

# thespin

SPINAL CORD INJURY BC

WINTER 2021

## Now You See It... Now You Don't

**BCIT and ICORD researcher Dr. Jaimie Borisoff is taking one of the most popular mobility add-ons to a new level**



# Your mobility freedom is our top priority.



Sidewinder Conversions is committed to enhancing your mobility freedom, independence and quality of life. Since 1999, we've been providing safe and reliable accessible transportation solutions and service in a caring, professional manner.

Our selection of side and rear-entry accessible conversions are available on most full-size vans and minivans, and feature industry-leading technology, ease of use and functional aesthetics. With power and manual options, along with a range of driving controls, mobility aids and stowage lifts, our conversions provide the optimal blend of performance, safety and style.

Whether you're an independent driver, an assisted passenger or a caregiver, our team of qualified experts can help you choose the right solution to meet your mobility and lifestyle needs.

**SIDEWINDER**   
**Conversions & Mobility Ltd.**

44658 Yale Rd. W.  
Chilliwack, BC V2R 0G5  
PHONE: 1-604-792-2082  
TOLL FREE: 1-888-266-2299



**[sidewinderconversions.com](http://sidewinderconversions.com)**

Follow us on:



 **PROUDLY CANADIAN** 



Transport Canada approved and certified CMVSS, FMVSS or CSA compliant  
Licensed motor dealer registered with the VSA (Vehicle Sales Authority of BC) [www.mvsabc.com](http://www.mvsabc.com)



# contents

WINTER 2021

## features

### 12 Cooking Up a Little Adventure

Bruce Cook is inspiring people with disabilities to get out of their comfort zones on his TV show, *By Hook or By Cook*.

### 16 Cover Story

An inside look at how BCIT and ICORD researcher Dr. Jaimie Borisoff is taking one of the most popular wheelchair add-ons ever created to the next level.

### 20 Be Seen...Get a Brake!

Research from ICORD confirms that adding lights to your wheelchair is the best way to stay visible to drivers at night.

### 24 Back in the Hunt

A unique partnership between Kelowna-based Accessible Wilderness Expeditions and an Okanagan construction company is providing opportunities for peers to experience big game hunting in BC's backcountry.

### 29 Please Remain Seated

The lobby to allow passengers with disabilities to remain in their own wheelchairs while flying commercially is gaining momentum.

## departments

### 4 editor's message

Are our emergency preparations and responses inclusive?

### 6 gear & gadgets

New products, devices, and aids to daily living that might make a difference in your life.

### 8 events

Important dates for your calendar.

### 10 peer shoutouts

Giving credit where credit's due.

### 23 spin doctor

All about breastfeeding for mothers with SCI.

### 33 participate in research

ICORD research projects that need your participation.

### 34 last word

The world's first international SCI biobank has launched in Vancouver, thanks to the efforts of Dr. Brian Kwon.

**COVER PHOTO:** Dr. Jaimie Borisoff and his revolutionary SWIVL, which builds on the concept of the hugely popular FreeWheel.



## GOT QUESTIONS?

How do I...



Search

## GET ANSWERS.

Visit our online SCI Info Database for more than 800 trusted resources.

 [sci-bc.ca/info-database](https://sci-bc.ca/info-database)



Spinal Cord Injury BC

# Are our emergency preparations and responses inclusive?

Even though the vast majority of us accept that our climate is changing and that climate change is fueling natural disasters that are becoming more frequent and devastating, just how it all will impact us has seemed pretty abstract. That is, until now. From the devastating forest fires that followed this summer's unprecedented heat dome, to this fall's succession of atmospheric rivers and the destructive flooding resulting from them, it's suddenly very real.

How has our emergency preparedness and responses—as individuals, as communities, and as a province—stacked up against this threat turned into reality, particularly in the context of an ongoing global pandemic? I think it's fair to say that the results of these tests are mixed. There are many heartwarming stories of communities coming together to support those most affected; clearly, the majority are doing their part, following temporary orders and guidance aimed at getting us through an acutely challenging time. Unfortunately, these stories are tempered by many disheartening accounts of selfish behaviour.

It's also possible that, as a society, we wouldn't get high marks when it comes to considering the impact of these climate disasters on people with disabilities. True, nature doesn't discriminate, but it's also true that our preparations and responses to these disasters are far from equitable. Yes, there is an onus on all of us to be better prepared as individuals—for example, we can make sure we have plans for what to do in an emergency, and, if possible, have our emergency kits at the ready. But as a society, our governments must have emergency response plans that take into account the challenges faced by people with all forms of disability. This includes making our infrastructure more accessible. Where do you go when you need accessible temporary shelter? How do you get there? From communication, to transportation, to evacuation centres, people with disabilities need to have accessible ways to evacuate and places to go, and to have clear instructions on what to do and where to go in the event of an emergency.

It's also important to rapidly implement orders or policies for stores and other services to limit panic buying and to ensure they are not putting restrictions in place that negatively impact people with disabilities. Not everyone has the financial means or storage space to stockpile food and supplies, so ensuring access to food and essential supplies is critical.

As I write this, we remain in the torrents of yet another devastating atmospheric river and under provincial state of emergency due to the widespread impacts damage from flooding has caused. We are still in the grips of a natural disaster event. As we emerge from it and start the recovery process, let's make sure we do so with access and inclusion clearly in mind. And let's all be better prepared.

To help you prepare, please check out SCI BC's blog posts on emergency preparedness—look up "What's a GoBag & Why Have One" and "Emergency Essentials for People with Disabilities". You can also search "emergencies" in our SCI Info Database ([sci-bc.ca/sci-info-database/](http://sci-bc.ca/sci-info-database/)) or call our toll-free InfoLine (1.800.689.2477) for more information.

Take care and stay safe.

—Chris McBride, PhD, Executive Director, SCI BC



# thespin

*The Spin* is the quarterly magazine of Spinal Cord Injury BC. An online edition of *The Spin* is available on the SCI BC website [www.sci-bc.ca](http://www.sci-bc.ca).

Executive Editor..... Chris McBride  
Managing Editor/Designer ..... Cliff Bridges  
Assistant Editor ..... Alison Brierley  
Editorial Support..... Holly Birch  
Administration..... Penaz Sidhu

## SUBSCRIPTIONS

Free subscriptions are available for BC residents and health professionals:  
T: 604.324.3611 TF: 1.877.324.3611 E: [thespin@sci-bc.ca](mailto:thespin@sci-bc.ca)

## ADVERTISING

Advertising rates and a publishing calendar for *The Spin* are available online at [sci-bc.ca/thespin](http://sci-bc.ca/thespin). You can also contact Shelley Milstein at [smilstein@sci-bc.ca](mailto:smilstein@sci-bc.ca) or 604.326.1222.

## SUBMISSIONS

Submissions, suggestions and comments are greatly appreciated—please email these to [thespin@sci-bc.ca](mailto:thespin@sci-bc.ca) or send by regular mail to:

Assistant Editor, *The Spin*  
Spinal Cord Injury BC, 780 SW Marine Drive  
Vancouver, British Columbia V6P 5Y7

## COPYRIGHT

You are welcome to reproduce material from *The Spin* after gaining permission from the Executive Editor. All reproduced material must be appropriately acknowledged.

The opinions expressed in *The Spin* are not necessarily those of SCI BC. Also, SCI BC does not endorse nor is responsible for the products or services advertised within *The Spin*. The information contained within *The Spin* is presented for the purpose of educating people about spinal cord injury. Nothing contained in *The Spin* is intended to be used for medical diagnosis or treatment. It should not be used in place of the advice of your physician or other qualified health care provider.

Publications Mail Agreement #: 40684573  
ISSN #: 1922-9445

Return undeliverable Canadian addresses to:  
Spinal Cord Injury BC, 780 SW Marine Drive  
Vancouver, British Columbia V6P 5Y7 T: 604.324.3611

To update/change delivery address, email [thespin@sci-bc.ca](mailto:thespin@sci-bc.ca) or call 604.324.3611.

## SCI BC HEAD OFFICE

780 SW Marine Drive, Vancouver, British Columbia V6P 5Y7  
T: 604.324.3611 TF: 1.877.324.3611 F: 604.326.1229  
E: [info@sci-bc.ca](mailto:info@sci-bc.ca)

## REGIONAL PEER CONTACTS

Fort St. John: Lori Slater, Peer Program Coordinator  
T: 250.787.1912 E: [lslater@sci-bc.ca](mailto:lslater@sci-bc.ca)  
Greater Vancouver/Fraser Valley: Rod Bitz, Peer Program Coordinator  
T: 604.500.2900 E: [rbitz@sci-bc.ca](mailto:rbitz@sci-bc.ca)  
Metro Vancouver: Teri Thorson, Peer Program Coordinator  
T: 604.714.4185 E: [tthorson@sci-bc.ca](mailto:tthorson@sci-bc.ca)  
Metro Vancouver: Ryan Clarkson, Peer Program Coordinator  
T: 604.714.4185 E: [rclarkson@sci-bc.ca](mailto:rclarkson@sci-bc.ca)  
Nanaimo: Bert Abbott, Peer Program Coordinator  
T: 250.616.1186 E: [babbott@sci-bc.ca](mailto:babbott@sci-bc.ca)  
North Shore/Sea to Sky: Peter Chisholm, Peer Program Coordinator  
T: 604.739.5913 E: [pchisholm@sci-bc.ca](mailto:pchisholm@sci-bc.ca)  
Prince George: Brandy Stiles, Peer Program Coordinator  
T: 250.563.6942 E: [bstiles@sci-bc.ca](mailto:bstiles@sci-bc.ca)  
Quesnel: Alison Duddy, Peer Program Coordinator  
E: [aduddy@sci-bc.ca](mailto:aduddy@sci-bc.ca)  
Victoria: Scott Heron, Peer Support Specialist  
T: 250.812.0773 E: [sheron@sci-bc.ca](mailto:sheron@sci-bc.ca)

SCI BC is grateful for the financial support of the BC Gaming Commission and the BC Paraplegic Foundation.

We acknowledge that *The Spin* is created on the traditional and ancestral territory of the Coast Salish peoples—Squamish, Musqueam, and Selilwiltulh (Tsleil-Waututh) Nations. Our provincial work takes place on the territories of Indigenous peoples who have lived on and cared for the land for time immemorial. We are grateful to work, share stories, and connect in these spaces.

**SCI BC InfoLine: 1.800.689.2477**







# WE ARE BESPOKE

## NOUS SOMMES SUR MESURE

WHEELCHAIRS | FAUTEUILS ROULANTS



BATEC MOBILITY



BATEC MOBILITY



BENOIT SYSTEMES



VARILITE CUSHIONS & BACKS



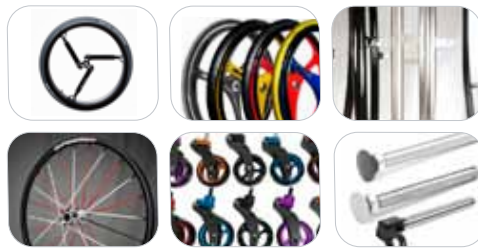
AELITE CRUTCHES



TIRES



WHEELS, SUSPENSION, PUSH RIMS & AXLES



ACCESSORIES



## OFFERING A FULL PRODUCT LINE !

*...and a host of other products from fine manufacturers around the world.*

## OFFRANT TOUTE UNE GAMME DE PRODUITS !

*...et toute une gamme de produits additionnels de première qualité.*



51 Caldari Rd, Units 6-7B  
Concord, ON, L4K 4G3



t. (416) 661-4499  
e. 49@49bespoke.com

**49**BESPOKE.COM



### QUFORA IRRISEDO

The Qufora IrriSedo Mini is a simple one-handed rectal irrigation system designed to improve and speed up your bowel routine. It's simple to learn, easy to handle, and discreet. A hand pump is filled with lukewarm water and a single-use rectal cone is inserted. By squeezing the hand pump once, water flows into the rectum. When the cone is removed, water and waste will evacuate into the toilet. The IrriSedo Mini system is designed for people who need only a small amount of water when irrigating. Qufora, which is based in the UK, says it is working to bring the product to North America. Visit [myqufora.com](http://myqufora.com) to learn more.

### LAPSNAP

Includesign's LapSnap lets wheelchair users carry a ton of stuff while leaving their hands free for wheeling. The versatile carryall was developed for grocery shopping, but users say it's great for laundry, gardening, cleaning, and traveling to school or work. It's made with lightweight, durable, waterproof material. It rests comfortably in place thanks to a versatile strap, which can be worn behind the back, under the legs, or through the arms of the wheelchair. A padded base makes it comfortable to use for extended periods of time. The LapSnap is roughly the size of a traditional shopping basket and is compatible with most wheelchairs. It's also collapsible, so it can be stored compactly and transported easily after use. Visit [thelapsnap.com](http://thelapsnap.com) for details.



### QUICKZIP SHEETS

While not designed specifically for people with disabilities, Quickzip Sheets reportedly make it a breeze for wheelchair users to change their bedding. The bottom fitted sheet is actually made of two pieces that zip together—a base piece snugly stays in place around the perimeter sides of the mattress, while the top portion that you lay on is attached to the base with a hidden zipper. To launder, you simply unzip the top piece from the bottom. Once washed, the top is easy to zip back into place thanks to indicators on both the top and bottom pieces. Quickzip Sheets are available as just a bottom fitted sheet, or as a set that includes the bottom fitted sheet system, a top sheet, and pillow cases. The sheets are 100 percent cotton with a thread count of 400. More options and details can be found at [quickzip.com](http://quickzip.com).

# Innovations

New products, devices, and aids to daily living that might make a difference in your life...



### WHEELBLADES

Wheelblades are small, high-quality, adjustable mini-skis that click onto the front casters of your wheelchair, making it easy for you to push and steer in winter conditions. Their light weight and compact design allow you to take them wherever you go. They're made of durable, high-strength materials, and can be attached quickly without any tools on most types of wheelchairs. To attach, you position the Wheelblades in front of your wheelchair, and then manoeuvre your casters or front wheels into the clamping mechanism. Then you simply close the clamp lever to keep them firmly attached. Have a look at [nicon-tec.ch](http://nicon-tec.ch) to see more photos and find a dealer.





Start Right  
Here.

VaPro Pocket™ catheters offer the features male patients want.<sup>1</sup>

Protection. Ease of Use. Discretion.

VaPro Pocket catheters provide 100% No Touch Protection with a protective tip and sleeve, and they are easy to use, with an improved protective tip that offers a more comfortable insertion. The pocket-size package design is more discreet—a quality users prefer.

Consider VaPro Pocket catheters right from the start.

Learn more by visiting [Hollister.com](http://Hollister.com) or contact us at 1.800.263.7400.



Improved catheter.  
Discreet packaging.

Reference: 1. Hollister data on file.

Prior to use, be sure to read the Instructions for Use for information regarding Intended Use, Contraindications, Warnings, Precautions, and Instructions.

The Hollister logo, VaPro Plus Pocket, and VaPro Pocket are trademarks of Hollister Incorporated.  
©2021 Hollister Incorporated. ALL-01469

CE  
0050

VaPro Pocket  
No Touch Intermittent Catheter

VaPro Plus Pocket  
No Touch Intermittent Catheter



Continence Care



### Stay tuned for in-person events.

As we gradually resume in-person activities, our Peer Program Coordinators will be reaching out to you by email or phone to let you know about events as they come up. Follow our social media channels for the latest announcements and check out our online events calendar to find new additions. The health of our peers is our top priority, so we'll be implementing safety protocols to keep everyone safe. To learn more: [sci-bc.ca/events](https://sci-bc.ca/events) | @SpinalCordInjuryBC | @SCI\_BC



### Be together in any weather.

Throughout the winter, our online events will be going strong. Our amazing Peer Program Coordinators and volunteer online hosts are here for you with an array of activities to keep you connected. Trivia, games night, sports talk, adaptive boxing, book club, coffee groups, mindfulness activities and more—there's a lot going on. Join in through Zoom or dial-in by phone. Visit [sci-bc.ca/events](https://sci-bc.ca/events) or call our toll-free InfoLine (1.800.689.2477) for more info.



### Follow the tracks.

We're excited to offer two days of Nordic sit-skiing! Join our friends from Whistler Adaptive Sports Program for an exciting time touring the trails of the Whistler Olympic Park. These free ski days, which will take place on February 5 and March 12, are open to all peers regardless of their experience. All equipment will be provided—just dress warmly and prepare for a day of fun. For more details or to reserve a spot, please contact Peter at [pchisholm@sci-bc.ca](mailto:pchisholm@sci-bc.ca) or 604.739.5913.



 **ALLIANCE  
Mobility**  
[www.amsvans.ca](http://www.amsvans.ca)



 **BraunAbility**



**Wheelchair Vans  
and Adaptations**



**Vehicle Lifts and  
Driving Aids**

“Our  
Community  
Matters”

**Freedom  
Through  
Mobility.**



#110, 12211 Vulcan Way,  
Richmond, BC, V6V 1J7  
☎ 604-370-7004



1075 McCurdy Rd  
Kelowna, BC, V1X 2P9  
☎ 236-420-1400



**Alliance Mobility**  
has stepped up to help six-year-old  
Emiliano by donating a **Dodge Grand  
Caravan** with rear entry conversion to  
the Hernandez Family.





# WorkBC Assistive Technology Services

Assistive Technology Services provides equipment and devices to help individuals thrive in the workplace.

Supports available through Assistive Technology Services include:

- Assistive devices, equipment and technology
- Ergonomic supports (e.g. ergonomic furniture, lighting systems)
- Restorative supports (e.g. canes, crutches)
- Attendant services related to work (e.g. assistance with mobility or personal hygiene at work)
- American Sign Language (ASL) interpreting and captioning services
- Communication and hearing devices related to work
- Workplace access and modification
- Vehicle modifications

---

**Questions? Need help applying?**  
**Contact us: 1-844-453-5506 or [info-ats@workbc.ca](mailto:info-ats@workbc.ca)**  
**For more information: [workbc-ats.ca](http://workbc-ats.ca)**

---



This program is funded by the Government of Canada  
and the Province of British Columbia.

It could be a first—a quadriplegic filmmaker producing a documentary about another quadriplegic artist.

**MAT THE ALIEN**, born Mat Andrew, is a prolific DJ and producer who has been a fixture of the Whistler and Squamish electronic music scene since the mid-90s. After his mountain bike accident last October near his home in Nanaimo, Mat spent six months in hospital and rehab. When he got home earlier this year, it didn't take him long to get back in his studio (right) and explore how to return to DJing. Lately, he's been collaborating with other artists online, playing online sets, and figuring out how to return to teaching online.

Chronicling Mat's return to spinning beats is **MURRAY SIPLE** (inset photo), a well-known BC artist, writer and filmmaker who recently moved from North Vancouver to Salt Spring Island. With funding from the BC Arts Council, Siple will continue to shoot footage of Mat the Alien—including his expected return to live DJing—until this coming summer. He expects to debut the film later in 2022.



## Peer Shoutouts



Have you seen BCAA's "Nothing's Going To Stop Us Now" TV commercial? The minute-long spot, which debuted in October on BC TV stations, is definitely the feel-good ad of the season. One of the reasons is that, in order to promote provincial travel and BCAA services, it relies on a huge, diverse cast of people from every walk of life. That includes people with disabilities, and one of them is none other than former SCI BC employee **KIRSTEN SHARP** (third from right above).

"We wheeled up and down that steep ass hill for three and a half hours for like a split second of finished video," says Kirsten with a laugh. "Surprisingly, many people have seen it and recognized me, which is crazy."

While she enjoyed the experience, it's unlikely that acting will ever be her day job—particularly since she has a new position as Director Of Content Production at Daz 3D, a digital production company. "I have an agent; in fact, the ad is the first work I booked through my agent," she says. "But work is full-on. So I won't be focusing on acting much!"

A warm welcome and shoutout to **ROD BITZ** and **PETER CHISHOLM**, our two new Greater Vancouver region Peer Program Coordinators.

Originally from Saskatchewan, Rod moved to Vancouver after his C7 SCI. He enjoys fitness and watching and playing all kinds of sports, including wheelchair rugby (he's a former member of the BC wheelchair rugby team). His working life includes ten years as a recreation and fitness coordinator for persons with various disabilities with the City of Surrey.



"The first three months have been rewarding," says Rod. "I have spoken to so many peers who have expressed gratitude for the reach out calls and I can sense sincerity in their voices. I have felt a sense of satisfaction while meeting with peers for a coffee or ice cream, and it was fun. Also, it's satisfying to see that the peers are engaged and comfortable with a meetup. I prefer the in-person activities and expect this component to flourish at a reasonable pace."

Like Rod, Peter is also a big fan of staying active. After graduating with a phys ed degree at the University of Calgary, he moved to the Lower Mainland, working as a lifeguard, swimming instructor, and youth outreach worker with the Maples Adolescent Treatment Centre and the District of West Vancouver. When he's not working, you can often find him on his handcycle, sit-ski, or kayak.



"I'm enjoying the new challenge working with SCI BC," says Peter, who sustained a C6-7 injury in 2009 in a kayaking accident.

"I have wanted to get more involved with the organization for a while now, and this opportunity comes at a great time in my life. We know that connecting with peers in our community has so many beneficial effects, and as we come out of the pandemic, I think it will be even more important to find safe ways to connect."



# Order your free SpeediCath® Catheter Box!

Catheter options as individual as you are.



Male



Female

## Order now!



<http://visit.coloplast.ca/free-catheter-box>



1-866-293-6349



Scan the QR  
Code to order

Ostomy Care / Continence Care / Wound & Skin Care / Interventional Urology

Coloplast Canada, A205-2401 Bristol Circle, Oakville, ON

[www.coloplast.ca](http://www.coloplast.ca) The Coloplast logo is a registered trademark of Coloplast. © 2021-06 All rights reserved Coloplast.



**Coloplast**

# Cooking Up a Little Adventure

Freestyle motocross rider Bruce Cook believes that challenging yourself with adventure is one of the best ways to make the most of life, regardless of SCI or any other disability. As host of the TV show *By Hook or By Cook*, he's proving that to one guest at a time.

On October 14, 2015, in front of a sold-out crowd in Toronto's Air Canada Centre, Bruce Cook psyched himself up for one of the most important moments of his life. As a member of the incredibly popular Nitro Circus, he was about to attempt a huge backflip and, in the process, become the first paraplegic to ever accomplish the feat.

Just 21 months earlier, and only an hour down the road in Hamilton, Cook crashed while attempting a record-setting double front flip. He'd sustained a T11 complete injury, and was carried out of the stadium on a stretcher.

Once the extent of his injuries was known, few of his family, friends, co-riders and fans thought he'd ever be able to get back on a motocross bike again, let alone perform in front of a crowd. But, as his family and friends will attest to, Cook has always been unwavering in his determination, and he wanted to ride again. Fresh out of rehab at GF Strong and back at his family's farm just outside of Kelowna, he pursued his dream with a tireless passion. He first modified a bike and learned how to ride again as a paraplegic, then gradually challenged himself more and more until, one day, he attempted a backflip into a foam pit.

With more and more practice, and with a great deal of perseverance to convince the show's owners, he eventually ended up back in the Nitro Circus. And







here he was, about to attempt the backflip in front an audience that included members of his family and many fans who had seen him crash in Hamilton.

"No matter how prepared, I couldn't help but have some flashbacks and think to myself, 'Is this really a good idea?'" says Cook as he thinks back to those last few turns around the stadium floor before he approached the ramp. "I had a harsh case of the 'what ifs.' I was definitely nervous. But I was also confident."

Needless to say, confidence prevailed over doubt, and Cook nailed the flip. The crowd let out a collective gasp of relief and then roared, and his Nitro Circus co-riders mobbed him.

"It was totally an 'I'm back!' moment," says Cook. "Honestly, I didn't know how I would feel after I landed it. I had told myself I'd be okay if I just did the one backflip, back in front of a crowd. But as soon as I landed and heard the crowd and got rushed by all my Nitro friends, I knew I was back and I would definitely continue to tour."

And that's what he did, continuing as a member of the Nitro Circus until COVID-19 wreaked havoc with stadium events like Nitro Circus. He hopes to return to touring in the future, but in the interim, he picked up an interesting sideline—hosting a TV show aptly titled *By Hook or By Cook*.

"I actually didn't come up with the show concept," he explains. "In 2019, I got cold-called by Pamela, before we even knew each other, and she asked if I wanted to come and shoot basically a pitch video."

"Pamela" is Pamela Tomlinson, a producer and director with Kelowna-based Render Digital Media (she's also now Cook's girlfriend). She had worked with the Canadian network Accessible Media Inc. (AMI) on several previous projects, and AMI was keen to partner with her on her new idea. She gave Cook a quick rundown of the show, and asked him what he thought.

"A few minutes later, I said, 'Sure, why not?'" says Cook. "We filmed a five or so minute video with interviews. It was just a great fit, then kind of morphed into being heavily influenced by me."

The general idea for the show was that, on each episode, Cook would work with a guest with a disability, gently encouraging them to challenge themselves and realize their dreams the same way he had after his injury—with perseverance, innovation and modifications. The goal was to have each guest break out of their routine, discover their inner strength, and come away with a feeling of accomplishment and a renewed sense of what they're capable of—the same benefits Cook had experienced when he started challenging himself after rehab.

"Getting back to riding was extremely important for me," says Cook. "It was such a relief and just felt like I was back to my old self, just in a slightly different way. Getting back to doing other outdoor stuff like offroading, quading and camping was also great for my mental health. It's all been such a huge part of my life for as long as I can remember that it would be really tough to be without it."

Naturally, not everyone with an SCI or

other disability has the desire, let alone the skills, to break into the world of extreme sports. But that, explains Cook, was never the intention of the show.

"I've always lived my life pushing limits and boundaries and also with a lot of spontaneity," he says. "Some of the stuff I've done is definitely over the top for many people. But I love when people can experience that same feeling from trying something different, or doing something they didn't think they could do, or even just seeing a place they've never been. I never suggest or push anyone into something that I don't truly believe they can accomplish. Sometimes people just need that little bit of extra help or confidence to get them to try something, and I have a bit of experience in that department. Often, it has a snowball effect where, once you try one thing, it gives you the courage to try something else. Doing things that are out of your comfort zone can be so rewarding."

The first season was shot in 2020, COVID and all, and debuted on AMI-tv in June 2021. The eight episodes feature Cook, and sometimes two friends who also have disabilities, Christian Baggett and Ashley King, creating adaptive equipment that allows guests of all abilities to realize their dreams. They spend anywhere from three to five days with guests, preparing them for a big adventure at the end of each episode—anything from hot air ballooning and rock wall climbing to kayaking and ATVing.

By any measure, the first season was deemed a huge success. Everyone was keen to follow it up with a second sea-

son, and shooting began for it as the first season was being aired.

"We wrapped filming for season two in October, and the first episode should be out in the spring of 2022—May or June, I believe," says Cook. "Season two is slightly different in that each episode isn't a standalone adventure. The story flows through the whole season with some adventures intertwined."

Another change for season two is that Bagg takes on a much larger role, working with Cook throughout the episodes. Some readers will recognize Bagg, an SCI peer from Calgary who is getting a lot of attention globally these days for his innovative three-wheel electric mountain bike, the Bowhead Reach.

"Christian has a pretty big role in season two," says Cook. "He's an engineer, an idea generator, an adventure buddy, a planner, and a friend. It's a very hands-on season with a lot of the stuff that Christian already does, like building stuff and outdoor adventuring. He's a natural fit."

As for what to expect for plot and content, Cook says we'll just have to wait and see what season two has in store. But it's a given that, just as in season one, viewers will see guests break out of their daily routines and challenge themselves—and have a great time in the process. But of course, they won't be the only ones enjoying themselves.

"Honestly, I have a ton of fun," says Cook. "There isn't a scene being shot where there isn't laughter, and while Christian is great to have around, sometimes we end up having to shoot the same scene many times because we can't keep ourselves composed."

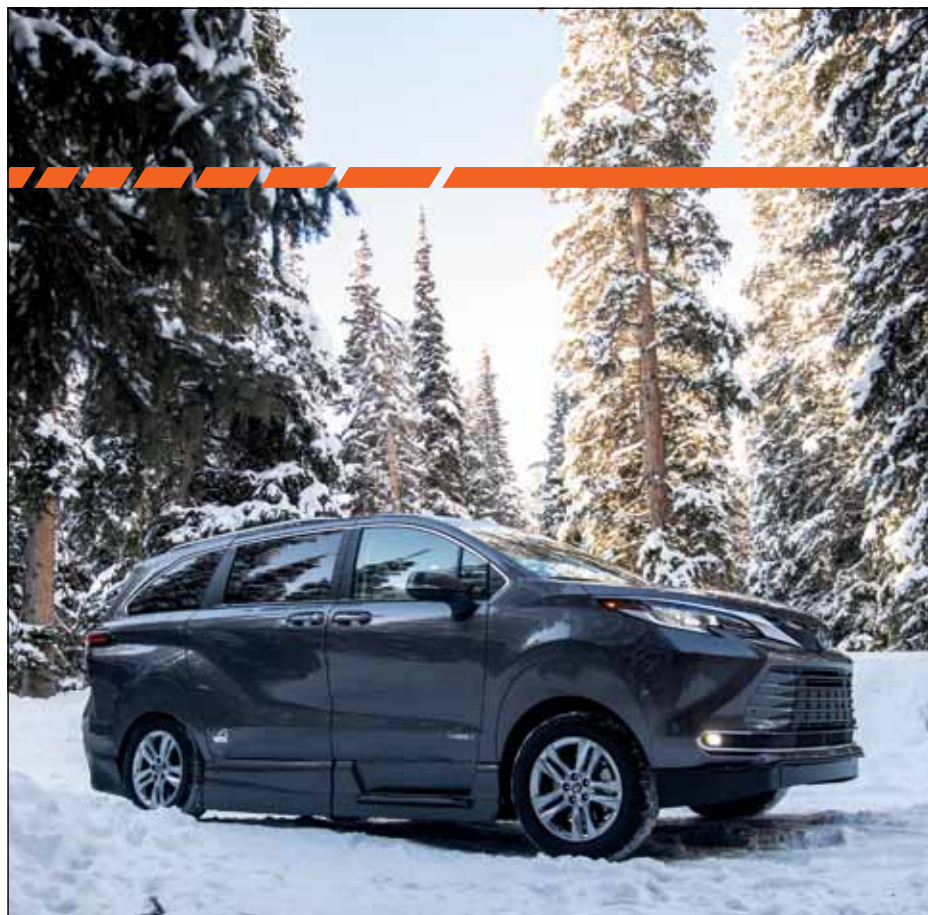
Even more important to Cook than the laughter and camaraderie with the cast and crew is the satisfaction of knowing that he's helping people realize dreams and gain more control in their lives as people who live with disabilities.

"Overall, it's very satisfying," he says. "There's obviously days that feel like you worked backwards and have frustrating moments, but when you see smiles on

people's faces in the end, it all makes it so worth it and hugely satisfying. I have kept in touch with a few people that appeared on the show. Every once in a while, I'll get a message that they're trying something else, or it motivated them to sign up for an outing or something, and that always makes me feel good. I don't expect that going on an adventure on the show is going to change someone's life in a day, but if it can give them that little bit of confidence to see that they can do it, maybe they'll be a little more willing to say yes to the next experience. And that's a win in my eyes.

"I hope people can realize that even though they have an injury or disability, life can still be great. Sometimes things will be harder, but if you face things with a can-do attitude, there's usually a way to adapt something to make it work."

You can watch *By Hook or By Cook* and other AMI shows on TELUS and Shaw (channel 888), or by streaming the show at the AMI website ([ami.ca](http://ami.ca)) or via the free AMI-tv app for Apple and Android. ■



**NEW!**

**First and only,  
all wheel drive  
accessible conversion**

Call to book a demo of  
the new VMI side entry  
conversion for Toyota  
Sienna hybrid.

 **Silver Cross**  
AUTOMOTIVE

[silvercrossauto.com](http://silvercrossauto.com)

**1.877.215.7609**



# COMPLEX REHAB TEAM



Meet the team: Evan Kellett, Anthony Purcell (front),  
Graham Denison (back), Erik Hagreen.

## The Macdonald's Home Health Care Complex Rehab Team is here for you!

Unlimited options to meet your needs:

- Custom manual rigid chairs
- Custom electronic adaptations
- Custom mechanical adaptations
- Complex power solutions
- Alternate drive control experts
- Custom fabrication
- 3D printing

**Macdonald's**  
HOME HEALTH CARE

locally owned and operated since 1926 🍁



macdonaldshhc.com



complexrehab@macdonaldshhc.com



Vancouver: 604-872-5496

Burnaby: 778-379-5496

## Save energy & money

SCI BC is teaming up with FortisBC and BC Hydro to offer SCI BC members personalized advice and home installation of energy-saving products – at no cost to you.

Some households may even qualify for a new fridge, insulation, or a natural gas furnace.

**Call our InfoLine for more info:**

**1-800-689-2477**

This program is available to owners or renters living in single-family homes, townhouses, and duplexes.

We're working together to help B.C. save energy.



\*Products installed depend on the individual characteristics of the home and other program criteria. Only FortisBC natural gas heated, FortisBC electrically heated or BC Hydro electrically heated single family homes, townhouses and duplexes may be eligible for insulation upgrades. In addition, only FortisBC natural gas heated homes may be eligible for furnace replacement. Other program criteria apply. Apartment units and mobile homes are not eligible for insulation or furnaces. Offer subject to change.





# Building a Better FreeWheel



An inside look at how BCIT and ICORD researcher Dr. Jaimie Borisoff is taking one of the most popular wheelchair add-ons ever created to the next level.



**B**ert Abbott loves his FreeWheel. Like so many other peers, he relies on it whenever he needs to wheel off-road (or off-sidewalk). Once locked into place, the device's huge front wheel extends the wheelbase of his chair and lifts his front casters off the ground, making it that much easier for him to negotiate difficult terrain.

"I've had my FreeWheel for close to ten years," says Abbott, who is SCI BC's Peer Program Manager and Information Resources Agent. "It's been very important—especially on grass soccer fields where I've watched my granddaughters playing soccer. I don't use it quite as much recently, as they're no longer playing. But it's still important in the summer months when I use it a lot—on trails and the beach, at outdoor concerts, and during most outdoor activities."

But despite being a huge fan of the FreeWheel, Abbott, like many other peers who use it, says it's not a perfect solution. Among the complaints is that it's a little too large—and as a result, you often have to take it off when you get to your destination. At that point, it becomes a cumbersome piece of kit that you have to lug around on your lap or hang off the back of your chair. For these reasons, it's a little inconvenient for everyday use, and often gets left at home or in the car.

"I have my FreeWheel in my car all the time in case I want to use it," says Abbott. "But I cannot count how many times I've been somewhere and not put it on because I didn't think I would need it—and then had to go back to the car to get it because it turned out that I did need it. Also, I use the FreeWheel a lot in public, and it often trips people around me, because of the length it sticks out as well as the fact that people just aren't looking for it. So when I'm sitting at an event, I have to take the FreeWheel off so people won't trip. I'm used to taking it on and off, and it's not that much of an inconvenience for me. But wheeling around with it on your lap isn't a lot of fun."

Enter Dr. Jaimie Borisoff—an engineer and neuroscientist who is the Canadian

Research Chair in Rehabilitation Engineering Design at BCIT, an ICORD principal investigator, and an adjunct professor at UBC's Department of Occupational Science and Occupational Therapy. We know many readers know him or know of him, either because he's also a peer who lives with an SCI, or because of his track record of developing innovative mobility solutions.

Many will likely remember that he's the inventor of the Elevation, a wheelchair now sold by PDG Mobility which simply and easily allows a user to "elevate" up to 10 inches. Most recently, we told you about the work he's done to create aRow, an accessible rowing machine for wheelchair users (*The Spin*, Spring 2021).

Like Abbott, Borisoff loves the FreeWheel concept—but has long lamented its shortcomings. So he decided he could create a new add-on product.

"This is an idea that's been slowly germinating for a few years," says Borisoff. "I've always been a big fan of the FreeWheel, and even had one of the first ones made about 12 years ago. My colleague Ian Denison, who has been the equipment specialist at GF Strong for 40 years, likes to say that 'casters are parasites' and are only useful to stop you from tipping over. Otherwise, they just dig into stuff, get stopped by rocks and bumps, and can even pitch you forward dangerously. Of course you need casters

for the best indoor manoeuvrability and to keep you from tipping over. But if you can get rid of the need for casters when appropriate, using a device like the FreeWheel, it offers some big benefits."

Borisoff played around with a few ideas for years. Then, in September 2020, Dr. James Laskin, who works at the Praxis Spinal Cord Institute, asked him if he had anything on the burner that might be a good candidate for the Praxis SCI Incubate program, which helps commercialize technology designed to improve life for people with SCI and other disabilities.

"He thought I must have something kicking around that would be appropriate," says Borisoff. "This was about 10 days before the deadline for submissions. And I thought, 'Hmm...you know, there is this thing.'"

At the time, the "thing" was still just an idea in Borisoff's head. But the prospect of getting funding—and the looming deadline for applications—lit his fire.

"When things kicked into gear, I was, in the back of my mind, considering the space underneath the front of a manual wheelchair, between your legs and rear axle. It's a lot of space and generally underutilized. I also had an increasingly clear idea of what was wrong with the FreeWheel and all products like it—you often don't have it with you when you need it! Great product, but if it sits at



*Peers rave about the FreeWheel—but also complain about its size and how hard it is to carry around when you need to wheel without it—for example, at a crowded event.*

home all the time like mine, not being used, that's a problem, right? They also don't store well, and are difficult to carry. Where do you put it when you pop into a coffee shop, for instance? What do you do when sitting around a campfire and people are walking around and tripping over it? So I had this idea: what if you could tuck, fold, or place a FreeWheel-like thing under your chair, and easily deploy it when needed?"

With just a week and a half before the Praxis deadline, Borisoff got to work on a prototype.

"I did a lot of the work at home, after an initial trip to get all sorts of bits and pieces from my lab shelving units. A wheel here, a fork there. I even used a piece of my kid's Lego as a spacer. I submitted an application and prototype on time, along with a video showing the prototype with me using it outside—it was pretty cool."

That prototype was built with the wheel stored under the chair on a swinging arm. To activate it, the user would do a wheelie—the wheel would first swing down, and momentum would carry it up and to the front of the chair, where the footrest locked it into place.

"It turned out to be relatively easy to build this simple prototype," says Borisoff. "And it just worked. It swung like a pendulum when you did this extreme wheelie, and it emerged, and as you landed the wheelie, bam! The casters were up and away you went. Then you did a big wheelie again, and it tucked right back where it didn't bother you when it was stowed, and you could start wheeling again."

The application process for Praxis SCI Incubate program had several stages. After demonstrating the prototype at his first interview, Borisoff was invited for a second interview, two weeks after

the first. In the interim, he realized he needed to make some changes.

"It became obvious that the kung-fu wheelie thing was a bit extreme," he explains. "How many wheelchair users can actually do that sort of thing? So I decided it needed to be easier to fold out and stow again. It had to come out from between your legs. I made a second prototype where the wheel was stored between the legs, and deployed by swinging it out and down. Like the first prototype, it worked great, but the difference was that it was now very easy to use."

The revised design won over the Praxis staff, and the SCI Incubate program approved it.

"With funding in place, we started real development of the product," says Borisoff. Over the next six months, with help from BCIT's MAKE+ applied research team, he worked on refining the concept. He tested different sizes of the



*LEFT: When not needed, the SWIVL rotates up and in, and stores between the user's legs. RIGHT: When required, it rotates out and down, where it locks securely into place. It takes seconds for the user to switch from one position to the other.*



wheel. He added the ability for the wheel to swivel, just like a caster and the FreeWheel (the original prototypes didn't swivel in place; you turned by doing a mini-wheelie and changing direction as needed). He worked on adjustability so it would fit a wide variety of wheelchairs. He beefed up the strength, and improved the clamping and locking-in-place mechanisms. And, perhaps most important, he increased the rigidity to avoid the type of "flutter" that some users experience with the casters of their chairs.

He dubbed it the SWIVL, and started to refer to it as "the stow and roll front wheel." Users can easily attach the SWIVL themselves while they're sitting in their wheelchair. When not in use, it's folded up and between the legs of the user (or even further behind the legs, depending on the wheelchair frame). It's deployed in seconds by "swivelling" it out and, with a simple click to lock it into place, the casters are lifted off the ground. It's quick, easy and tidy. In just seconds, users can shift easily between the SWIVL and regular castors as needed.

By this past summer, Borisoff felt he finally had a polished prototype—one that he could confidently seek a patent and trademark for in order to protect his intellectual property. Then, with those applications submitted, he began the process of seeking validation from both peers and colleagues in the world of mobility engineering.

He began testing it with peers, who provided overwhelmingly positive feedback. Buoyed by that, he created a video presentation and presented it in July at the 2021 RESNA conference (RESNA is the Rehabilitation Engineering and Assistive Technology Society of North America). His colleagues at RESNA loved it, awarding him the prestigious Developer's Showcase IMPACT Award.

"All validation is important," he says. "Not just for me, but also for potential partners who may help me bring this to market—they want validation from as many others as possible. Of course, real sales are even better validation, but I believe we'll get there as we move forward."



As you read this, Borisoff is in the process of exploring ways to bring the device to market as soon as possible. He concedes it's the part of the process he enjoys the least—after all, he thinks of himself as a researcher, not a businessman. He says the path forward isn't quite clear. Options include fabricating a modest number of SWIVLs and getting them on the market, or enlisting the help of an industry partner. He's grateful to the Praxis SCI Incubate program for providing him with the expertise and advice he needed to start this process, in addition to the \$25,000 of seed money.

While the business aspect of bringing SWIVL to market is a chore to him, personally using the device on a regular basis has been nothing but a pleasure.

"I've been using it when my kids play baseball," he says. "I used it on Halloween night—it made trick or treating with my kids a breeze. No problem with side-walks full of wet leaves, or wheeling over grass and even a path through bushes. When we got to an area with dozens of people milling around in front of a particularly cool decorated house, I thought, 'Someone is going to trip over this thing.' Duh! I just tucked it up; problem solved. And then we went to a neighbour's house. As we went through their front door, I just folded it up, and voila. When we left, down it came again for the wheel home. Once it's attached, it works like a charm. It's great for urban wheeling, not just off-

road stuff. So much less resistance than casters—one day, I need to do a study to document just how much more efficient it is to wheel like this. And it gives you confidence—you don't have to look at the ground all the time."

Looking forward, Borisoff's ultimate hope for SWIVL is to have mobility therapists offer it as an add-on as a matter of course for every manual wheelchair prescribed and sold.

"It's about wheelchair users being able to live more spontaneously; being able to access whatever environment they want, whenever they want," he says. "This notion of spontaneity is key and usually ignored. People with disabilities can do almost anything if they have the right equipment, resources, and assistance from others. But they often can't do things on a whim like everyone else."

The last word goes to Bert Abbott, who hasn't tested the prototype, but has seen the video Borisoff created to debut the SWIVL at the 2021 RESNA conference.

"This does sound and look like a great product and is an improvement on the FreeWheel," he says. "It's a great idea. Having it fold up, and being able to have it on your chair all the time, is the best part of the product. Overall, if I had seen this product before the FreeWheel, I probably would have chosen it. And should I need a new one in the future, I will most likely choose the SWIVL if it's available." ■



# Be Seen... Get a Brake!

How you can avoid becoming a statistic on our wintry, rainy and dark streets.

It's a tragedy that happens far too often—you open the newspaper or your go-to news site and read about yet another wheelchair user who has been struck by a vehicle. It's likely that a few readers have been involved in a pedestrian/vehicle incident, and many more know of other peers who have been hit by a car or truck.

Beyond the anecdotes, statistics make it clear that wheelchair users are significantly

more vulnerable to being struck by a vehicle than other pedestrians. One American study that analyzed data between 2002 and 2010 concluded that, in the USA, an estimated 1,040 wheelchair users were treated in emergency departments each of those years for non-fatal injuries related to collisions with vehicles. Another study of wheelchair users in the USA concluded that, from 2006 to 2012, wheelchair users had a

36 percent higher risk of being involved in a fatal collision than non-wheelchair users. Meanwhile, other studies have clearly demonstrated that the majority of pedestrian/vehicle collisions occur at night—and that one of the most critical factors underlying these events is that drivers just don't see pedestrians.

Of course, none of this is a revelation for most wheelchair users, and over the years, like cyclists and able-bodied





pedestrians, they've used a variety of strategies to increase their visibility. These include orange flags, reflective safety vests worn on their bodies or placed on their seat backs, and, more recently, various aftermarket bike lights and reflectors. But it's never been really known how these strategies work and compare to each other.

A couple of years ago, two ICORD researchers—Dr. Ben Mortenson and Dr. Bonnie Sawatzky—set out to determine the most effective way for wheelchair users to be more visible to drivers and avoid being involved in these types of collisions. The catalyst to their work was Eric Molendyk, a Tetra Society employee and SCI BC peer whose personal story led to the development of TetraGear lights—a wheelchair light kit which the Tetra Society has since made available commercially (that's it on the facing page).

"I met Eric when they were crowd sourcing the production of TetraGear lights, which were made because of the accident he had—in 2008, he was hit by a car whose driver didn't see him despite his reflective lights," says Mortenson. "I was really compelled by his story. So I signed up for a set with the idea we would test them to show whether they were significantly better than other options."

Sawatzky agreed to collaborate, along with occupational therapy students Jaquelyn Webber and Jennifer Wuschke. The goal the team decided on was to investigate the effectiveness of three different visibility strategies for wheelchair users in nighttime and daytime conditions—the TetraGear LED lighting system, reflective safety vests, and wheelchair-mounted orange flags. These were all compared to the control, which was black clothing (essentially no visibility strategy at all).

Fifty participants—men and women who routinely drive—were shown videos that were taken from the driver's perspective in a vehicle travelling at 30 km/h. In each video, a wheelchair user using one of the three visibility strategies or the control is waiting to cross the street. As participants watched each

of the videos, they indicated by a mouse click when, if at all, they first saw the wheelchair user at the roadside. Results were compared to determine which strategy allowed for the quickest reaction time (and therefore the longest time to stop their vehicle).

The videos, which included daytime and nighttime scenarios, were shown to the participants in a random order. Ultimately, results from four of the participants were rejected, as the researchers concluded that they were guessing rather than reacting to actually seeing the wheelchair user (they clicked before it was possible for anyone to actually see the wheelchair user).

In nighttime conditions, the TetraGear LED lighting system emerged as the most effective strategy by far. The reflective vest was next, but not nearly as effective at alerting drivers as the lighting system. Neither the orange flag nor black clothing provided an adequate stopping distance when a vehicle was travelling at 32 km/h at night.

During daytime conditions, all visibility strategies were similarly effective. Remember, however, that night is the time when most pedestrian/vehicle collisions occur.

The videos were all shot with the vehicle travelling at 30 km/h. But the reaction times can be extrapolated to different speeds, keeping in mind that the faster the vehicle is travelling, the longer it takes to stop.

"Given the average stopping distance of a vehicle travelling at 64 km/h is 33 – 38 m...the findings suggest that the reflective vest may not be adequate at nighttime when vehicles are travelling at higher speeds," the team wrote in the study paper, which was titled *Evaluating common approaches to improve visibility of wheelchair users* and appeared in May 2019 in the journal *Assistive Technology*. "When a vehicle is travelling at 88 km/h the average stopping distance is 59 – 69 m...the findings suggest that the LED lighting system is the only viable strategy at this speed during nighttime conditions."

We asked members of the research team if they were surprised to see just how effective LED lighting is in terms of raising visibility, when compared to the alternatives.

"I was a little surprised, but I probably shouldn't have been when you think about the physics of it," says Mortenson. "For a reflector to work, the light from a driver's headlights needs to hit it pretty well head on and bounce back to the driver. So there is lots of room for problems with that situation, in terms of angle of the headlight and brightness and reflectiveness of the material."

Mortenson and Sawatzky point out that there are some limitations to the study. For example, the straight road used for the videos may not be representative of a road. As well, the GoPro camera footage used does not replicate



Dr. Bonnie Sawatzky and Dr. Ben Mortenson (photos courtesy ICORD)

the visual acuity of the human eye, so the average driver might have quicker reaction times when encountering these visibility strategies when actually behind the wheel. And it's important to note there is great variation in how wheelchair users utilize these different visibility strategies—in the study, the LED lighting system, the reflective safety vest, and the orange flag were always mounted on the wheelchair in the same position. Naturally, individuals might prefer different locations for placing the various devices, which could impact the effectiveness of the strategy deployed.

Nevertheless, it would appear to be conclusive enough to convince anyone truly concerned about their safety as a wheelchair pedestrian, particularly those who are routinely out at night on dark and rainy city streets, to take a closer look at the TetraGear system. You can learn more at [tetragear.com](http://tetragear.com).

However, it's a premium product with a price tag to match. If it's unaffordable for you, rest assured that there's a growing



*Activ Life LED Bike Wheel Lights, available on Amazon, are relatively inexpensive and can be used on many wheelchairs.*

number of less expensive LED lighting systems that can be mounted on tires and other parts of the wheelchair structure (see Amazon, for example).

"We didn't evaluate other systems, but just based on physics, something that emits bright light will be much easier to see than something that reflects," says

Mortenson. "So any LEDs would be better than none from this perspective."

"Multiple lights is critical, and Tetra lights makes this easy," adds Sawatzky. "However, I have to say that, with more and more lighting systems on the market, it is cheaper and easier to place these where you want on your chair or body. I now wear a toque with an LED light holder in the front that is easily removable and USB chargeable. It keeps me warm and safe."

In a perfect world, drivers on our nighttime streets would have the technology and training to avoid hitting pedestrians. It is, however, far from a perfect world.

"I hate putting the responsibility on wheelers and walkers in this regard," concludes Mortenson. "It's the people behind the wheel who are legally obligated to drive responsibly, after all. But given the potential consequences of not being seen, being a defensive walker or wheeler is a good idea—especially in these dark and rainy conditions." ■

## More than just numbers.

"I strive to be both an accountant and a mentor. I can help navigate our tax and disability support systems with a combination of professional and personal experience."

- Walter Gagen  
accountant & founder



**We're the missing piece!**  
**Our services include:**

CSIL bookkeeping  
Personal and corporate tax prep  
Custom services to meet your needs  
Pick-up and delivery available

[www.gagen.ca](http://www.gagen.ca)

[wgagen@telus.net](mailto:wgagen@telus.net)

**1-866-277-2745 | I'm Walter Gagen. Call me - I'm able. | 604-597-5100**



# ask the SPIN DOCTOR



We've received numerous questions about breastfeeding after SCI. For some insight, we reached out to Laura McCracken, Clinical Coordinator in Dr. Andrei Krassioukov's ICORD lab, which is working with an international panel of experts to create clinical practice guidelines for breastfeeding after SCI. She coordinated this response from the research team.

**L**ike all mothers, women with SCI may experience common breastfeeding challenges—baby having difficulty latching or feeding, inverted nipples, clogged ducts, breast inflammation, and overabundance of milk. For mothers with SCI, however, there are often additional challenges.

Flow of milk is controlled by your hormones and nervous system. When a baby suckles, sensory nerves send signals to the spinal cord, which relays them to the brain and hormonal glands, which release hormones which trigger milk flow. With SCI, this communication may be disrupted. Generally, if your level and severity of injury is higher, you may experience more difficulties. Based on Dr. Andrei Krassioukov's team's research, women with SCI at or above T6 have been found to breastfeed for 3.3 months on average, compared to 6.5 months for women with SCI below T6. Women with complete injuries at or above T5 may produce little to no milk.

There are medicines and supplements that may help with milk production and ejection. Be aware that some of these are considered "off-label", have mixed results, and lack evidence for their safety and effectiveness. It's advised that you work with your doctor and partners in care to use all non-pharmacological options first.

Mobility is another common challenge. Transfers and bed mobility can become increasingly difficult during pregnancy due to weight gain, increased spasms, decreased ability to shift weight forward during transfers, altered centre of gravity, and fatigue. After baby arrives, transfers may be challenging as you heal. The number of transfers required will likely increase after the baby is born. Additional trunk support to increase stability while lifting and holding the baby in a breastfeeding position may be helpful. Adjusting the seat slope or backrest angle can change the centre of gravity and improve stability. A backrest with deeper lateral trunk support may also add stability. Women with high thoracic or cervical injuries and poor hand/arm functions also may experience difficulty positioning baby during breastfeeding and may need to try different positions, such as sitting up in bed with pillows or sitting in their wheelchair with a breastfeeding pillow to provide support, enhance balance and decrease infant spit-up. The most preferred positions for women with SCI include reclined position, football hold, cradle hold, cross cradle hold, and side-lying position.

There are aids that might help. Dolls that mimic the weight and muscle tone of baby can be used to practice different techniques to find what works best without fear of safety risk

to an actual baby. Wedges can provide support for sitting upright in bed (providing support for the back, belly or baby), or be used as a leg support to reduce spasms and improve blood pressure. Carriers (harnesses, wraps, ring slings) may also be useful in positioning baby when bottle-feeding and keeping baby upright after a feed to reduce spit-up/reflux. Breastfeeding pillows can also provide support.

Then there's the issue of AD, or autonomic dysreflexia. Breastfeeding, clogged ducts, and breast inflammation may trigger AD in women with SCI at or above T6. If you experience symptoms of AD, you should stop breastfeeding, and wait until symptoms subside and blood pressure goes down close to normal before you resume.

Women with SCI should talk to their doctor and partners in care early on to discuss potential breastfeeding barriers, supports/aids, and goals, and come up with a plan. This plan might include strategies such as attempting breastfeeding early after baby is born in order to maximize the baby's ability to latch and suckle, providing safe skin-to-skin contact, and learning what cues to watch for to determine if your baby has a good latch and is feeding well. Your doctor may suggest hand expression or a breast pump if baby has a hard time latching and suckling effectively. Continued self-evaluation and ongoing consultation with a lactation consultant or experienced community health nurse can help you reach your breastfeeding goals.

While not a replacement for consulting directly with your healthcare team, more information is emerging online. With the support of the Craig H. Neilson Foundation, Dr. Krassioukov and fellow ICORD researchers Dr. Stacy Elliott and Dr. Janice Eng are working with an international panel of breastfeeding and SCI experts (including mothers with SCI) to create clinical practice guidelines and consumer guidelines for breastfeeding for mothers with SCI.

As part of this project, five excellent clinician and consumer resource videos were recently created in partnership with SCIRE (SCIRE is the Spinal Cord Injury Research Evidence project), mothers with SCI, and clinical experts. Three of the videos feature personal stories of SCI BC peers and expert advice. The fourth deals with complications, and the fifth and final video provides an introduction to assistive aids.

You can find them on YouTube—point your browser to [youtube.com](https://www.youtube.com) and search for "SCIRE". Another source for more information on pregnancy and breastfeeding is SCI BC's *SCI Pregnancy Guide* at [scisexualhealth.ca](https://scisexualhealth.ca) ■



# Back In the Hunt

A unique partnership between Kelowna-based Accessible Wilderness Expeditions and an Okanagan construction company is providing opportunities for peers to experience big game hunting in BC's backcountry.

**F**rank LaBounty grew up surrounded by wilderness in his home town of Prince George. Spending time in the backcountry was a big part of his life as he grew up, and that included hunting deer and moose.

He also chose to make his career in the backcountry. In 1998, while working as a machine operator in the logging

industry, his life took an unexpected turn when an equipment malfunction resulted in a C5-6 incomplete SCI.

In the following years, with hospital and rehab in the rear view mirror, LaBounty got back to some of the things he loved doing prior to his injury. One of those was curling, and many readers no doubt recognize LaBounty as a five-time Canadian wheelchair curling champion.

But hunting, particularly expedition hunting deep in the backcountry, never appeared to be a viable option for him after his injury.

"It's hard to get back into hunting," says LaBounty. "I have a permit to shoot out of my vehicle, but if you see something, you have to be lined up just perfect, as you can only shoot out your window—you don't have a very big space."

Earlier this year, our Northern BC Peer Program Coordinator, Brandy Stiles, gave LaBounty a heads up about an upcoming event—the 3rd Annual Rempel Builders Accessible Hunting Trip.

Since 2019, Rempel Builders—one of the Okanagan's leading commercial and luxury residential builders—has been providing sponsorship funding to Accessible Wilderness Expeditions (AWE), a program operating under the umbrella of Kelowna-based Community Recreation Initiatives Society (CRIS). With this





funding, AWE has been able to provide an incredible opportunity each year for one or two people with a disability to take part in a four-day, fully inclusive backcountry hunting trip in southern BC.

"I'm the type of person that will try it first and let everybody know how it was," says LaBounty. "So when I heard about this hunt, I never hesitated—I applied right away."

To his surprise, LaBounty was selected by AWE to be this year's participant. He learned that, as the program's guest, he'd be enjoying four days of accommodation, guided big game (deer) hunting, and backcountry exploration in Grand Forks, BC. He also learned there would be no cost to him, thanks to the expertise of the AWE program and the generosity of Rempel Builders.

"The connection with the Rempel family developed three years ago, when the owner of Rempel Builders, Reg

Rempel, approached CRIS President Troy Becker and expressed his interest in funding an inclusive hunting trip for someone with an SCI or other disability," explains Laura McEwan, AWE's Manager of Program Delivery. "Troy pointed him towards the AWE program, which has similar partnerships with other funding partners who also offer annual funded experiences. The Rempels' passion for hunting and supporting their community, paired with AWE expertise in accessible travel and adventure, made for a perfect pairing."

"We started a company back several years ago called Adaptable Living to help facilitate barrier-free living for individuals in their home," says Rempel, an avid outdoorsman himself. "After working with several customers and seeing the challenges that they face after experiencing a life-changing injury, not only physically but emotionally, and realizing

that life was going to come with many more challenges, I thought, 'What can we do to make a small difference?' That's when I reached out to my good friend Troy Becker, who has been running CRIS for the past 20 years in our community, and asked if he had ever done a hunting trip or would even consider doing one. If you know Troy, you know he loves any and all challenges and was on board immediately. It has been a rewarding and eye-opening experience for all involved as you come to the realization that there are very few barriers in life when we come together as a community and pull from everyone's strengths and abilities for the common good of humanity."

The first trip took place in the fall of 2019 and was deemed a great success—by the first participants, SCI BC peers Luke Eliason and Anand Kannan; the volunteers involved; and AWE and Rempel Builders. And that's how it became an

annual event. In 2020, with COVID-19 safety protocols in place, another SCI BC peer, William McCreight, was selected to take part.

"It was my first time getting back in the wilderness since my spinal cord injury," said McCreight, who, like LaBounty, was an avid hunter before his SCI. "It's difficult to put it into words, the feeling of getting back onto my journey of where it all began."

Fast forward to this year, when it was LaBounty's turn. Aside from fulfilling the standard BC hunting regulations requirements—providing his BC hunting license number, securing applicable game tags, and having a valid federal firearms permit, or PAL—there was little for him to do except show up in Grand Forks on October 21 with everything he needed to stay warm and dry for four days.

"Thanks to our sponsors, we were able to provide an all-inclusive, access-

ible trip for Frank," says McEwan. "Our AWE Manager, trip leader and camp chef took care of all trip planning logistics, recruiting volunteers, booking accommodation, meal planning, and coordinating all the ins and outs of the expedition."

She adds that LaBounty was consulted throughout the planning process, to determine his goals for the trip, and his health, personal care and dietary needs.

"The program is awesome," says LaBounty. "The organization was great, right down to the last detail. The sponsors were good—they supplied everything you needed and more. Everyone always had your safety in mind. The volunteers were great—I felt I was in safe hands all the time. A great group. The food was also good, and they had a large teepee that we had our meals in. It was always nice and warm and dry, and that was important because we had a lot of rain."

While Frank's accommodation—a post

and beam cabin—wasn't entirely barrier-free, it was accessible enough that he and his personal caregivers had no problem keeping him comfortable and on his routines.

As for the actual hunting, it was a full-on experience that was far more intense and satisfying than what LaBounty had ever been able to achieve from the cab of a pickup after his injury.

"Frank was able to access remote hunting locations by using a combination of adaptive equipment including the TrailRider, side-by-side ATV, 4x4 vehicle, and hunting blinds," says McEwan. "Each piece of equipment required adaptations to ensure Frank was comfortable and safe for the duration of the activity."

You're likely wondering if LaBounty was successful.

"I never got a deer, but that's not what it was all about," he says. "It's not always about getting something—getting out in

## More About AWE and CRIS

AWE, short for Accessible Wilderness Expeditions, is a program operated by Community Recreational Initiatives Society (CRIS), a Kelowna-based non-profit organization that provides adapted sport and recreation opportunities in the Okanagan and beyond.

Since 2001, CRIS has supported persons with physical and mental disabilities by developing and implementing several outdoor and wilderness adventure programs. In addition to AWE, CRIS operates the Adaptive Adventures program (AA), which provides short-duration day trips in local Okanagan communities year round, and the Adaptive Rentals program (AR), which offers accessible outdoor recreational equipment for clients and families looking for independent and self-guided experiences.

AWE provides elaborate, breathtaking extended wilderness experiences throughout BC and western USA, including the annual Rempel Builders Accessible Hunting Trip. The goal is to increase accessibility and diversity in the outdoors and empower people of all abilities, by providing expertise and access to opportunities that meet their specific wilderness adventure desires.

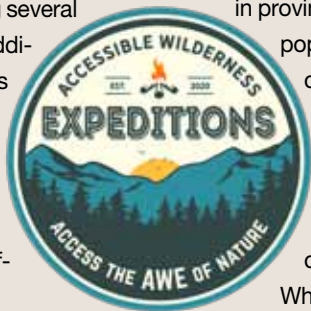
"The AWE program is designed for individuals seeking that dream adventure, which they can't do on their own or don't have the resources for," says Laura McEwan, Manager of Program Delivery. "AWE prides itself on empowering people with impairments to break down perceived barriers and to participate in these challenging—and sometimes extreme—adventures. These back-country expeditions and wilderness adventures are made

possible through a combination of the right people, experience, and adaptive equipment."

AWE trips can include rugged backcountry alpine hikes, ocean kayak expeditions, mountaineering opportunities, rock climbing, zip-lining, fly-in remote big game hunting, multi-day expeditions in provincial and national parks, and hut-to-hut traverses on popular trekking routes. These trips can be as luxurious or as primitive and rugged as the mind, body and budget are willing to undertake. Depending on the adventure, AWE recruits highly-trained and experienced wilderness, mountain, or sea kayak guides, as well as staff and volunteers specializing in adaptive outdoor recreation, to make these dreams a reality.

Where possible, AWE seeks to find funding for individuals to pursue their adventures (as with the Annual Rempel Builders Hunting Trip), but also works with many individuals who are self-funded.

"Each trip is specifically tailored to the client and their personal goals," explains McEwan. "Many of these trips are 'wish list' or 'bucket list' items. Not surprisingly, many AWE clients are those who were active prior to injury or onset of disability—avid hikers, hunters, fishermen, paddlers or mountaineers. We would love to hear from you, whether you were an avid outdoor enthusiast prior to your injury or have a dream outdoor wilderness adventure waiting to be explored. The AWE team believes that everything is possible together!" For more information about AWE and CRIS, visit [accesswilderness.ca](http://accesswilderness.ca) and [crisadaptive.ca](http://crisadaptive.ca).





the bush means so much more. If anyone's looking for an adventure, this was exactly that. I wouldn't change it. I would highly recommend this to any other individuals that would be interested in going. If they needed me to talk with anyone before they went, I would gladly do that to help ease their minds."

One aspect of the adventure was particularly powerful for LaBounty—being able to get into the most rugged locations, thanks to the TrailRider and his own team of sherpas.

"I'd seen the TrailRider, but never tried it—I didn't think it was for me. When I got in their TrailRider, I realized I was seeing places that I'd otherwise need a helicopter to access."

The entire experience made such an impact on LaBounty that it's since inspired him to get out hunting more and more.

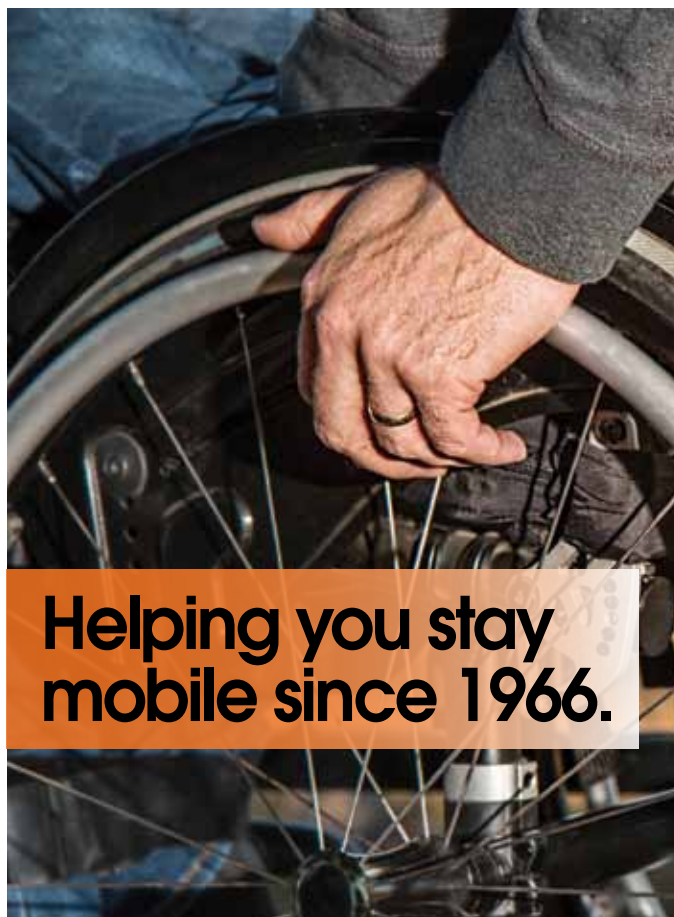
"Since this trip, my son has started to come around to take me hunting," he says. "We went out all last weekend and had a good time getting to know each other again." He adds that he's now exploring the idea of getting permission from a local farmer to set up a blind, which he thinks would work perfect for him and other hunters who use wheelchairs.

The fact that the experience has left LaBounty with the desire to get out more isn't a surprise to McEwan.

"The feedback we receive from clients, family and caregivers includes a greater sense of hope, renewed mental health, a sense of empowerment, a complete 180° from depression and PTSD situations, and strong new connections to everyone on the trip where lifelong friendships are developed," she says. "With the support and sponsorship of Rempel Builders, we hope to continue to provide an AWE hunting trip in years to come."

Naturally, we wanted to know if AWE and CRIS would consider working with other funders, as well as volunteers, to create similar opportunities elsewhere in the province.

"Yes!" McEwan says. "Given the extensive experience, cost and work required to pull these trips off, we understand why we are the only group providing this level of experience for people. The reason we have been successful in providing these opportunities is because of the partnerships with financial contributors and volunteers who understand and appreciate the impact these services and experiences have on our clients and communities. CRIS and the AWE program are always seeking new partnerships and sponsorship opportunities. You can find more information and a link to our sponsorship packages on our website ([accesswilderness.ca](http://accesswilderness.ca))."



**Helping you stay mobile since 1966.**

**Regency Medical Supplies is a family-owned home health business that's been putting our customers first for more than five decades.**

We have more than 5,000 products featured in our 6,000 square foot showroom, ranging from manual and power wheelchairs to daily living aids and incontinence/ostomy supplies.

We also have a full service department for your equipment maintenance requirements, a rental department for your short term needs, a long term care and rehab department for those requiring more specialized equipment, and province-wide delivery.

Our knowledgeable staff will provide you with friendly, personalized service to help you choose the product that fits your individual needs and is just right for you.

.....

**Regency**  
MEDICAL SUPPLIES

4437 Canada Way, Burnaby BC V5G 1J3  
Within BC's Lower Mainland: 778-724-2520  
Toll free within Canada: 1-800-663-1012

**[www.regencymed.com](http://www.regencymed.com)**





MyndMotion electronic stim



*Vancouver. Victoria. Surrey*

Neuromotion is proud to be a new SCI BC sponsor and to be a direct sponsor of the SCI BC virtual West Coast Wheelchair Adaptive Boxing with Leo Sammarelli on Thursdays 11-12.

Neuromotion has been providing neurological rehabilitation to individuals with spinal cord injuries since 2000.

Utilizing innovative technology and a team approach, Neuromotion provides challenging, fun, rewarding rehabilitation for individuals with neurological conditions to achieve important and meaningful goals.

Neuromotion enthusiastically provides unique neurological expertise, customized treatment plans, knowledgeable support and education, and a safe and supportive community environment. For those not able to get into the clinics we are also pleased to offer tele-rehabilitation services.

Got questions? Send us an email [info@neuromotionphysio.com](mailto:info@neuromotionphysio.com)

Visit our website: [www.neuromotionphysio.com](http://www.neuromotionphysio.com) or Instagram @neuromotion to see more of the services we provide.

*Athletic Therapy, Counselling, Kinesiology, Massage,  
Occupational Therapy, Physiotherapy, Speech Therapy*



IFS R7300 bike



Lokomat for gait training



Tilt table

# Safe & Happy Holidays...



**...From the staff of Access Driver Rehab Specialists!**

Our Driver Rehabilitation Specialists provide the highest quality driver evaluation and rehab services—when you want, and where you want. We are the only program in BC that offers a mobile service throughout the province, as well as Alberta and the Pacific Northwest. We offer assessments, training, and driver rehabilitation in either a sedan or high tech (electronic controls) van.

**Access Driver Rehab Specialists—your key to independence.**



**Phone: 604-263-5218**

**email: [AccessDriverRehab@gmail.com](mailto:AccessDriverRehab@gmail.com)**

**[www.accessdriverrehab.com](http://www.accessdriverrehab.com)**





# “Please remain seated...”

The lobby to allow passengers with disabilities to remain in their own wheelchairs while flying on commercial airlines is gaining momentum.

**W**hat keeps you from flying? No doubt, for the past two years, the fear of being exposed to COVID-19 has kept a lot of people grounded. But for many wheelchair users, particularly quadriplegics and others who rely on power wheelchairs, we think it's safe to say that the sheer ordeal of having to transfer multiple times, first from their own chair, then to a travel chair, and finally to a regular aircraft seat, has kept many from even considering flying, long before the arrival of the pandemic.

The process at best is uncomfortable, and often painful and even dangerous. Meanwhile, once aboard, all you can do is hope like hell that your ride arrives at the destination unscathed from its own perilous journey in cargo.

If you think about it, airline travel for wheelchair users is unique. With any other mode of public transportation, be it taxi, bus, train or ship, travellers always remain in their own chairs, which are typically secured with an approved tie-down system for safety. All this may

be on the verge of changing. In 2018, US Congress told the US Access Board, an independent federal agency that promotes equality for people with disabilities, to examine the feasibility of allowing wheelchair travellers to remain in their own chairs throughout the entire process of travelling on an airplane.

The Board struck an expert committee, which began working on the issue. This past September, the committee released its report, titled *Technical Feasibility of a Wheelchair Securement Concept for Airline Travel: A Preliminary Assessment*.

The bottom line? “After reviewing the available information...the committee did

not identify any issues in this preliminary assessment that seem likely to present design and engineering challenges so formidable that they call into question the technical feasibility of an in-cabin wheelchair securement system and the value of exploring the concept further,” reads the report’s executive summary.

The committee concedes that equipping enough airplanes with securement systems to provide meaningful levels of airline service would require substantial effort and money—but it makes clear that the types of cabin modifications required would likely be of only moderate technical complexity for many of the most widely-used airplanes.

Specifically, the report found that a large majority of airplanes have a main boarding door that’s wide enough to accommodate most wheelchairs. As well, the two most widely-used aircraft in the US, the Boeing 737 and the Airbus A320, should require only modest interior modifications to create a wheelchair securement area located at the front of the cabin. And because most wheelchairs comply with motor vehicle transportation safety and crash performance standards (WC19) for wheelchairs established by the Rehabilitation Engineering and Assistive Technology Society of North America (RESNA), they would allow for a standardized “one size fits all” in-cabin wheelchair tie-down and occupant restraint system.

Finally, the report recommends that the US Department of Transportation and the Federal Aviation Administration (FAA) establish a program of research, in collaboration with RESNA and the assistive technology industry, to test and evaluate a range of wheelchairs and re-



1. When not occupied by a wheelchair user, PriestmanGoode’s chair can be used by an able-bodied passenger.
2. The entire seat is easily stowed in preparation for a passenger using a wheelchair.
3. The wheelchair is backed into place and secured with an approved restraint system.



straint systems against crashworthiness and safety performance criteria.

That may sound like more delays ahead. But at least one US manufacturer of airplane seating systems is already pushing ahead with the idea, suggesting that it believes this change is inevitable.

PriestmanGoode creates airline interiors for major players in the global aviation business, including Airbus, United, Lufthansa, WestJet, Air Canada, and others. In late October, the company unveiled designs for a seating system that allows airlines to convert traditional seats into spaces capable of safely securing a power wheelchair. Its new system, called Air 4 All, includes an airline seat that easily folds out of the way to reveal a track and locking mechanism similar to the docking system that many peers currently use to drive a van from a wheelchair. As part of its design process for Air 4 All, PriestmanGoode consulted heavily with the disability community.

At the moment, the system is only intended for narrow-body jets with two seats on either side of the aisle (for example, the Boeing 737). But the company is already expanding the application of the system to larger aircraft.

"Air 4 All will usher in a step-change in the industry and finally offer equal access to comfort, safety and dignity for all passengers," said Paul Priestman, the chairman of PriestmanGoode, when the design was unveiled. "The biggest barrier in the past has been that giving greater space to passengers in wheelchairs would have reduced seat count and resulted in a loss of revenue for airlines. Air 4 All solves this problem and has the added benefit of enabling airlines to retain the design of their cabin on every seat, ensuring brand consistency and a cohesive brand experience for all passengers."

A prototype of the Air 4 All system was scheduled to be unveiled in December, as this issue of *The Spin* was going to press. Check out the short video ([vimeo.com/513314275](https://vimeo.com/513314275)) to see how it works.

We'll be following developments closely, and will let you know the moment there's more progress to report. ■



## PeerSAY!

We asked a few of our well-travelled peers for their thoughts about the current realities of flying—and the prospect of being able to remain in their own wheelchairs during a flight.

### ROGER B. JONES | C5-6 | Vancouver

It's an issue that I've been following for several years. At one point, I was on the Canadian Transportation Agency's Accessibility Advisory Committee and lobbied for something in this country—albeit unsuccessfully.

The current system is brutal for many wheelchair users. It is unsafe, awkward and often degrading to be dragged and carried throughout the transfer process. At the same time, your expensive and often customized equipment is at high risk of being damaged. So being able to travel in your own equipment is huge. I have heard from people with disabilities, time and time again, that one of the main reasons they don't travel by air is exactly because of the current process.

It's exciting to see that there may finally be some movement around travel with a wheelchair. This has been a long time coming, but the need is still there.



### DAVE SYMINGTON | C5-6 | Vancouver

It would be a game changer for sure. I've heard it talked about for years and I think it may have been tried out on British Airways at one point.

Having to be lifted onto the aisle chair, then squished through to get to your seat, and then lifted/dragged/yanked onto your seat—this is all a huge impediment and disincentive to travel. It's also unpredictable who is going to be doing the lifting, and sometimes I'm left on the plane for up to an hour and a half before anybody arrives to get me off. And of course sometimes they can't find your chair! There's also the likelihood of damage to your chair when it's in the storage area. Sometimes they refuse to give me a window seat, so anybody that's sitting next to me has to climb over me to get out, and often my knees are pushed up against the seat in front of me—which is very uncomfortable and could cause skin breakdown.

I have taken to booking economy plus or even business class to ensure that I have a decent seat with enough room. Obviously, this is a costly solution and doesn't solve the main problem of getting on and off the plane. My fingers are crossed that, in the future, I will be able to use my own chair to fly.



### CHRIS MARKS | C5 | Victoria

It's a major hassle to fly, with about a 25 percent chance of seriously damaging equipment. A broken wheelchair while is flying is similar to an able-bodied person breaking their leg. There's also often long timelines to get it fixed.

As a quad with strong spasms, it's really uncomfortable to have two, three or four strangers that don't know my body try and transfer me into the aisle, or into window seat. If I could strap in, in my chair, I would have no issues flying! No damaged equipment, no uncomfortable transfers, no terrible-fitting airport chairs or Washington chairs. I would enjoy travelling again.



Looking for a job?

Need Assistive Technology for  
your home office?

Want help connecting with others  
through email or social media?

**Neil Squire has you covered.**

Virtual and in-person services  
available. Contact us today.

**1 877 673 4636 | [info@neilsquire.ca](mailto:info@neilsquire.ca)**



We use technology, knowledge, and passion to  
empower Canadians with disabilities.

**What story will your gift tell?**



Change the world with a charitable gift in your Will to  
Spinal Cord Injury BC, while still supporting those you love.

**[www.willpower.ca/charities/scibc](http://www.willpower.ca/charities/scibc)**





# Participate in Research

SCI research is about much more than test tubes, stem cells, and a far-off cure.

At ICORD (International Collaboration On Repair Discoveries), SCI research is also about improving bladder, bowel, and cardiovascular health; taming pain and autonomic dysreflexia; enhancing sexual health and fertility; new assistive technologies; wheelchair design and ergonomics; and much more. In other words, it's about maximizing recovery, independence, health, and quality of life. But it doesn't happen without you. That's why SCI BC and ICORD are partnering to help raise awareness and increase participation in world-leading research. Working together, we can make SCI research more meaningful and move it along at a faster pace, and we invite you to be a part of it.

## Exercise Guidelines Promotion and Implementation in Chronic SCI (EPIC-SCI): A Randomized Controlled Trial

**Overview:** ICORD researcher Dr. Kathleen Martin Ginis is evaluating the effects of following the *International SCI Exercise Guidelines* over the course of a six month period. Participants will be randomly allocated to one of two groups. One of the groups will follow an exercise program. The other group (the control group) will be asked not to change their daily lifestyle. After six months, the control group will have the opportunity to enjoy the exercise program.

**What to expect:** The exercise program consists of two to three hours of exercise per week, at home or in a local fitness facility. The study involves three visits to the testing site as well as questionnaires that will be filled out online or over the phone. During each visit, participants will be asked to complete fitness tests, participate in a brief test to see how the body responds to pressure and cold stimuli applied to the arm, and provide blood samples.

**Who can participate:** You may be eligible to participate in this study if you are 18 or older, have been fully vaccinated against COVID-19, have been diagnosed with an SCI more than one year ago, have an injury level at C3 or below, experience chronic pain, participate in less than 40 minutes per week of structured, moderate intensity, aerobic exercise AND less than two bouts per week of strength training, and have no medical contra-indications.

**Why participate:** Through participation in the study you will learn what your peak oxygen uptake is, in addition to your current levels of muscular strength for major muscle functioning groups. Although there are no other guaranteed benefits, you may get fitness and cardiometabolic health improvements associated with exercise, which may lead to sustained exercise adherence. You will be compensated a flat rate for travel to the testing site.

**Location:** The study will take place in the Okanagan and Vancouver, but is currently recruiting at the Blusson Spinal Cord Centre site in Vancouver only.

**For more information or to sign up to participate:** please contact Bobo Tong at bobo.tong@ubc.ca or 778.581.6487, or visit [icord.org/studies/2021/11/epic-sci](https://icord.org/studies/2021/11/epic-sci).



## Male Sexual Functioning Following SCI

**Overview:** This study, led by ICORD researchers Dr. Andrei Krassioukov and Dr. Stacy Elliott, aims to investigate quality of life, sex hormone concentrations, and perceptions of sexual function across two groups of men with SCI who perform different amounts of habitual, free-living physical activity.

**What to expect:** Participation in this study consists of two visits: an initial two-hour visit to ICORD in the Blusson Spinal Cord Centre for a series of assessments including blood samples, blood pressure, questionnaires, and an interview; and a second one-hour visit to the Centre for Hip Health and Mobility for a dual-energy x-ray absorptiometry (DXA) fat and lean mass scan. You will also be required to wear a physical activity monitor for three days to provide detailed information about your physical activity behaviours. This device is unobtrusive and will not interfere with your everyday activities or lifestyle.

**Who can participate:** You may be eligible to participate if you are male, 18 to 60 years of age, have had a traumatic SCI and are at least 12 months post-injury, and have a level of injury between C4-L2 which is motor-complete (American Spinal Injury Association Impairment Scale; AIS A or B) or motor-incomplete (AIS C or D) SCI. If you have a motor-incomplete injury and can ambulate, we require you to use a wheelchair for more than 75 percent of your waking day.

**Why participate:** This study hopes to understand the relationship between physical activity, and testosterone, quality of life, and sexual function in men with SCI. We hope the information learned from this study can be used in the future to benefit individuals with SCI. At the end of the study, you will receive an honorarium of \$20 per visit for travel expenses.

**Location:** The study will take place Blusson Spinal Cord Centre and the Centre for Hip Health and Mobility in Vancouver.

**For more information or to sign up to participate:** please contact Rachel Lai at [rachel.lai@ubc.ca](mailto:rachel.lai@ubc.ca) or 604.675.8856, or visit [icord.org/studies/2019/06/male-sexual-function](https://icord.org/studies/2019/06/male-sexual-function).



Learn more about what makes ICORD one of the biggest and best SCI research centres in the world, and the research they are doing, by visiting [www.icord.org/research/participate-in-a-study](https://www.icord.org/research/participate-in-a-study)

# A Different Kind of Bank

Vancouver is home to the world's first SCI biobank, thanks to the vision and efforts of Dr. Brian Kwon.

**A**re you familiar with the term “biobank”? If not, here’s how Wikipedia describes it: “A biobank is a type of biorepository that stores biological samples (usually human) for use in research. Biobanks have become an important resource in medical research, supporting many types of contemporary research like genomics and personalized medicine.”

Until recently, there’s never been an SCI biobank anywhere in the world—at least not one that is open to specimen requests from around the globe. That all changed in 2019, when VGH spine surgeon and ICORD neuroscientist Dr. Brian Kwon created and launched the International Spinal Cord Injury Biobank (ISCIB), which is based right here in BC.

In the space of two short years, this one-of-a-kind collection has grown to include almost 42,000 specimens obtained from 241 participants.

Kwon and members of his research team rely on these, but their goal for ISCIB is far grander. “The vision of ISCIB is that it will serve as a resource to the global SCI research community,” reads the ISCIB website. “All ISCIB materials are made available to researchers globally, provided that the proposed research has undergone ethical review and is aimed to improve the overall understanding of SCI and the spine.”

What exactly are the specimens being collected? And why are they so vital?

“We store fluid biospecimens which have been collected from living donors who are participating in specific SCI research studies, where biobank consent is obtained to store any remnant samples and data at the same time as the study consent,” explains Adam Velenosi, ISCIB Program Manager. “This currently in-

cludes cerebrospinal fluid, blood serum, blood plasma, and whole blood for RNA extraction. We also collect full or partial spinal cords from deceased participants who have sustained an acute SCI—these are recruited directly into the biobank and are not referred from another specific research study. Currently, we are exclusively recruiting participants who sustain an acute SCI and pass away at Vancouver General Hospital (VGH), but we are looking to expand this eligibility criteria in the coming year.”

In compliance with our country’s strict privacy laws, all specimens are completely de-identified. In other words, a specimen dataset includes donor information such as the age and injury level, but never the identity of the donor.

As for why these specimens are so important, it’s all about the fact that so little SCI research to understand the biology of the injured spinal cord can actually be conducted using human participants.

“A large amount of SCI research is conducted in animal models, which are undoubtedly useful, but at the end of the day, there are things that we simply have to learn from our human patients,” says Kwon. “ISCIB’s human specimens have been used to help bridge this gap, confirming that what a researcher might observe and learn in their animal model is also relevant in humans, or conversely, identifying important differences that need to be overcome. This invaluable information can provide the critical evidence needed to pursue novel therapeutics or obtain support and funding for future studies and trials.”

If you’ve been paying attention, you’ve likely noted that the emphasis is on acute SCI research—that is, samples being collected are from people in hospital who

are undergoing treatment in the days and weeks after their injury, or, in the case of whole or partial spinal cords, from those who have not survived their injury. And thus, the research relying on collected specimens is primarily concerned with better understanding the biological mechanisms that are responsible for the damage and paralysis that follow an SCI, along with developing treatments and therapies to minimize that damage and improve outcomes. But Kwon and Velenosi are working to expand the collection processes to include those living with chronic SCI, and that chronic SCI research will eventually benefit.

“I have always felt that there are questions about the chronically injured spinal cord that we will simply never be able to answer in animal models alone,” says Kwon. “How will we explain things like neuropathic pain, spasticity, bowel and bladder dysfunction, and even motor function without having human spinal cords to study and start to establish the underlying causes?”

For this reason, Kwon and his team are currently investigating the logistics of collecting post mortem, chronic SCI spinal cords from donors who pass away outside of Vancouver and VGH.

“We already have some individuals living with SCI who are keen on donating to our biobank in the future, but we have yet to develop the protocol and consent form for these participants—and get it approved, of course. Once the logistics are established, we will be able to build this into a consent form and protocol for the ethics board to review.”

This means that readers who are interested in contributing to the body of chronic SCI research can’t currently get involved, but they’ll likely be able to in the future. To learn more, visit [sci-biobank.org](https://sci-biobank.org). ■



Dr. Brian Kwon



# HAPPY HOLIDAYS

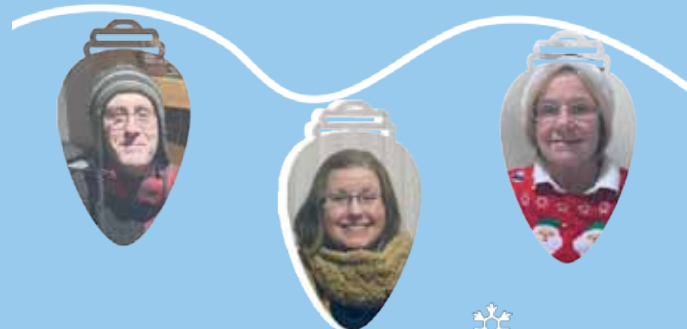
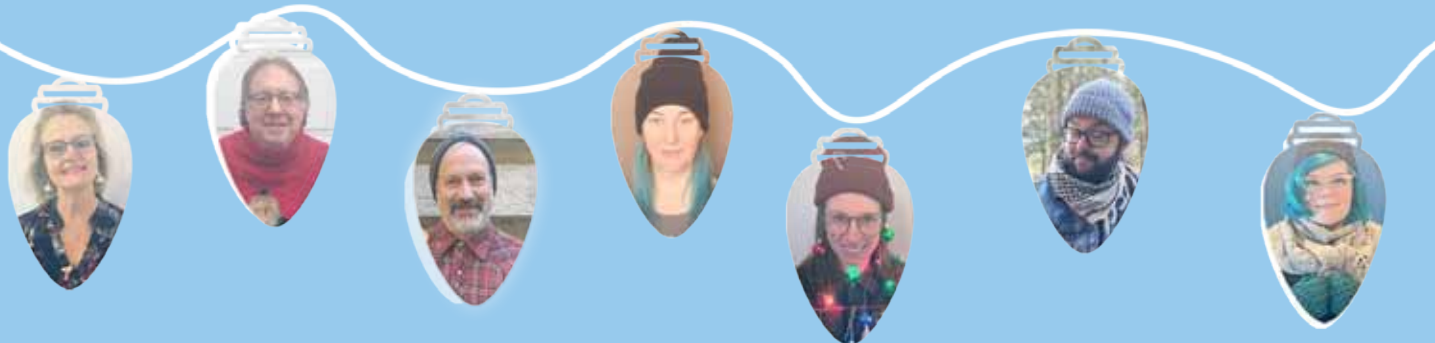


Your support brought friendship, connection, and happiness to our members by allowing us to continue our online events and programs.

Because of you, we were also able to provide people living with spinal cord injuries the information and help they needed to find housing, get adaptive equipment, stay physically and mentally healthy, and so much more!

Thank you for your continued support. We look forward to connecting with you in the new year!

- Spinal Cord Injury BC team



# Greater Reach & Better Service



Chairstuff is proud to continue our long-term sponsorship with SCI BC.

When you support Chairstuff, you support SCI BC.

## Chairstuff has your back ...

**And your front!** We *really* understand bowel and bladder issues. Over the years, our staff has been made up of people living with different disabilities, and we regularly mesh with the local SCI peer community. Combine this with our legendary efficiency, wide range of products, and competitive prices, and you have a winning team in your corner. Our products include:

**Intermittent Catheters**

**Bowel Products**

**External Catheters**

**Foley Catheters**

**Drainage Bags**

Contact us for free product samples or to chat about your specific needs!

## A supply company by people with SCI—for people with SCI

“ I have been ordering my colostomy supplies, catheters, and leg bags through Chairstuff since 2001. My stuff is always on time and that’s pretty great considering I live 900 kms away from where they do business.”  
— Crystle

“ I switched over to Chairstuff from one of the bigger companies, which was more expensive. I like dealing with Steve because he’s a dude in a chair who’s got his own business. Anytime I need supplies, they’re delivered to my door.”  
— Kevin

“We’re here for you 24/7. We mean it.”



1-866-363-0025 | 604-876-4133  
info@chairstuff.com  
chairstuff.com

STEVE MILUM  
Founder & CEO  
Chairstuff

