

PN Research Update

The Suit and “Spider Therapy” *By: Bridget Somerville*

“Ouch!” Ralph Radzki, a therapist at Polfit Wellness, was shocked when he heard his paralyzed patient, Damien Minna, respond this way after he repositioned his leg. “What do you mean ‘Ouch’?” Radzki asked, “I thought you couldn’t feel pain in your legs?” “That’s what I thought too!” Minna replied.

Radzki had adjusted a strap around Minna’s leg used in Polfit’s “Spider Therapy” technique and accidentally pulled some hair. The 2 men, who had been working together for a year, looked at each other in disbelief.

This feeling of disbelief is common among the Polfit staff, even though they see these results from their treatments time and again. Their amazement comes from the fact that many of their patients begin severely disabled. They have been told by the traditional medical establishment that they will never improve, never recover. The Polfit team knows different... they have the techniques and abilities to help these patients regain their life.

How does Polfit do it? Intensive, unique treatments that allow their patients more freedom of movement than traditional physical therapy. The intensive part refers partly to the initial month of treatment where patients attend therapy 4 1/2 hours a day, 5 days a week. Over the course of the month, patients are pushed progressively harder to gain strength and control. One of the keys to this intensity is a specialized suit patients wear during exercises. The form-fitting outfit has a series of bands running through it to provide weight-bearing throughout the body. Research has shown that the suit provides significant input into the central nervous system. It further proved to be effective at aligning the body correctly by adjusting the bands to match individual needs.

Patients with motor disorders were able to move through exercises in proper alignment wearing the suit and simultaneously receive considerable input - “teaching” the body and mind how it feels to move correctly. The suit intensifies traditional exercises, moving patients to progress more quickly. Eventually, patients find they can move easier when out of the suit and it becomes part of their new found abilities.

“Spider” Therapy is a unique part of Polfit’s program. In this technique, bungee cords are strategically strapped to the patients to hold them up in correct alignment. Once the patients are positioned, they are able to move through exercises without having to bear all their weight. For some patients these movements are passive while others are able to move with assistance. Passive or active, patients experience the movement and pick up on how to make their bodies move on their own. Bungee cords are then lowered or removed, slowly increasing the amount of weight they must hold up while performing the task.

In Minna's case, this technique has been an exciting part of his Polfit experience. The former CIF Football Defensive Player of the Year had broken his neck in a diving accident, leaving him paralyzed from his chest down. He was determined to recover, and worked hard to do so, but Polfit brought a whole different approach to gait training that Damien had never experienced. He went from moving through movements passively, to taking an active role in the process. He began to feel more overall sensation and control of his muscles.

"My muscle strength began to improve weekly as my nervous system relearned how to connect properly with my body," Minna said.

With assistance from the Spider, Minna can now take steps on a stair-stepper and treadmill for 20 minutes, continuously. He has also gained enough strength in his core from this therapy to sit on his knees and move into a kneeling position, completely independently and only using his hands for balance.



Minna isn't the only patient to reach these strides after experiencing therapy at Polfit. Another patient, Brandon Reyes, has been taking an increasing number of steps on the treadmill during Spider therapy, using less and less support. Reyes, the victim of a traumatic brain injury, is 6'1" and 200 lbs. Prior to coming to Polfit, he had been unable to attempt such movements since traditional rehabilitation had no way to safely and effectively hold him in a position to do so. When Reyes began at Polfit he struggled to take any steps on the treadmill and his right leg would not bend. He now walks on the treadmill with minimal support for an hour at a time, bending his right leg with each stride.

Radzki points out that cognitive ability is often a big part of a patient's recovery. Minna has had much success due to the fact that he is able to follow commands. Reyes suffered mental delays in addition to physical disabilities as a result of his injury. Still, with continued intensive therapy, Reyes' ability to follow commands has improved

along with his physical achievements.

Radzki isn't surprised to see this cognitive improvement. He says that he often sees patients' cognition improve alongside the physical advances.

"Movement stimulates nerves," Radzki explained. "Through these techniques we find that the brain gets fired-up and finds correct ways to make the body balance on its own."

Radzki says patients often show signs of development in areas they are not even focusing on. For instance, he may be working on a patient's leg strength or trunk control. As they acquire that skill the patient will have improvements in head control, swallowing, or even their speech. This phenomenon is what tends to help many of the patients at Polfit reach their goals. In addition to spinal cord injuries and TBI, Polfit treats a range of motor disorders resulting from cerebral palsy, stroke, etc. along with patients of all ages. Patients travel from all over the world to experience these improvements. They return faithfully, making more progress with each visit, because they know Polfit helps them reach milestones previously thought impossible.