Mobilization of Patients in ICU– Physiotherapy

The purpose of this document is to provide clinicians working in the Intensive Care Unit at St. Paul's Hospital with a framework to assist in decision making regarding the mobilization of patients.

Stages of Mobility

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Patient Description	Unstable See page 2	1. Stable 2. Tolerates 20 min in cardiac chair	1. Stable 2. Able to dangle for 20 min	1. Stable 2. Able to stand for 1 min	1. Stable 2. Able to ambulate 10 metres	1. Stable 2. Ambulating safely with supervision
Main Goals	1. Prevent pressure injuries 2. Prevent joint stiffness	1. Prevent pressure injuries 2. Prevent joint pain and stiffness 3. Stimulate patient 4. Increase neck/trunk strength	1. Increase trunk and limb strength 2. Progress to standing	1. Increase standing tolerances, 2. Improve balance 3. Progress to walking	1. Increase mobility tolerance 2. Encourage ADL	1. Encourage patient to mobilize 2. Encourage ADL
RN Role	1. ROM 2. Q2H turns	1. ROM 2. Q2H turns 3. Cardiac Chair 30 min TID	1. Ensure patient is turning regularly 2. Ensure patient is doing ROM exercises 3. Cardiac Chair 30 min TID	1. Sitting in recliner 1 hour BID 2. Standing for 1 min BID	1. Sitting out for all meals 2. Ambulating BID	1. Supervise patient while ambulating

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
PT Role	Assess, monitor; provide consultation when appropriate	1. Dangle (unsupported sitting) 2. Balance/coordination exercise for head, neck and trunk	1. Trunk and extremities strengthening in preparation for standing 2. Standing	1. Weight bearing / weight shifting exercise 2. walking	1. Provide consultation and/or assistance to RN as needed 2. Increase overall strength and endurance	Provide consultation and/or assistance to RN as needed
Ready for next stage when	1. Patient becomes stable 2. Patient tolerates 20 min in cardiac chair	Patient able to dangle for 20 min	Patient able to stand for 1 min	First day patient ambulates 10 metres	First day patient can safely ambulate with supervision	N/A

When to consider not mobilizing

The following are evidence-informed and expert informed suggestions of when it may be inappropriate to mobilize the patient

Please note: the cited values are not absolute criteria for withholding mobilization but are within the range of concern that could benefit from team discussion

Cardiovascular Status

- **Mean arterial pressure**: less than 65 [1,3]
- **BP:** A drop in systolic pressure (more than 30 mmHg) or below pre-exercise level **OR** a disproportionate rise e.g. more than 200 mmHg for systolic or more than 110 mmHg for diastolic [4]
- **HR:** less than 40 [3] or more than 130 [3, 5,] requiring temporary pacer
- **Hemodynamic:** Administration of a new inotrope/ pressor agent or frequent increase [5]; or higher dosage; uncontrolled systemic hypertension, active bleeding [3, 5].
- **Acute or unstable cardiac status:** New MI [1]; dysrhythmia requiring new medications [1]; active cardiac ischemia [3]; unstable rhythm [5]; intraortic balloon [5].
- Pulmonary Embolus: discussion with physician to determine suitability
- Deep Vein Thrombosis: May mobilize as tolerated immediately after low molecular weight heparin (e.g. enoxaparin, lovenox®, dalteparin, fragmin®, tinzaparin (innohep®), nadroparin (fraxiparine®) is given. If patient is on any other form of anticoagulation (e.g. IV heparin) please check mobility orders with the physician. Monitor patient for changes in pain, swelling, colour and shortness of breath [6].

Respiratory Status

- **SpO_2:** less than 88% [1,3] or undetermined cyanosis.
- **RR:** less than 5 or greater than 40 [3]
- **FiO_2:** less than 60% [5]
- **Ventilator Issues:** ventilator asynchrony [3]; unsecure airway [3]; uncontrolled airway irritability; extracorporeal membrane oxygenation; high frequency oscillatory ventilation

Neurological Status

Patient Status: severe agitation, distress or combative [2,3]; not able to understand instructions this risking patient or therapist safety Uncleared, unstable/non-fixated spinal cord injury [5] or head injury.

Other

- During Intermittent hemodialysis 3
- Unstable fracture
- Excessive muscle soreness or fatigue that is residual rom last exercise or activity session
- Other contraindications specific to a given setting/unit.

References

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4. ACSM Guidelines for Exercise Testing and Prescription. 8th edition. Lippincott Williams & Wilkins. Philadelphia 2010 pp.209-10.
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6. 6. Singh C, Fletcher R, Cunningham K, and Szlivka M. Mobilization with a Deep Vein Thrombosis. Clinical Practice Guideline (DRAFT in process). Fraser Health Authority. 2009.

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Safe Prescription of Mobilizing Patients in Acute Care Settings. What to Assess, What to Monitor, When not to Mobilize and How to Mobilize and Progress. (SAFEMOB). Developed by the SAFEMOB Task Force. 2010.

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