

Hands On Skill Development: Ambulation

Watch

This handout is intended to accompany the Lesson Plan: Hands On Skill Development using Ambulation.

- After group discussion and feedback from instructors, complete the chart below. Be specific as you list the impairments.

Functional limitation: decreased ability to ambulate independently

Phase of gait	Gait deviations noted	Possible impairments (be specific)
Swing	<p><i>Decreased push off L ankle initial swing</i></p> <p><i>Decreased L hip flexion moment initial swing</i></p> <p><i>Decreased L knee flexion moment initial swing</i></p> <p><i>Decreased L knee deceleration terminal swing</i></p> <p><i>Increased external rotation LLE</i></p>	<p><i>L ankle PF weakness, decreased L hip extension PROM</i></p> <p><i>L hip flexor weakness</i></p> <p><i>L knee flexor weakness</i></p> <p><i>Weakness L hip internal rotators</i></p> <p><i>Decreased sensation and proprioception LLE</i></p> <p><i>Tone abnormalities LLE</i></p> <p><i>Decreased coordination LLE</i></p> <p><i>Pain</i></p> <p><i>Fatigue</i></p> <p><i>Decreased attention to task</i></p>
Stance	<p><i>L hip flexion/retraction throughout</i></p> <p><i>L knee hyperextension midstance</i></p> <p><i>L ankle plantarflexion midstance despite AFO</i></p> <p><i>Decreased weight acceptance on LLE</i></p>	<p><i>L hip extensor weakness</i></p> <p><i>L hip PROM limitations</i></p> <p><i>L knee extensor weakness</i></p> <p><i>L knee PROM limitations</i></p> <p><i>L ankle PROM limitations</i></p> <p><i>L ankle DF weakness</i></p> <p><i>L ankle PF spasticity</i></p> <p><i>Fear</i></p> <p><i>Pain</i></p> <p><i>Decreased sensation and proprioception LLE</i></p>
Throughout gait cycle	<p><i>LUE fully extended</i></p> <p><i>L shoulder protracted</i></p>	<p><i>Dense weakness of LUE</i></p> <p><i>Flaccid muscle tone LUE</i></p>

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	<p><i>L trunk elongated</i></p> <p><i>Weight shifted to R side</i></p> <p><i>Forward head, head rotated to right</i></p>	<p><i>Weakness L side of trunk</i></p> <p><i>Fear of accepting weight on LLE</i></p> <p><i>Visual perceptual deficits</i></p>
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- Practice hands on skills related to testing your impairment hypotheses. As one student simulates being the patient, the other student tests impairments related to the neurologic diagnosis.

If impairment testing has been previously covered in another class, it may be helpful to have a pre-lab assignment for students to review their testing skills in order to avoid having to review in this lab.

- Discuss with a peer how the impairments are related to the functional limitation. For example if you found the patient's hip extensors to be weak, can you see where in the gait cycle that would be most problematic?
- Document one short-term goal for this patient (2 weeks).
Goals must be specific, measurable, attainable, realistic and time specific. Goals must also be patient centered and relate to the treatment setting and the patient's prior level of function.

STG 1.) In 2 weeks, patient will ambulate 40' with assistive device and L AFO with moderate assist of one and min verbal cues for sequencing in order to improve ambulate to bathroom with staff.

- Document one long-term goal for this patient (4 weeks).

LTG 2.) In 4 weeks, patient will ambulate 100' with supervision using L AFO on level terrain with LBQC and no verbal cueing in order to be more independent for home discharge with family.

- Plan your treatment. It should reflect the patients impairment findings and the goals you have set. One approach to organizing your treatment ideas is shown in the grid below.

Impairments	Treatment Ideas	Rationale
	<p>Be specific: patient position, equipment, assistive devices, your cues and facilitation</p>	

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<p><i>L hip flexor weakness: against gravity to ½ active range with flexor synergy</i></p> <p><i>L knee flexor weakness: gravity eliminated to ¼ active range</i></p> <p><i>L hip extensor weakness: gravity eliminated to ½ active range with extensor synergy</i></p> <p><i>L knee extensor weakness: gravity eliminated to ½ active range</i></p> <p><i>L ankle DF: absent strength</i></p> <p><i>L ankle df=0 degrees</i></p> <p><i>L hip extension=0 degrees</i></p> <p><i>Decreased light touch and proprioception in ankle and foot of LLE: 50% accuracy noted</i></p> <p><i>Tone abnormalities LLE: flaccidity with emerging L ankle PF spasticity</i></p> <p><i>Decreased coordination LLE: unable to fully test due to weakness</i></p> <p><i>R side strength in RUE and RLE are 5/5 with normal sensation and coordination</i></p>	<p><i>Treatment ideas should include all of the following:</i></p> <p><i>Patient position</i></p> <p><i>Therapist generated tactile cues and facilitation</i></p> <p><i>Therapist generated verbal cues</i></p> <p><i>Environmental set up and equipment used. For Henry this should include specifics on assistive devices and the AFO and support of his L arm</i></p> <p><i>Students can be reminded that their treatment should be:</i></p> <p><i>Safe (but not too safe)</i></p> <p><i>Goal oriented</i></p> <p><i>Related to functional limitation</i></p> <p><i>Related to patient impairments</i></p> <p><i>Salient</i></p>	<p><i>Rationale should include:</i></p> <p><i>Why this intervention was chosen including what impairments are being addressed and how they will impact function.</i></p> <p><i>Common issues seen with students include only addressing impairments in their treatment or only function, addressing one impairment at a time, or not showing skill in their intervention.</i></p> <p><i>Many students play it safe and need to be reminded to challenge the patient at their highest functional level.</i></p> <p><i>An example for Henry would be working only in supine on activities like clamshells or abdominal drawins. Although his core and L hip is weak, this position does not relate to the functional activity and is too easy for him at this stage of recovery.</i></p>
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7. Practice verbalizing to a peer why you chose this treatment intervention. Provide a detailed rationale for why you worked in the position chosen, the activities you used and the environmental set up.
8. Some critical thinking questions to consider before you start your treatment:
 - At what level of the motor control continuum is your activity? (mobility>stability?controlled/dynamic stability>skill) Did you consider this as you

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were planning it and how does it align with where the patient is currently performing?

- Is your treatment directed at one of your stated goals?
- Does your treatment focus solely on impairments without considering function? Provide a rationale for this approach. Discuss how this impacts the patient's functional recovery.
- Does your treatment focus solely on function without considering impairments? Provide a rationale for this approach. Discuss how this impacts the patient's ability to overcome their impairments.
- Does the chosen treatment mean something to the patient? This salience is important for patient buy-in with therapy. How could you improve salience in this intervention?
- Discuss how you would approach setting up this treatment with the patient. What equipment is needed and what safety considerations exist? Talk through your plan with a peer before you begin.

9. Hands on practice:

- Perform your treatment interventions. Use patient friendly language at all times.
- Perform progression and regression of the initial activity. Problem solve reasoning for progression and regression and how a therapist knows when to advance an activity with a given patient. Discuss signs that a patient is not tolerating a given treatment activity and need a regression of that activity.

10. Seek out feedback from peers and lab instructors regarding:

- Your body mechanics
- Your safety awareness and ability to keep the patient safe
- Your ability to build a rapport with your patient
- Your ability to initiate and terminate the treatment
- Your handling skills and ability to facilitate movement