

Aspen Daily News

Physical therapy device at Aspen Club helps the paralyzed to walk

by Collin Szewczyk, Aspen Daily News Staff Writer

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Bionic suit, therapy table available for use

Locals who are living with paralysis or weakness in their legs can now utilize a bionic exoskeleton suit in Aspen to help them walk again.

An Ekso bionic exoskeleton is being leased to Able Bionics USA by the nonprofit Bridging Bionics Foundation, and can be used for therapy sessions at the Aspen Club and Spa.

This week, six locals who are paralyzed or have lower extremity weakness are wearing the suit to help them to walk again.

The physical therapy device, which is made by Ekso Bionics and called an Ekso, was gifted to Bridging Bionics by Amanda Boxtel, the nonprofit's executive director.

The device is worn around the waist and legs to allow people with spinal cord injuries to stand and walk using a motorized function. It can also be used to aid people who have suffered a stroke, have a neurological disorder, or have weakness in their lower extremities.

"Our collaborative goal is to provide access to cutting edge technology, which is typically cost-prohibitive, to enhance neurorecovery and quality of life for individuals who have neurological disorders or mobility impairments," Boxtel noted in a statement this week.

The program, which took several months to prepare, aims to schedule two or three full days per week for clients, but is contingent on physical therapist availability and client demand. During the first two weeks of November, a Level II certified Ekso physical therapist from Able Bionics will visit Aspen to help local therapists evaluate new clients and familiarize themselves with the equipment.

The exoskeleton, which costs \$150,000, is adjustable, and can accommodate most people up to 220 pounds, who are between 5-foot, 2-inches and 6-foot, 2-inches tall, depending on the leg length. For hemiplegics, who have paralysis affecting only one side of the body, the device can be turned off on either the right or left side, to allow for natural movement.

"Walking is achieved by the user's weight shifts to activate sensors in the device, which initiate steps. Battery-powered motors drive the legs, replacing deficient neuromuscular function," the statement noted.

Boxtel named the exoskeleton "Tucker" after her beloved golden retriever, who died just four days before she started walking in the device.

"For the first time, Tucker is helping others stand up and walk," she noted in the statement. "The technology needs to be shared. It feels great in my heart to see others with similar disabilities have access to this technology to help them have a better quality of life."

The physical therapist's compensation of \$75 for each session is paid for by Able Bionics USA. This equates to \$7,800 for two sessions per week for the year. The exoskeleton therapy is free to local clients, but they are encouraged to make a one-time donation of \$300 to participate in the program for the entire year.

For the first six weeks, two PTs will be working with clients and the exoskeleton while they get familiar with the device. That training and compensation will cost \$16,000, but is well worth it in Boxtel's eyes, adding that money raised during a March fundraiser is helping people walk this week.



Photo courtesy of Amanda Boxtel

Karen, a resident of Canon City who suffered a spinal cord injury five years ago, stands up in the Ekso bionic exoskeleton this week at the Aspen Club and Spa.

"I feel like it should be a human right to walk," she said Wednesday. "This is going to be a really great rehabilitation tool. It's my dream to see the robot I once had helping other people.

The space at the Aspen Club and Spa is being leased to Able Bionics for \$1 a year.

"We are excited to see the program launch in the Aspen Club and Spa so that individuals with mobility impairments, who qualify to use the technology, can exercise in an inclusive environment that promotes well-being," said Michael Fox, owner and chief executive officer of the Aspen Club and Spa, in the statement.

Boxtel, 47, who hails from Brisbane, Australia, and lives in Basalt, suffered a spinal cord injury while skiing on Feb. 27, 1992. She co-founded Challenge Aspen in December 1995, and has since been a writer, professional speaker, and skiing instructor to the disabled at the Aspen Skiing Co., using a mono-ski.

She has said that internal organs are meant to hang, and walking helps her think more clearly, improves her circulation and digestion, and staves off issues such as edema and constipation.

The program is funded through community support and donations to Bridging Bionics Foundation.

"I'm excited about the quality of therapy delivered by our highly skilled team and revolutionary equipment they have access to," noted Mitchell Brogan, president and founder of Able Bionics, in the statement. "The Aspen program will enable local clients from the I-70 corridor and throughout the Roaring Fork Valley to use the Ekso bionic exoskeleton suit and a Galileo Neuromuscular Tilt Table."

Boxtel said that the experience of walking again transcends the therapeutic value, and is exhilarating on not only a psychological level, but also on a psychosocial one.

"Every time I get up a moment of euphoria surges through me. It happens every single time," she said. "Just looking people eye-to-eye, you can't put words behind that."

Galileo now available, too

The Galileo is a side-alternating vibrational training system that was donated by Lenny "Boogie" Weinglass. It is designed to conjure involuntary muscle contractions by using the nervous system to induce up to 4,500 reflexive muscle contractions in three minutes.

The table optimizes neuromuscular recovery and accelerates early rehabilitation; reduces muscle spasms, engages afferent and efferent reflex-based muscle stimulation; and improves muscle balance, function, power and, force, the statement noted. For people with a spinal cord injury, the treatment can also help improve neuromuscular recovery and plasticity as well as blood flow; prevent osteoporosis; and treat back pain.

Boxtel said people living with paralysis need to ensure that their bodies are flexible and stretched to maintain range of motion so they are ready to walk again. She said the exoskeleton and Galileo are just a couple of steps in ever evolving technology.

"Our bodies are made for mobility and if we don't use it, we lose it. ... It's all about quality of life," she said. "I've been paralyzed for 23 years and I'm still walking, so there's no excuses. People need to prepare their bodies to walk again, because they can."

Tax deductible donations for the program can be made to: Bridging Bionics Foundation, PO Box 3767, Basalt, CO 81621.