  • ________________