

Kneuro Training Guide

Engaging Swing

For Kneuro to release into swing, the three parameters below must be met. Without these, the knee will remain in the default stance mode.

Within 10° of Full Extension	Kneuro allows patients to walk with slight stance flexion, if desired. The knee must be near full extension to allow swing phase.
Anterior Tilt	Like the tibia, Kneuro should have a forward tilt toward the line of progression prior to swing phase.
Forward Progression	The sensors within Kneuro require input of forward movement.

Parameter Adjustability

	Function	When to Lower	When to Raise
Yielding Resistance	Provides smooth, controlled knee bending during weight-bearing activities like sitting and ramp/stair descent	The user cannot sit or descend ramps/slopes quickly enough	The user drops into chair or user feels insufficiently supported during ramp/slope descent
Initial Contact Resistance	Absorbs impact and provides support for a smoother and more stable walking experience	The user feels there is not enough "cushion" when loading prosthesis	The user experiences a bobble or hypertension moment at initial contact
Extension Resistance	Controls the speed at which the knee straightens while in swing phase	The knee does not swing fast enough; the user is "waiting" on the knee	The knee swings too quickly or the user experiences terminal impact

When the user is connected to the app, only certain adjustments will be available. If additional adjustments are required, please contact the prosthetist to discuss.

Control Button

Power ON/OFF

8 second hold

Manual Lock

2 second hold

Quick Access Mode Selection

 Double tap



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Initial Training Activities

General Notes	<ul style="list-style-type: none"> Weight shifting in both single and double limb support teaches trust and confidence in the prosthesis. Focus on equal step length, proper pelvic rotation, and arm swing to help prevent gait deviations.
Sitting Down	<ul style="list-style-type: none"> Evenly load the prosthesis and the sound limb. With equal weight in both feet, shift weight towards the heels and push the glutes towards the chair. Sit with a fluid motion. Both feet should remain on the floor. Sitting function: The foot can be easily positioned while seated when the thigh is horizontal for more than 2 seconds. Stance Lock: Stance Lock engages if the patient pauses while sitting or does not commit to the motion. This is a supportive hold between 20-40 deg of flexion which engages when paused for two or more seconds in the same position. To disable this feature, contact the prosthetist.
Level Ground Walking	<p>Teaching Trust</p> <ul style="list-style-type: none"> Start with weight shifting activities. Have the patient place the prosthesis in front of them, bend the knee slightly, and lean into the yielding function. This is the resistance that will be felt when Stumble Recovery is triggered. <p>Teaching Swing Initiation</p> <ul style="list-style-type: none"> Have the patient take their first step with their sound limb so the prosthesis is behind them. Lean into the toe to reach extension and the required forward tilt. Use the hip flexors to help initiate swing and forward progression. Start with small, slow steps, placing the heel in line, or slightly ahead of the toe with each subsequent step.
Ramps & Slopes	<ul style="list-style-type: none"> Use a handrail and take small steps. Initiate descent with the prosthetic limb, riding the yielding resistance down the ramp before stepping forward with the sound limb.

Advanced Training Activities

Stairs	<p>Descent</p> <ul style="list-style-type: none"> Place the prosthetic foot on the step, with the front half of the foot hanging off. Step down with the sound side and allow Kneuro to flex. The user will feel resistance as they lower to the next step. <p>Ascent</p> <p>To ascend stairs Step-Over-Step, the user should initiate a rapid movement similar to wiping something from the bottom of a shoe. It is best to step first with the prosthesis, then the sound side.</p> <ul style="list-style-type: none"> Bring the fully extended prosthesis posterior. Quickly move into hip flexion and place the full foot on the next step. Once engaged, a slight hitch will be seen/felt.
Walk-to-Run	<p>As the time in stance phase shortens, extension resistance during swing phase decreases.</p> <ul style="list-style-type: none"> Progress from walking, to hopping, to skipping, to running. Focus on pushing through the stance foot and lifting with the knee to generate momentum. Keep the posture tall, thinking of each stride as controlled and fluid. Make sure to land softly and with balance. <p><i>Note: Kneuro is not a running knee and should not be used for extended running activities. The recommended use of this feature is for short distances and emergency situations.</i></p>



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