Benefits of Early Mobilization

Determining Readiness of Therapeutic Intervention

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Early Mobility Is Important

- Decreases days on the ventilator
- Decreases days in the hospital
- Decreases disability
- Decreases delirium

How Mobility Decreases Ventilator Days

- In a supine position, lung volumes are reduced
- Risk of atelectasis and pneumonia increases
- Muscles of respiration weaken rapidly

Related Interventions

- Raise the head of the bed!
- Use the ventilator’s VTE readout to provide visual cues for the patient to take deep breaths.
- Assist the patient to sit at the edge of the bed.
- Use tactile cuing to encourage improved pulmonary ventilation.
- Transfer to the chair.
- Ambulate!
How Mobility Decreases Length Of Stay

Immobility can contribute to several complications that prolong hospital stay:

- Bedrest causes pressure ulcers
- Bedrest increases risk of DVT
Related Interventions

- Antiembolics
- Empower your patient to participate in bed mobility
- Educate the patient and family
- Delay the increase in blood viscosity
How mobility decreases disability

- Bed rest results in orthostatic hypotension.
- Best rest causes weakness.
- Bed rest causes long term disability.

Related Interventions

- Start with exercises
- Integrate theraband or manual resistance as tolerated
How mobility decreases delirium

- Bedrest induced Hypoxia causes delirium. ¹
- Retention of carbon dioxide causes confusion. ¹
- Immobility leads to delirium.
- Lack of sleep has been shown to contribute to delirium. ²


Related Interventions

- The simplest of interventions is assisting the patient in touching their own face!
- Re-orientation during your treatment session
- Help your patient move, to the maximum of their tolerance
- Involving family in the patient’s care
ICU patients can be mobilized safely!

Multiple research studies have been conducted on this topic in the past few years. A sample follows:

- Of 498 patients, 1 adverse event ¹
- Of 176 interventions, 2 adverse events ²
- Of 424 interventions, 1 adverse event ³

Common Misconceptions

Often a PT, OT, or RN will fail to consider mobilization for the following reasons:

- Pt is orally intubated
- Pt is on continuous renal replacement therapy (CRRT)
- Resting HR is over 100
  - Studies that allowed HR up to 140
- Femoral lines
Determining Readiness

**MOVE** criteria

- **M**: myocardial stability
- **O**: FiO2 \(<= 60\%\), PEEP \(<= 10 \text{ cmH}_2\text{O}\)
- **V**: vasopressors not being titrated up in past 2 hours and MAP >60, unless exception such as chronic hypotension
- **E**: pt is engaging, interacting with staff when stimulated. RASS of -2 or better to be successful

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Can The Patient Follow Simple Commands?

YES

Can The Patient Complete Active Full Knee Extension Against Gravity?

YES

Can The Patient Maintain Sitting with Minimal Assist or Less?

YES

Can The Patient March in Place 5x (with or without a walker, with or without assistance)?

NO

Use Alternative Method:
- Sliding Board (if trained)
- Hoyer Lift
- Stretcher Chair
- Bed to Chair Position

Yes! Go forth and mobilize!
Red Flags

- Oxygen saturation lower than 88%
- Increased work of breathing
- Decrease in blood pressure, MAP
- Change in EKG rhythm
- Chest pain
- Signs of pain
- Signs of fatigue
- Patient request
Lines That Require Extra Caution

- Endotracheal tube
- Tracheostomy tube
- UE Arterial line
- Femoral lines: Arterial, Venous, Dialysis
- Swan Ganz
- Pleural chest tube
- Mediastinal chest tube
- IABP
- Feeding tubes
How to Overcome Barriers

- Research has shown mobility in ICU to be feasible 1, 2, 3
- Barriers: RN, RT, PT time, access to portable ventilator, need for 2nd person for lines protection
- Patient’s pain, sedation level
- Ventilator weaning
- Dialysis or other procedures

Take Home Message

- Do something!
- Mobility does not necessarily mean gait/ambulation.
- Try AROM in bed.
- Dangle.
- Transfer to the chair
- Team work is vital
Change your thinking from “Why I can’t treat that patient” to “What can I do to help this patient?”