Observation Skill Development Ambulation

This faculty resource is designed to accompany the ICE Lesson Plan: **Observation Skill Development using Ambulation**.

Faculty Resource

1. Students will need baseline knowledge of the gait cycle to practice observational skills in the neurologically impaired individual. Each faculty member will likely use different resources to have students observe normal gait prior to this assignment.

   The Rancho Los Amigos Observational Gait Analysis worksheet is a good resource to get students thinking about a systematic way to examine gait. It is recommended that students break down the phases of gait to observe one at a time and start either proximal or distal with their observations.

   Tools such as the Dynamic Gait Index and Functional Gait Assessment are quantitative tools which are more useful for individuals who are more functional in their recovery.

   Having students videotape gait using their cell phones and uploading to a free app for gait analysis can be helpful especially if they slow the video down and pause to take notes.

2. Neurologically impaired individual static standing observations:

   a. Trunk: body weight is shifted to right. Could be due to using parallel bar in R hand but also due to need for stability. Left side of trunk appears elongated and inactive.

   b. Head is turned to right and forward flexed but head control appears normal.

   c. The left upper extremity is unsupported and hanging by his side pulling his shoulder anteriorly and causing poor upper trunk posture. The right upper extremity is working hard to hold the body upright using the parallel bars.

   d. The right lower extremity is fully loaded with weight. The left lower extremity is externally rotated, flexed and protracted at the hip and the left knee alternates between excessive flexion and hyperextension depending on the amount of weight on the limb. The ankle varies between 0 degrees of ankle dorsiflexion and at times appears to plantarflex to 10-15 degrees despite the use of the L AFO>

3. The individual requires minimal assist of one to stand statically with use of R hand on the bar. He appears to be exerting approximately 75% or more of the effort required to stand statically.

4. The therapist has chosen to use a left ankle foot orthosis to support the lower extremity and the parallel bar to provide upper extremity support. The bar is being pulled on, not pushed on which is the opposite of the strategy that is needed for successful use of an ambulation device.

5. Swing phase observations:

   a. Inadequate push off of the left ankle plantarflexors during initial swing

   b. Decreased active left hip and knee flexion during swing

   c. Decreased eccentric left hamstring activity in terminal swing to slow the LLE

   d. Increased external rotation of the left leg during swing, good weight shift off LLE

   e. Left ankle is held in good position by L AFO to allow foot clearance

   f. The therapist holds the gait belt rather than provide facilitation, but does well providing upper trunk support anteriorly to encourage postural correction

6. Stance phase observations:

   a. The left hip is in retraction and relative flexion

   b. The trunk is leaning to the right and the left side of the trunk is elongated

   c. The left knee is in hyperextension at midstance with occasional instability into flexion

   d. There is increased external rotation of the left leg, ankle plantarflexion despite use of the L AFO, and poor weight acceptance on the left leg.

   e. Verbal cueing is short and concise which is good, but not specific enough to direct the patient to exactly what is expected of him. The patient is clearly paying attention but the therapist does not check in with him as to whether he is really ready to engage. There appears to be a lack of active listening skills, eye contact, and affirmation.

   f. The therapist does provide for patient safely and effectively blocks his left knee as needed. Facilitation could be employed more effectively to promote muscular activity during the task.