



## REHABILITATION SERVICES

### Lifetime Achiever Succeeds with the Ekso™ Bionics Eksoskeleton after Traumatic Injury

Schuyler Arakawa has always been an achiever. She was a top student at Berkeley Prep in Tampa, which helped her secure admission into the prestigious Ivy League at Yale.

Throughout her young life, she traveled to five out of seven continents doing volunteer work. Beautiful, adventurous, a talented dancer; she had an unending zest for life. All who meet her say that to know her is to love her.

After graduation from Yale in 2015, she headed to Peru on a post-graduate fellowship.

She was there to build schools and work with the indigenous population. She returned to the U.S. for the 2015 holiday and on her way back to Peru, she and a friend planned a two-week excursion to Colombia. On February 19, the day before their scheduled return to Peru, they joined a group of fellow travelers to go rafting in one of the more desolate parts of Columbia. Tragedy struck out of nowhere.

The group pulled into a grotto to go swimming and diving off one of the mountain ledges. As they scaled the ledge, a large boulder fell from 30 feet above and landed directly on her head. It crushed her skull, collapsed her lungs, fractured multiple vertebrae of



*Schuyler Arakawa practices dancing at the parallel bars during her session with physical therapist Steve Wesenbagen at the TGH Brandon Healthplex. Dancing was an activity she loved before her accident in 2016, when she was struck by a falling boulder while rafting in Columbia. During her therapy session, Arakawa used the Ekso™ Bionics exoskeleton to help walk, along with more conventional therapies*

her spine, and caused a dozen breaks in both legs. Schuyler began the fight of her life.



*Student therapist Molly Fulmer, left, and physical therapist Steve Wesenbagen fasten a harness on the Ekso™ Bionics exoskeleton before a session with Schuyler Arakawa at the TGH Brandon Healthplex*

Being in a remote part of the country, it took an hour to get her to a hospital with an intensive care unit. Most hospitals in that part of the world don't have ICUs.

When Schuyler's mother, Meridith Alexander, got the urgent call, her motherly instinct naturally kicked in. Initially, the hospital caregivers were trying to keep Schuyler alive so that Meridith could say goodbye. The severe injuries Schuyler sustained are typically fatal. In fact, doctors later told Meridith that most people who sustained this level of injury to their lungs never survived beyond the scene of the injury. And it was almost impossible for doctors to comprehend how one of Schuyler's many broken bones had not nicked her

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# COVID-19 Patient Grateful for her Rehabilitation Family

Tampa resident, Ria Straker Gumbs, knew something was wrong when back in April, she was coughing up blood, had shortness of breath, and a nasty headache. She felt overheated and attempted to purchase a thermometer, going store to store, but every store was sold out.

She then went to her local community health center, Lee Davis, to be tested for COVID-19. It took subsequent tests to confirm she was positive.



*Ria Straker Gumbs, who was hospitalized for months due to COVID-19*

Her daughter immediately drove her to Tampa General Hospital's Emergency Department, where they diagnosed her with sepsis and double pneumonia, in addition to COVID-19. They told her kidney failure, and possible cardiac arrest would be next if they did not intubate her quickly.

Little did she know her situation was that bad. Images of New York City and all the deaths from COVID-19 ran through her head. She immediately got on the phone to call her husband Glen, her children, Pastor, boss, and friend. She even told her husband to remarry if she passed away while in the hospital.

A devout Christian, she asked the nurse to write "Psalms 91" on her body before she was intubated. The nurse obliged and also wrote it on a yellow stickie note above her door for added comfort.

She spent the next three weeks on the ventilator and had to receive a tracheotomy to help her breathe.

Throughout her time on the ventilator, she said she could hear everything but understandably could not communicate back. She recited scriptures in her mind and had visions of her 16-year-old son Nehemiah pacing in her hospital room, encouraging her not to give up. She said she wanted to wake up and get home to take care of Nehemiah's diabetes, and the rest of her family, who were also recovering from COVID-19.

She was transferred from the ICU to the 8th floor for a 16 day stay, as part of a two-month overall hospitalization. Ria remembered fondly the gracious people who cared for her. "Dr. Melinda Hayes was incredible. Or as I like to call her, "the Village Doctor". They don't make them like her anymore," she said. "When I came to Rehab, it immediately felt like family."

Ria kept a journal of the many caregivers, housekeeping, and dietary staff who touched her life. There are too many to list, but each had a special story. "At no time was my help and recovery not paramount. Everyone worked to make certain they could send me back to my husband and kids," she said.

"They were compassionate, and I felt they were all family. They anticipated my every need."

She did have some tough nights sleeping after her time in the ICU. Psychologist Sherry Leib was a comfort to her. "Dr. Leib was amazing," she recalled. I saw her and her psychology team. I never had mental issues, but when I was on the 8th floor (the unit she went to after the ICU and the ventilator was removed), gravity set in. Dr. Leib was instrumental in letting me know what happened. She's an incredible woman."

Dr. Sherry Leib is a 20-year TGH team member who specializes in rehab and health psychology. Before coming to TGH, she worked in Los Angeles with people afflicted with HIV/AIDS in the 1980s. This work showed her appreciation for working with people who have novel, frequently misunderstood, and often stigmatized diseases, similar to COVID-19. Subsequently, Dr. Leib volunteered to work with COVID-19 patients at TGH. "I'm proud to be able to help these patients learn about COVID and cope," she said. "The psychological needs of people with COVID-19 are often downplayed, especially critically ill patients where we're trying to save their lives. The rehab process focuses on saving quality of life and helping people regain function after devastating illness and disease."

Common issues that people with COVID-19 cope with are uncertainty, disease process, fear about dying, anxiety, depression, family welfare, finances, and social isolation/stigma.

"Since COVID-19 is such a new disease, we're still learning the long-term effects. Patient education on this disease process is important to clarify expectations," said Dr. Leib.

Gumbs continued to reflect on the caregivers who touched her life. Like when Physical Therapist Chase Frye transported her in her wheelchair from her Rehab Center hospital room to the water's edge along Hillsboro Bay. He told her that dolphins are often seen there and that they'd probably see one that day. Gumbs was pleasantly surprised by what she encountered that day, "We didn't just see one, we saw a whole family of dolphins! Chase told me it was a good sign. I was so glad to be outside and



*Patient Ria Straker Gumbs with some of her therapists, left to right, Vincent Mendez, PTA, Amanda Feldstein, PT, and Amy Randol, OT*

get some sun!", she said with gratitude.

The therapy services (physical therapy, occupational therapy, and speech therapy) in Hospital-Based Rehab have been frequently recognized by physicians, nurses, and other interdisciplinary team members for the integral role they play in the treatment and recovery of patients like Gumbs. Chris Wagner is the physical therapist who worked with her in acute care and worked with the COVID patients on the acute side in the ICU.

"Ria is a great example of a patient who never gave up, said Chris. From the initial PT/OT evaluation in the COVID ICU, she continued to fight every day. These are the moments that define why I became a physical therapist," he added. "Having the ability to assist with the patient's recovery and then see a patient's reaction to their own improvement. I am fortunate to work at this amazing institution where we can see the full spectrum of recovery from ICU level care to discharging home from Rehab!"

During her two week stay in Rehab, Ria celebrated her 47th birthday. Her rehab therapists Amy, Shelby, and Amanda lovingly brought her gourmet



*Dr. Sherry Leib, rehab and health psychology*

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## Eksokeleton after Traumatic Injury continued from page 1

arteries, resulting in fatal blood loss. The most significant damage was to her brain. But being the eternal optimist, Alexander was not going to give up hope.

Alexander needed to get to her daughter as quickly as possible. It was not easy. Almost 24 hours passed before she could be with her. She had to drive to Miami because she could not get a last-minute flight in Tampa. Then she took an overnight flight to Bogotá, followed by a 4½ hour drive to the hospital. The travel time felt endless.

Two days after her arrival, it was decided to fly Schuyler to the closest trauma center in the United States, Jackson Memorial in Miami. There she endured three, 14-hour surgeries to repair her face, skull, brain, right thigh, and left ankle. Everyone was shocked; she survived. The doctors told Meredith her daughter would be blind and likely remain in a vegetative state.

One of the doctors told her it was one of the most challenging surgeries he has ever done. Her brain was like “corn flakes”. Schuyler defied all odds.

She remained in Miami for three months, and then returned to her home in Tampa with Meredith now taking over the role of her full-time caregiver. It was evident she could not live on her own. She then began her outpatient rehabilitation journey with Tampa General Hospital, three times per week.



*Student therapist Molly Fulmer scrolls through the controller functions of the Ekso™ Bionics exoskeleton before a session with Schuyler*

In 2019, Schuyler and Meredith learned of the Ekso™ Bionics exoskeleton and saw exciting potential for her to learn to walk again on her own. Ekso™ is a wearable bionic exoskeleton, designed to assist patients with lower body weakness or paralysis to stand up and walk. It was initially intended for use with spinal cord injuries, not brain injuries like Schuyler's. But TGH team members and Meredith advocated to use the technology for brain injuries and a new rehab journey with the Ekso™ began.

The problem seemed to be that her cognitive brain needed to show her how to step correctly. She needed repetition for muscle memory to kick in, like she

developed as a dancer in her youth.

Since January, Schuyler has been coming to the TGH Brandon Healthplex twice a week for outpatient work on the Ekso™. She had lots of assistance in the beginning, but now is walking proficiently in the Ekso™ suit and her transferring skills are much more stable. This month, her reliance rate on the Ekso™ went from 70 percent dependence to 0 percent. Which meant she was walking 100 percent on her own. That was a real breakthrough.

Her physical therapist Steve Wesenhagen describes Ekso™ as a robot. It measures how the patient does. “We recently got her numbers to where the robot did zero percent, and she did 100 percent – which is really amazing and awesome.” He continued, “she used to be a ballet dancer at a high level, so we have been doing positions like a plie’. She has come a long way. She can transfer to another chair and is vastly improving. We’ve been trying to use what she knew and what she’s good at in her brain memory to build strength and balance and help her recover.”

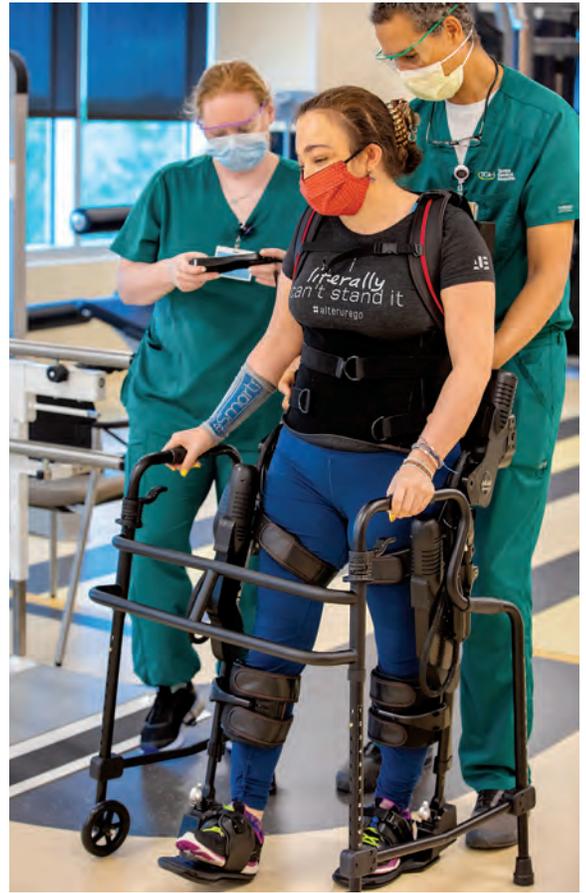
Schuyler praises the work of Wesenhagen, “he is really focused and smart. He pushes me to the next level. We started utilizing dance and the Ekso™ to get my brain to work again like it used to. He makes sure he pushes me until I’m tired,” she said.

Meredith added in her respect for Steve, “He is so dedicated at the deepest level by paying attention to what’s working well and giving “Schuy” exercises at home. He’s so perceptive and personable. It’s wonderful to work with him.”

Alexander also gave a shout out to Dr. Melinda Hayes, who she says has been a huge champion for Schuyler. She says the Ekso™ has dramatically been life-changing for Schuyler.

The mother-daughter duo has been so enthusiastic about their overall experience with TGH Rehab that they have served on the Patient Family Coalition this past year. They even traveled to Tallahassee to speak to the Legislature on the excellent rehab services at Tampa General.

Meredith is confident that if her daughter can continue to work with the Ekso™, her body will “get it.” She speaks internationally as a motivational speaker and life coach. Schuyler’s miraculous recovery is a big part of her inspiring message. The dynamic mom says that Schuyler believes she will one day walk again on her own and defy all precedents.



*Schuyler Arakawa uses the Ekso™ Bionics exoskeleton during a session with physical therapist Steve Wesenhagen and student therapist Molly Fulme. Arakawa used the exoskeleton to help with her gait, along with more conventional therapies*

And close to 7000 enthusiastic, global followers on their community Facebook page entitled “Schuy is the Limit” agree.



*Schuyler Arakawa and her mother, Meredith Alexander, attend a press conference where Tampa General Hospital patients shared their patient stories at the Florida State Capitol Historic Capital Steps on “We Are TGH Day” in Tallahassee, Fla., on Nov. 6, 2019*

## Interdisciplinary Rehab Council Empowers and Educates on the Benefits of Rehabilitation Services

With such a wide range of experts caring for complicated rehabilitation patient cases, it takes a lot of communication and coordination. The Interdisciplinary Rehabilitation Council or IRC at Tampa General Hospital includes all the disciplines addressing the needs of rehab patients. The group's



Scan this QR code for fun facts about TGH Rehabilitation Services

goal is to provide a rehab “snapshot” of the services they offer and promote it throughout the hospital.

The IRC is made up of various members from the Rehab division, including Hospital-Based Rehab, Acute Inpatient Rehab (Therapy), Acute

Inpatient Rehab (Nursing), Outpatient Rehab, Pediatric Rehab, Administration, Psychology, and a management representative. The IRC addresses the whole continuum of care.

The mission statement is simple: Empower team members to have a more active role in expanding the TGH footprint by promoting professional development and clinical expertise as well as community awareness of the benefits of rehabilitation services.

Samantha Evans, an occupational therapist and chair of the IRC explains, “There are volunteer and

social events, as well as professional development activities. Although we are restricted during the COVID-19 pandemic, we want people to know what we do and the services we offer.”

The IRC established four strategic initiatives this year:

- National Rehabilitation Week
- Rehab Division Social Event
- Division Wide Community Activity
- Educational Event for Professional Development

The IRC meets the first Wednesday of the month and communicates through emails and virtual discussions.

Traditionally, the Rehabilitation Center has hosted an annual Rehab Reunion during National Rehabilitation Awareness Week: a lunch gathering with former patients and their TGH caregivers. They have been emotional events, filled with inspiring testimonials.

This year, due to COVID-19 restrictions, the Rehab Center plans a virtual rehab reunion, where patients and team members will produce individual video messages shown online. The link will be emailed to former patients. Anyone involved in TGH rehab is welcome to participate.

The group is amid planning for the upcoming events for National Rehabilitation Week, which is **September 21 – 25**. This year's theme is Renew, Rebuild, and Restore.



**Monday – Friday:** Team members can participate in an **interactive virtual game** with fellow team members called **Kahoot**.

It consists of a variety of trivia questions, with winners announced on Friday.

**Wednesday: Renew, Rebuild, Restore**

**Art Project:** Team members will use recycled materials to build items that reflect this theme.

**Friday: IRC Virtual Education Summer Symposium.**

Vascular services and Westcoast Brace and Limb will present on **Post-Amputation Management**. One CEU will be offered.

The IRC hopes to return to the traditional methods of celebrating National Rehab Week after the pandemic subsides. But in the meantime, they have plenty of groundwork to cover.

**Scan the QR code to learn fun facts about the Rehab Center.**

### COVID-19 Recovery, *continued from page 2*

cupcakes and a large homemade card, filled with handwritten well wishes from the entire team. They arranged for her family to be stationed across the water by the Jose Gaspar pirate ship docked along Bayshore Boulevard and gave her binoculars to see them, wave hello, and wish her a happy birthday. It meant the world to her.

A career working mom of six children, Ria currently serves as a Housing Counselor for the Housing and Education Alliance, working with the City of Tampa and State of Florida.

During her hospital stay, some of the caregivers she encountered happened to be recent clients she had placed in housing. “I took care of them in my job; now they we’re taking care of me,” she exclaimed.

Ria looks forward to returning to another of her life's calling to be a motivational speaker again, but she says this time it will be on another platform. She's now on a mission to protect people from COVID-19.

She looks forward to educating others and telling them about the lasting effects.

Now recovering at home, Ria hopes to get clearance to remove her tracheotomy permanently when she visits her doctor in the coming weeks.

A native of Trinidad, the woman who fought weeks in the hospital for her life, reached the light at the tunnel's end. She unabashedly boasts her cooking skills and says she makes a “wicked pulled pork and island chicken” – which she can't wait to cook again. She plans to bring some back to the caregivers who treated her like family.



*Ria Straker Gumbs cherishes the memory of the large birthday card her care team presented to her while she was hospitalized*

## RehabMatters

### Rehab Matters

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