



# Movement Analysis

## Instructions

1. View videos in small groups and go over the questions related to each video
2. Work independently to answer questions
3. Return to your group and discuss case
4. Individually write SOAPE note for case

## Watch

Watch all assigned videos:

- Acute Care Part 1: Bed Mobility Scooting Up in Bed
- Acute Care Part 4: Dizziness while Standing
- Mobility: Ambulation in Acute Care
- Mobility: Transfer from chair to bed in Acute Care
- Upper Extremity Assessment: Acute Care
- Upper Extremity ROM: Family Teaching

# Movement Analysis

## Questions

1. What are the precautions you need to consider when working with this patient?  
Consider all the lines and leads and surgical precautions you need to be aware of and follow.

List of Precautions	Plan to Maintain Precautions
Surgical incision - sternum	No aggressive weight bearing and strengthening x 6 wks post sx
NG Tube	Monitor patient to ensure he does not try to pull out ng tube; largely maintain head of bed to at 30 deg to prevent aspiration
Portal L upper arm	NO blood pressure measures L UE
Impulsive and poor safety awareness	Monitor patient closely during sessions; elevate bed rails at end of session; use gait/transfer belt
Fall risk	Use gait/transfer belt and monitor patient closely; ensure team know fall risk.
Orthostatic hypotension	Monitor pt symptoms; exercise in seated prior to standing; use TED hose

# Movement Analysis

2. Complete a movement analysis of his bed to chair transfer.

	<b>Initial Condition</b> Posture assessment of the initial starting position prior to the initiation of the activity	<b>Preparation</b> Postural set up and adjustment prior to the task. Remember this is mostly an internal process that may not be evident.	<b>Initiation</b> The first thing that moves as a part of the actual task	<b>Execution</b> Progression of the movement with description of changes in alignment, BOS with a description of movement.	<b>Termination</b> The final position at the end of the task.
Head and Neck	<b>Forward flexion and remained forward flexed approx 20 deg throughout mvment sequence</b>				
Upper Trunk	<b>B scap protract</b>				
Lower Trunk	<b>L/S ext</b>				<b>Relative hip ext; l/s flex; leaned back against chair</b>
Pelvis	<b>Ant pelvic tilt</b>				<b>Post pelvic tilt</b>
Upper Extremities	<b>R UE minimal support on thigh at initial condition through initiation; Once moving to standing R UE not part of BOS and was flaccid and hypotonic. L UE active component w/ movement</b>				
Lower Extremities	<b>R LE component of BOS at initial cond to initiation; Provided minimal muscle activity; L LE primarily provided muscle torque for movement sequence.</b>				

# Movement Analysis

3. Fill out the table below to predict impairments you saw during your movement analysis for bed mobility. What objectives measures would you complete to assess the impairments? What would you predict to be the outcome of the impairment testing? How would you intervene to reduce or address the impairment (within session)?

Predicted Impairment (based on movement analysis)	Objective Measure	Outcome	Within Session Intervention
<b>Limited selective strength R UE &amp; L LE</b>	<b>STREAM - R LE Fugl-Meyer R UE</b>		<b>Rood tapping/quick ice to R LE; NDT sit/stand; leg press; bridges; NuStep for R LE. NDT UE facilitation</b>
<b>Sensory loss R UE and LE</b>	<b>Prop R UE and LE</b>		<b>Incorporate UE and LE as part of BOS; make pt aware of extremities w/cues and neurofacilitation</b>
<b>Poor balance</b>	<b>Function in Sitting Test Seated fwd reach</b>		<b>Balance retraining</b>
<b>Neglect; R visual field cut</b>	<b>Double simultaneous stimulation; test visual fields</b>		<b>Same as sensory loss; cue to turn head to compensate for visual loss; neuro-optometry w/prism lenses</b>

4. View the patient videos:
- Acute Care Part 1: Bed Mobility Scooting Up in Bed
  - Acute Care Part 4: Dizziness while Standing

# Movement Analysis

OPTIONAL PRACTICE (additional practice for you to help prepare for final lab practical exam)

Select one of the movement sequences in the above two patient videos. Complete a movement analysis of his \_\_\_\_\_.

	<b>Initial Condition</b> Posture assessment of the initial starting position prior to the initiation of the activity	<b>Preparation</b> Postural set up and adjustment prior to the task. Remember this is mostly an internal process that may not be evident.	<b>Initiation</b> The first thing that moves as a part of the actual task	<b>Execution</b> Progression of the movement with description of changes in alignment, BOS with a description of movement.	<b>Termination</b> The final position at the end of the task.
Head and Neck					
Upper Trunk					
Lower Trunk					
Pelvis					
Upper Extremities					
Lower Extremities					

# Movement Analysis

OPTIONAL PRACTICE (additional practice for you to help prepare for final lab practical exam)

Fill out the table below to predict impairments you saw during your movement analysis for \_\_\_\_\_ . What objectives measures would you complete to assess the impairments? What would you predict to be the outcome of the impairment testing? How would you intervene to reduce or address the impairment (within session)?

Predicted Impairment (based on movement analysis)	Objective Measure	Outcome	Within Session Intervention

5. View the next patient video:
- Mobility: Ambulation in Acute Care

Using Rancho Gait Full Body Gait Form (next page), complete a gait analysis of this patient.

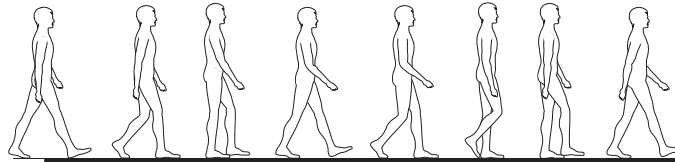
# GAIT ANALYSIS: FULL BODY



Rancho Los Amigos  
National Rehabilitation Center

Reference Limb:

L  R



Major Deviation  
 Minor Deviation

	WA		SLS		SLA				Major Problems:
	IC	LR	MSt	TSt	PSw	ISw	MSw	TSw	
<b>Trunk</b>									(WA) Weight Acceptance
Lean: B/F									
Lateral Lean: R/L									
Rotates: B/F									(SLS) Single Limb Support
<b>Pelvis</b>									
Hikes									
Tilt: P/A									
Lacks Forward Rotation									
Lacks Backward Rotation									
Excess Forward Rotation									
Excess Backward Rotation									(SLA) Swing Limb Advancement
Ipsilateral Drop									
Contralateral Drop									
<b>Hip</b>									(SLA) Swing Limb Advancement
Flexion: Limited									
Excess									
Past Retract									
Rotation: IR/ER									(SLA) Swing Limb Advancement
AD/Abduction: AD/AB									
<b>Knee</b>									
Flexion: Limited									
Excess									
Wobbles									
Hyperextends									
Extension Thrust									(SLA) Swing Limb Advancement
Varus/Valgus: Vr/Vl									
Excess Contralateral Flex									
<b>Ankle</b>									
Forefoot Contact									
Foot Flat Contact									
Foot Slap									
Excess Plantar Flexion									
Excess Dorsiflexion									
Inversion/Eversion: Iv/Ev									
Heel Off									
No Heel Off									
Drag									
Contralateral Vaulting									Name _____
<b>Toes</b>									Patient # _____
Up									Diagnosis _____
Inadequate Extension									
Clawed/Hammered: Cl/Ha									

# Movement Analysis

6. View the next patient video:
- Mobility: Transfer and Bed Mobility in Acute Care

Compare how he transfers back into the bed as compared to the start of the session. What are the movement differences you now see and what are the probable causes for these changes?

**Uses hospital bed rail w/ L UE; fatigued; diminished safety awareness**

7. View the next two patient videos:
- Upper Extremity Assessment: Acute Care
  - Upper Extremity ROM: Family Teaching

a. What other family training do you think is needed for this patient?

**Bed mob, transfer training, educate fall risk and safety concerns, LE PROM to AROM, bed positioning program**

b. How would you prioritize the family training?

**Safety concerns would be prioritized first; then other training**

c. Think about the important factors you would need to include during this family training session.

**Know home environment and discuss w/ family; discuss transitioning home or to acute rehab program**

d. How would you ensure the family member understood your instructions?

**Have family member complete return demonstration and "talk out the steps or sequence"**

8. Write SOAPE Note for this case.

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