



Ekso Rounds



Ekso Clinical Progressions

The Higher Level Ambulator:

This month we talk about how to progress your higher level patient. If your patient is showing return and increased functional abilities, there are ways in which you can adjust your Ekso settings to increase the challenge or progress your goals. These methods can reduce the assistance of the Ekso, and have your patient do more. Remember to reassess your patient. Knowing their strength values is imperative to the success and safety of these added challenges. Please refer to the chart on page 74 in your training guide for full details. This list is not all inclusive; appropriate progression using Ekso is based off of the trained therapist's clinical judgement.

- **Increase the step height.**
 - This is an excellent challenge if one of the goals is to improve foot clearance. When the patient is having success, and showing lower forward assist values with a lower step height assignment (i.e. .1), a way to challenge a patient is to increase that step height assignment, and see if they can still maintain the same low forward assistance values. The higher the step height, the more hip and knee flexion is required from the patient.
- **Decrease swing complete time.**
 - This may be an option if the goal is to address patient's coordination, timing, or challenge motor planning. This reduces the time available to motor plan. If the patient is having success with a slow swing complete setting, changing the swing complete time to medium or fast encourages the patient to perform the same swing pattern, in less time- with a more coordinated motion
- **Decrease swing time.**
 - Similar to changing the swing complete time, this encourages the patient to walk at a fast pace, and produce the same quality swing with less time. This may challenge the patient to use less of Ekso's motors for assistance.
- **Decrease ankle support provided by Ekso. (Ekso GT Only)**
 - This will increase the eccentric demands at the ankle. As the patient is making gains in their strength values, reducing the assistance from Ekso will allow them to use this strength in a functional movement. Reference the ankle stiffness chart on page(16). If that leg is free, Free Leg Stance Support may need to be Max/high. Remember to assess individually.
- **Decrease hip stability provided by Ekso.**
 - This may be a good option if the goal is to challenge a higher level patient with good strength in his hip stabilizers. Challenge the patient's lower extremity to control up to 22 degrees of freedom in the frontal plane, to maintain quality of gait. The goal is for the patient to engage their hip musculature to maintain their swing leg within the sagittal plane, as opposed to Ekso rigidly keeping them there. **Remember to lock it back up before sitting down!**
- **At the end of the session, save some time to integrate all of the skills learned in Ekso, into over ground ambulation outside of the device. This is a key step in having the patient learn a new movement pattern.**

Have clinical questions? Please reply to EksoRounds@eksobionics.com to communicate with an Ekso Bionics clinical team member.