Ekso Bionics

- A wearable robotic suit which helps people with lower extremity paralysis or weakness walk.

- New technology, called Variable Assist, now allows those with hemiplegia to use Ekso.

- Gaylord is the only place in Connecticut to have this technology. Helping patients walk since 2012.

- Gaylord staff evaluates individual clients, as not everyone meets the criteria for the suit.

Frequently Asked Questions

What is Ekso™?
Ekso™ is a wearable robot or exoskeleton that enables people with lower-extremity paralysis or weakness to stand and walk. It is a ready to wear, battery powered, bionic device that is strapped over the user’s clothing.

How does it work?
With the individual providing the balance and proper body positioning, Ekso allows them to walk with reciprocal gait. The physical therapist uses the control pad to program the desired walking parameters, such as step length and speed, as well as control when the Ekso stands, sits, and takes a step. It is powered by lithium batteries which drive the hip and knee motors.

How much does the device weigh?
The device weighs approximately 50 pounds (23 kg). The user doesn’t support the weight of the device as it is transferred into the ground through the Ekso structure.

How is a person evaluated to use Ekso?
In order to be eligible for Ekso the individual needs to bring a medical release. Then, a comprehensive physical evaluation is conducted, which typically takes one hour. During this evaluation, a physical therapist examines key requirements for use including range of motion, muscle strength and spasticity.

How does the NEW technology, Variable Assist, allow those with hemiplegia to be treated?
Previously, Ekso didn’t allow for weakness on only one side. Now with Variable Assist, a person with lower extremity weakness can be individually accommodated to benefit from the repetitive activity of walking, allowing for increased exercise and function.

How fast can a user don and doff Ekso?
Following the initial evaluation, the fitting of the individual and the adjustment of Ekso typically takes ten minutes. An experienced user can transfer to/from their wheelchair and don or doff the Ekso in less than 5 minutes. The torso and leg straps are designed to enable the user/patient to easily get in and out of the device with none or minimal assistance.

For more information call (203) 284-2835 and “The Ekso Team” will be in touch.
Who is it for?
Ekso is for people with lower-extremity paralysis or weakness who would like assistance to stand up and walk. The user needs near normal range of motion, one-sided arm function with moderate arm and hand strength to manage crutches, cane or a walker, as determined during the evaluation. If you can transfer independently from a wheelchair to a chair, are between 5’2” – 6’2” (150-190 cm) tall and weigh 220 lbs (100 kg) or less, you are most likely a candidate.

How fast can someone walk in it?
The walking speed of Ekso depends on the individual’s aptitude and condition. Ekso allows walking speeds up to 1 mph.

What other assistive devices are used while walking?
Users complete a training program when learning to use Ekso. Usually, individuals begin using a walker and progress to crutches. Even if someone has one-sided upper extremity weakness, a walker or cane is still used. The learning curve is quite user specific depending on many factors. Everyone’s experience is different.

How does the physical therapist assist a user?
The physical therapist (PT) operates the Ekso with a remote control. This allows the PT to teach the user when to take a step, how to position their body for proper balance, and how to shift their weight in preparation to take another step. The PT also has the ability to modify Ekso’s walking pattern (i.e. step speed and length) and assistance from the device, as the individual progresses.

How can someone try it? Where is it available?
Gaylord is the only facility in Connecticut where Ekso is available. The Ekso is available at the Wallingford campus at:

Gaylord Outpatient Services
50 Gaylord Farm Road
Wallingford, CT 06492

(203) 284-2835 Ekso Information

See Gaylord patients walking using Ekso at www.gaylord.org and on our YouTube channel.

Which clients will benefit from Ekso bionics?
• Stroke
• MS
• Spinal Cord Injury
• Neurological conditions with lower extremity weakness