



LOCOMOTOR TRAINING

Through the use of bodyweight-supported treadmill training

Shepherd Center offers Locomotor training, which is an activity-based therapy that attempts to retrain the spinal cord to “remember” the pattern of walking again. This therapy is available only for patients who have some movement in their legs (research has not shown this therapy to improve walking in patients who do not yet have movement in their legs.)

There are two versions of this therapy: manual-assisted Locomotor training and robotic-assisted Locomotor training. Both therapies consist of supporting part of the patient’s body weight with a harness system that suspends the patient over a moving treadmill. The amount of body weight support, treadmill speed, walking time, and amount of assistance given to the patient can all be adjusted in both versions to best maximize the outcome.

MANUAL-ASSISTED LOCOMOTOR TRAINING

Trained therapists and therapy technicians manually facilitate the muscles in the legs to help the patient move his/her legs as the patient walks on the treadmill with part of his/her body weight supported by the harness system. The patient must work harder on the manual version, focusing on trunk control and posture, balance, coordination, symmetry, and strengthening while working on walking.

This therapy is for patients who already have movement or new movement in their legs (ASIA C or D). Patients with strong spasticity or very loose joints will likely not be eligible for this therapy due to risk of injury to the patient or trainers. The weight limit is 180-240 pounds, depending on the abilities of the patient.

ROBOTIC-ASSISTED LOCOMOTOR TRAINING

The robotic version of locomotor training is called the Lokomat. The Lokomat is a system of external orthoses that straps onto the patient. The robotic orthoses have motors in the hip and knee joints to move the patient’s legs. It can also give feedback as to how much the patient is working with the machine.

The Lokomat provides consistent steps every time and allows the patient to achieve a good walking pattern without needing to stop to rest. This therapy is for patients with little movement in their legs (ASIA C), with strong spasticity, or with very loose joints. The weight limit is 300 pounds, and the Lokomat must be able to accommodate the size of the patient.

Patient criteria for Locomotor training through the use of bodyweight-supported treadmill training:

- ASIA C or D - have movement in legs
- Ambulatory or non-ambulatory
- Medically stable
- No leg joint pain or fractures

MORE INFORMATION

Shepherd Center offers locomotor training on an inpatient and outpatient basis. The locomotor training program can, at times, be covered by insurance. For more information, contact:

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