

thrive

Living Well
with Limb Loss

ISSUE # 30

Pedal POWER

TIPS for
Amputee
Cyclists

Pet Pals
Choosing
the Right
Companion

TRAVEL
SMART
Know
Your
Limits

Motivation
Strategies



GET TO KNOW NAKED PROSTHETICS' THIRD GENERATION TECHNOLOGY

NAKED
PROSTHETICS

CONTENTS

ISSUE # 30

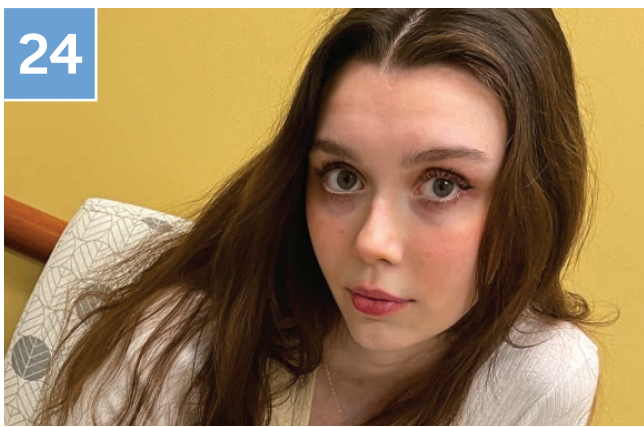
FEATURES

thrivemag.ca



Pedal Power

Freedom of Cycling After Amputation



Amalie Henze

Difficult Roads to Promising Destinations

DEPARTMENTS

PUBLISHER'S NOTE	=====	4
TAKE NOTE	=====	6
	Artificial Intelligence Informs Skin Care	6
	Managing Summer Socket Sweat	
	Sekond Skin Society Fitness App	
	Tariffs and Prosthetics	
	Movement Therapy for Back Pain	
	O&P Art Contest	
MIND OVER MATTER	=====	12
HEALTH & WELLNESS	=====	30
BEGINNINGS	=====	34
SCIENCE & TECHNOLOGY	=====	36
PEER SUPPORT	=====	40
FORUM	=====	44
TRAVEL	=====	46
FINAL WORD	=====	50

Let's Ride

"It's like riding a bike" is a well-worn expression meaning something that is easy to do even after a long time away from it. I'm certain that an amputee did not coin that phrase.

After losing both hands and elbows way back when I was 11 years old, relearning how to ride a bike was no easy feat, but absolutely invigorating once I did. The article in this issue about returning to cycling after an amputation refers to the "freedom" of biking plenty. I can relate. As a kid my bike meant skedad-dling off to the corner store for candy and camaraderie with friends.

The article offers tips for adapting a bike to differing types and levels of amputation. My childhood one-speed bike was actually perfectly adapted for me just as it was, complete with banana-seat, sissy-bar and just-pedal-backwards-brakes. Handbrakes was a problem that we'd address in due time.

When due time came – time for a geared bike – I sauntered into my local bike shop with bike in hand and a grand idea in mind for adapting the handbrakes for my Hosmer 88X hooks.

A young, shaggy-haired bike shop employee said: "I've got a better idea. Come back in two hours." I was a bit put-off. What could this dude know about adapting a bike for an amputee?

Well, the contraption that he envisioned – a retrofitted heel-driven braking system – still serves me today. It has faithfully and safely taken me on two-day, 200 km rural cycling adventures with my son, and provides the confidence to navigate busy city streets too.

Adaptations aren't always "textbook" or come straight out of a can. They can be fashioned just the same from anyone's desire and imagination... a slant not exclusively reserved for biking of course.

Jeff Tiessen
Publisher, *thrive* magazine



thrive founder and publisher, Jeff Tiessen

ABOUT THE PUBLISHER: Disability Today Publishing Group, a disability community leader for over 30 years, is known for its quality publications, and compelling editorial. The publisher of *Alignment* for Orthotics Prosthetics Canada, and a host of in-house magazine and book titles, the media firm is led by Jeff Tiessen, an amputee of 45+ years. Tiessen, a three-time Paralympian, award-winning author and Canadian Disability Hall of Fame inductee, is a respected advocate within the amputee community and healthcare fields as well.

thrive Living Well with Limb Loss

DT Publishing Group, Inc.
P.O. Box 327, Str. Main, Grimsby, ON L3M 4G5
Tel: (905) 945-1911
email: jeff@thrivemag.ca
thrivemag.ca

Managing Editor: Brenda McCarthy
email: info@thrivemag.ca

Editor-in-Chief: Jeff Tiessen

Subscriptions: Emily Grace
subs@thrivemag.ca
thrivemag.ca

Design & Layout: SJ Design Studio

Art Director: Starr Hansen

Contributing Editor
Kimberley Barreda
kimberley@unlimbited.com

Advertising Sales:
DT Publishing Group, Inc.
Jeff Tiessen, publisher
email: jeff@thrivemag.ca

Legal Consultant:
Bernard Gluckstein, Q.C.

thrive magazine is published three times a year by DT Publishing Group, Inc.

DTPG accepts no responsibility for injury, damages or losses arising out of the use or misuse of ideas, opinions, activities or products contained in this publication. Where appropriate, professional advice should be sought.

All material submitted to the magazine becomes the property of *thrive* magazine.

Canadian Postmaster: Please send address changes to *thrive* magazine, P.O. Box 327, Str. Main, Grimsby, ON L3M 4G5.

U.S. Postmaster: Please send address changes to *thrive* magazine, P.O. Box 2660, Niagara Falls, NY 14302-2660.

Subscriptions: 1-year (4 issues) is \$18.00 (orders outside of Canada and the U.S. add \$12.00 U.S.).

2-year (8 issues) is \$30.00 (orders outside of Canada and the U.S. add \$24.00 U.S.).

© DT Publishing Group, 2025. All rights reserved. Reproduction, in whole or in part, without permission is prohibited.

Canada

Funded by the Government of Canada.

Publications Mail Registration #10293
Canadian Mail Agreement #40069170
Printed in Canada

Special Thanks to these Community Leaders for Supporting *thrive* as Valued Sponsors and Partners!



ALPS®

REINFORCED
FLEX SLEEVE



The strength of reinforcement.
The look of confidence.



ARTIFICIAL INTELLIGENCE

Informs Skin Care



AI (Artificial Intelligence) is transforming amputee skin care by tailoring solutions to individual needs based on genetics, lifestyle, environment and prosthetic use.

Key advancements in AI-powered skin care include “smart bandages” that not only cover a wound but monitor it in real-time too. The iCares bandage from Caltech uses AI to clear excess moisture and analyze biomarkers for inflammation and infection, ensuring timely treatment. AI tools can analyze vast amounts of skin data to predict how skin will react under different conditions, such as stress, hormones, and environmental changes.

By analyzing genetic data, lifestyle factors, and real-time skin conditions, AI creates skincare routines for prosthesis users that evolve with personal needs which could significantly improve quality of life.

(Source: Amputee Coalition of Canada)

“There’s sweat in my prosthesis,” is one of the most common amputee complaints about warm weather. It’s normal and to be expected, but it’s uncomfortable and not healthy. Sweat collects in liners between residual limbs and the prosthesis, which can affect fit. Over time, this moisture buildup can also lead to bacteria growth which increases the risk of infection.

Take the time to do quick skin checks on hot days. Preventative care can save a lot of trouble in the future. It’s important to have what you need on hand. Keep a “limb bag” for your limb care essentials when you are on the move. Include baby wipes, antiseptic wipes, alcohol spray, a small absorbent towel, chaffing cream, blister pads of different sizes, and spare socks (a thick and a thin ply to accommodate swelling or shrinking).

SUMMER SWEAT

Baseball Arm Is A Big Hit

Thanks to The War Amps, Azul has a specially-designed arm that helps her grip a baseball bat securely. She loves batting, and everything else that goes with playing the game. Now in her second year of baseball, Azul represents the importance of the support of The War Amps for recreational devices for children and youth.



Make a Move on Back Pain



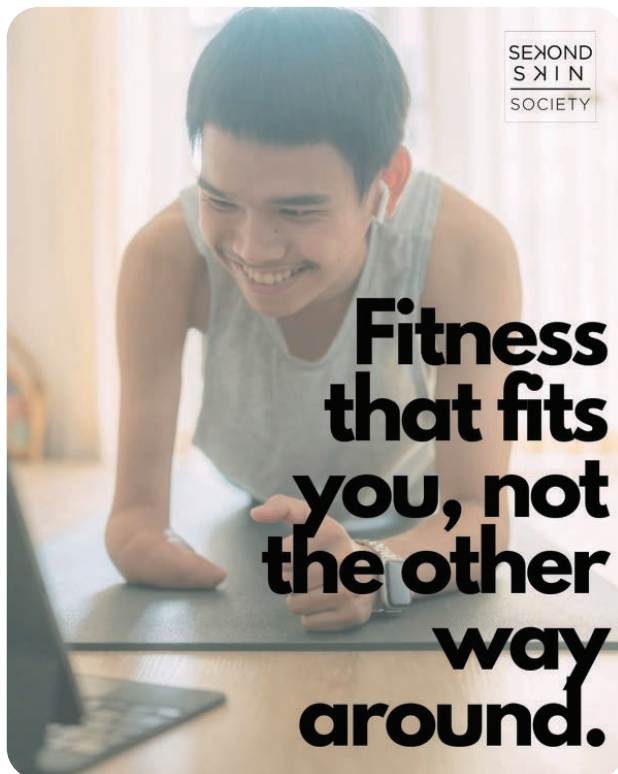
Low back pain is a common and persistent issue for prosthesis users after lower limb amputation. This secondary musculoskeletal disability impacts amputees more than twice as often as non-amputees. Asymmetry, abnormal joint forces, prosthesis type, and muscle atrophy are all contributing factors to low back pain experienced by amputees. Movement therapy can be an effective treatment. Intervention groups using exercise therapy reported significantly lower chronic pain levels. Core strengthening and stability exercises, including Pilates, show promise in reducing discomfort.

JOIN THE MOVEMENT

A new fitness App dedicated to accessibility and inclusion is bringing people with and without disabilities together through movement. Featuring enhanced personalization, the Sekond Skin Society App was created by instructors with and without disabilities, offering multiple standing and seated options for yoga, cardio, strength, dance and meditation classes.

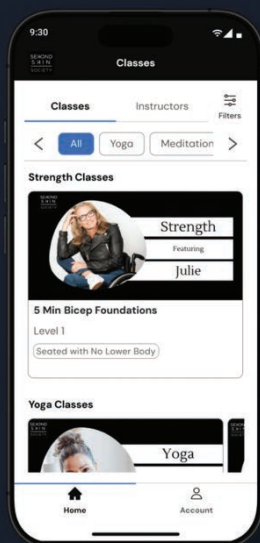
“Our instructor community includes trainers who are blind, deaf, wheelchair users and others with non-visible disabilities,” says Sekond Skin Society founder and CEO Lee-Anne Reuber.

Multiple class versions can be viewed simultaneously on a dual/split screen, so people with specific needs can take classes together. To learn more, visit sekondskinsociety.com. The App is available on Apple and Google Stores.



Diverse Instructors

Access multiple class versions, including Standing, Seated, and ASL instruction



Impact of Tariffs on Prosthetics in Canada

Nearly every industry and consumer group nationwide is asking some version of this question: “How will Trump’s tariffs impact me?” The Canadian government has pledged to impose 25 percent retaliatory tariffs on \$155 billion worth of American goods, including certain medical devices. That would mean, prosthetic componentry from the United States would not be exempt. The prosthetic manufacturing industry has not sounded any alarm bells, yet. The U.S. is prominent in prosthetic manufacturing, as is Europe. So far, it’s been business as usual, and many are hopeful that it will continue to be so.



O&P Art Contest

A CREATIVE EXPLORATION OF ORTHOTICS AND PROSTHETICS

Grand Prize \$500

Calling All Artists

What do orthotics and prosthetics represent to you? Orthotics Prosthetics Canada (OPC), the certifying body for the profession, is inviting practitioners and device-wearers alike to flex their creative muscles and submit original artwork to the inaugural O&P Art Contest.

The General Original Artwork category is for any digital or physical art piece inspired by the use of an orthotic or prosthetic device. Are you proud of the artwork you created to add flair or meaning to one of your devices? Submit it to the Device Art category to share it with the whole industry! Do you have a great photo that represents the profession in your everyday life? The Photography category is for you. A Bonus Category will consider all entries for use on OPC swag (t-shirts, mugs, etc.) to be available for purchase. Winning artists will receive \$250 worth of swag.

Prizes range from \$250 to \$500. Artwork will be voted on by the OPC membership and announced during National O&P Day celebrations on September 19th. Entry is free and open to all! Deadline: August 25, 2025. Enter at opcanada.ca/general/custom.asp?page=OPART-2025.



A CHANGE FOR THE BETTER



The Ferrier Coupler allows you to change your prosthesis quickly and easily. Simply remove one pin, and your prosthesis is disconnected. EASY, QUICK and CONVENIENT!

- Switch legs without changing clothes
- One socket serves multiple specialty legs
- Disconnect limb for comfort

Also, try Ferrier Coupler's Trowbridge Terra-Round all-terrain foot for extra stability and safety. The center stem flexes so the Terra-Round conforms snugly to the ground for hunting, fishing, or golfing.

**YOU NEED A
FERRIER COUPLER!**



Innovative Options in Prosthetics

Ask your prosthetist for
more information.

1-800-437-8597

See all of our products at
www.ferrier.coupler.com

**BORN
DIFFERENT**



**“Are there things I can’t do? I mean,
push-ups would be difficult”**

STUMP SOCK *Styling*

Amputee Sock Prints provides a canvas for a little fun and fashion for residual limbs. Amputees can choose from a catalogue of designs, characters, and sports themes. There is even a DIY option for uploading personal images or designs. Made from moisture-wicking synthetic fabrics, the socks are machine washable and dryable. The decorative socks offer 3-ply support, designed with comfort and style in mind for accessorizing your residual limb. Find them at amputeesockprints.com. Prices start at \$35 CDN.



SUBSCRIBE to

thrive

Live Well with Limb Loss

1-YEAR SUBSCRIPTION
(4 Issues) \$18.00

2-YEAR SUBSCRIPTION
(8 Issues) \$30.00

**Call (905) 945-1911 or order
online at thrivemag.ca.**



Right Foot Adventures

TANYA RABE
**Travel & Accessibility
Consultant**

tanya@rightfootadventures.ca

C: 647-620-1840

O: 416-367-8264 ext. 3491

1003-55 York St
Toronto ON M5J1R7

TICO Reg # 50021282



www.rightfootadventures.ca

A Perfect Part of Me

Your prosthesis should adapt to your lifestyle – not the other way around.

Discover unmatched comfort with Iceross liners. Designed to protect and gently hug your limb, Iceross liners offer superior skin protection and stability, making every step feel natural.

Paired perfectly with the Pro-Flex Terra, you get the freedom to confidently explore your world. Engineered for dynamic lifestyles, the Pro-Flex Terra foot smoothly adapts to various terrains, ensuring you stay steady and agile – no matter where life takes you.

Find your perfect fit at
go.ossur.com/liners



“A diamond is just a piece of charcoal that handled stress exceptionally well.”

~ Unknown



How To Keep Yourself Motivated When You're Not Feeling It

By Maria Moraca

I'm great with short-term goals. In fact, I prefer them. Work my butt off for a few months to reach a goal? I'm down with that. I'll give up a social life, down time, spending money, eating yummy food (read: sugar), drinking alcohol — whatever it takes, for the short-term. Long-term goals... ugh, not so much.



Despite this preference for immediate gratification, I *have* followed through with many long-term goals in my life — school and various trainings, long-distance relationships, starting and re-starting businesses, to name a few. There have also been quite a few of these goals that I've dropped that I wished I hadn't.

I, like many of us, find it much more difficult to stay engaged once the initial excitement of starting something new has worn off. Through this learning process of motivating myself to follow through with longer-view goals, I've come up with a few steps that have really helped me to stay focused and on track. Here are three steps that can help.

Remind yourself that you're in charge.

There are loads of reasons why we get off track with goals. Self-doubt, fear that we won't succeed, and concern that we are not setting realistic goals are just a few of them. This is really important to remember: You can change a goal if you want. You can keep going, you can revise it, or you can dump it altogether.

When we are experiencing doubts, it's easy to feel like we have no power; it's easy to feel like we don't have a choice. However, most often, we do.

I find that it helps to simply remind myself that I'm in charge. Many times, when the going gets tough, we begin to feel like the choices we made (sometimes long ago) are not our own. Sometimes, a reminder to ourselves that we are the ones who originally set this goal is a good way to rev the engine.

When I first started at acupuncture school I was pretty young, but it had been several years since I'd been in school. I'd been living on my own, partying it up, and doing whatever I liked. I saw pretty quickly that I had to get serious, stop staying out late so often, and learn to organize my time and resources far better than I had been doing. In short, I had to get productive.

Well, the meltdown that ensued was not very attractive. I didn't want to give up my young, single, and independent lifestyle! I didn't want to trade late nights with my friends for late nights with textbooks and manuals! That went on for about a week, until a wise friend (who was tired of my whining), said, basically, "You wanted this. Get with it, or quit."

It was the kick in the butt I needed to stop complaining and

remember that I did want it. I was very driven to be an acupuncturist, because it's an amazing modality. And I strongly desired (and continue to desire) to live a life of service. I won't say that it was completely smooth sailing from there on out, but my productivity and focus were certainly much improved.

Look back at all you've already achieved.

If you've been taking steps towards your goal for a while, then it can be a great exercise to take some time to consider all that you have already accomplished. All long-haul goals take multiple, incremental steps to attain. Pat yourself on the back, and remind yourself of these achievements.

The thing is, once an incremental step is attained, it can quickly feel like not quite so big of a deal. It becomes commonplace, and it's not as exciting as it was when we first accomplished it.

That's normal, and understandable, and it's good to look back occasionally and remind ourselves what a big deal reaching that step really was at the time.



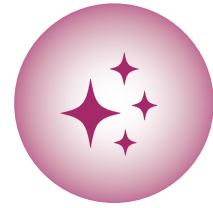
When I'm frustrated about what feels like a lack of movement toward a goal, I sit down and make a list of the steps I have already enacted to reach it, and what the results of those steps have been. I am almost always surprised at how much I've produced. This clarity helps in releasing those feelings of frustration.

Explore the reasons you're going for this goal and remind yourself often.

While I was in school, there were many times when I simply wanted to quit. I had student loans (that were growing!). As I mentioned, there was little time for a social and personal life. I was learning a technique that required a very different perspective (energy medicine vs. the physical body) than that I had previously.

Besides that, I was starting to sweat the idea of running my own business. Would I fail? Could I make it work? Maybe I was nuts to think that I could succeed at this at all! When I'd start to get too caught up in all of that noise, I would literally sit down and remind myself of the reasons I'd chosen the path I had.





I loved acupuncture. Despite the fear around being self-employed, I craved that independence. I resonated strongly with the concepts of energy that I was learning, even if the vocabulary was new.

Taking the time to have these talks with myself helped to re-invigorate me, to renew my focus, and encouraged me to

continue. To really follow through with a longer-term goal, we have to have solid reasons that make sense to us.

That said, goals aren't set in stone. Like everything in life, it's good to approach them with flexibility and open-mindedness. If you can't successfully remind yourself of your initial reasons for going for the goal, and get re-ignited about

those reasons, then it might be time to re-assess.

Only we can decide what is best for us, and that can change over time. It's so important to give ourselves permission to go for goals with full-on focus and gusto, or to change them, or put them aside for a while, or whatever else we decide is right at that time.

Reprinted with permission, this article was published at www.tinybuddha.com. For daily wisdom, join the Tiny Buddha list at tinybuddha.com. You can also follow Tiny Buddha on Facebook, X and Instagram.



We're proud to be the exclusive insurance broker for Orthotics Prosthetics Canada (OPC), serving over 100 OPC facilities.

Protecting your business is our business

We understand that every business is unique. Our experienced brokers can customize an insurance policy to ensure you have the right coverage in place for your specific needs.



Contact Jamie today for a free, no-obligation quote.

Jamie Colvin, Commercial Account Executive
705.698.2993 | jcolvin@brokerlink.ca

BrokerLink.ca



©2023 Brokerlink Inc. "BrokerLink & Design is a trademark of Brokerlink Inc. All rights reserved.



TASKA CX™

Setting the standard, defining the future.

TASKA CX™, the #1 small hand.

The TASKA CX, available in small and medium, has a legacy of proven performance and trust. While others chase trends, the CX consistently delivers what matters most - unmatched durability, reliability, and aesthetic excellence. It's the benchmark for quality, engineered to endure and chosen by users and prosthetists who demand more. In a crowded market, the CX doesn't just stand out - it sets the standard.

To discover more, visit ortoped.ca or taskaprosthetics.com

do more™

 **TASKA™**
by eqwal.

 **OrtoPed**
www.ortoped.ca 

Pedal Power

FREEDOM OF CYCLING AFTER AMPUTATION

By Brenda McCarthy

Cycling is more than just a sport or mode of transportation. It's a pathway to freedom, independence, and joy. For amputees, the prospect of cycling can be both exciting and intimidating but with the right tools, support, and mindset, barriers can be overcome for a new sense of adventure. Here are some important steps and practical advice to guide you through the start of your cycling journey and to discover its joys.



The benefits of cycling are plenty. As a low-impact exercise that provides immense physical, mental, and emotional benefits, cycling improves cardiovascular health by strengthening our heart and lungs, and improving overall endurance. It encourages core muscle use and improves balance and stability, important factors for amputees. Riding outdoors is known to reduce stress, enhance mood, and promote better mental wellness. And it offers an opportunity for social interaction – joining cycling groups fosters connections and a sense of belonging.

STEP 1

Evaluate Your Readiness

Before hopping onto a bike, it's essential to assess your physical condition and readiness. Consult with your healthcare team and prosthetist to ensure that your residual limb is up for the task. Explore adaptive equipment or therapies to support your cycling goals. Build stamina on a stationary bike, gradually increasing time and intensity and smoothing out your pedaling motion. Pay close attention to how your residual limb feels and how your prosthesis is performing.

PHYSICAL PREPARATION

- Find exercises that build strength and flexibility in your core and sound limbs.
- Work with a physical therapist to build better balance and coordination.
- Practice weight-bearing activities to prepare for the cycling motions.



STEP 2

Choose the Right Equipment

Cycling after an amputation requires equipment tailored to your needs to ensure comfort, safety and efficiency. Visit a bike shop to experiment with different bike setups and to find out what they can do to adapt a bicycle for your needs. Seek advice from your prosthetist too, and consider socket liners or cushioning for comfort on long rides. Discuss any discomfort that you experience, as this signals the need for adjustments. Consider socket tweaks for easier knee bending and explore different knee joints. There might be sport-specific options designed for the type of cycling you want to do. As your comfort and skills progress, experiment with secure foot attachments like straps, toe clips, or clipless pedals. And... invest in a quality helmet to protect your head.

TYPES OF BIKES

- **Handcycles:** Ideal for lower-limb amputees. Powered by hand pedals. Excellent control.
- **Adapted bikes:** Conventional bikes modified with prosthesis-friendly pedals, stabilizers, or seating.
- **Recumbent bikes:** Extra balance and comfort. Added support.
- **Tricycles and e-bikes** are also great options.



STEP 3

Start Slow and Build Confidence

Embarking on your cycling journey might take some patience and gradual progress. Start with short rides in safe environments such as parks, trails or quiet neighbourhoods. Get comfortable mounting and dismounting your bike. Practice pedaling and steering at a slow pace to build confidence. Focus on balance, especially if using a traditional or adapted bike.

Begin with achievable milestones, such as riding for 10 minutes or covering a short distance. Gradually increase your ride time as you grow more comfortable and confident. It's normal to encounter obstacles, whether physical, emotional, or technical. Seek support when needed, and celebrate every success. Remember, progress is a journey, not a race.



STEP 4

Join a Community

Cycling is as much of a social activity as it is an individual pursuit. Joining a community of cyclists can provide motivation, encouragement, and camaraderie. Research cycling clubs in your area that welcome adaptive cyclists. Many groups provide mentorship and group rides tailored to diverse needs. Find an online forum or community dedicated to adaptive cycling. Share experiences, ask for advice, and draw inspiration from others' journeys.



STEP 5

Embrace the Freedom

Cycling is more than a physical activity – it's a liberating experience that empowers you to explore new horizons. Embrace the freedom it offers and take pride in your resilience and determination.

MAINTAINING MOMENTUM

- Incorporate cycling into your routine as a regular activity.
- Continue setting personal goals to challenge yourself.
- Stay connected with your cycling community for ongoing support and encouragement.



Starting to cycle with an amputation is a journey of courage, adaptation and triumph. With the right preparation and support, you can overcome barriers and rediscover the joy of riding. So, gear up and ride forward into a world of possibilities — you've got this!



Amputee Cycling Guide

RIDING A BIKE WITH A PROSTHESIS

By Eddie Zepeda
PrimeCare Orthotics and Prosthetics

Cycling isn't solely about legs – it's a full-body experience offering a sense of freedom, fitness and the pure thrill of the ride! While limb differences present unique challenges, understanding those challenges is the key to finding the perfect adaptations and techniques to unlock your full cycling potential.

While cycling with an upper limb amputation often requires some adaptation, it's absolutely possible to experience the freedom and joy of this exhilarating activity with the right modifications. While unique challenges exist, the right prosthetic choices, customized bike adaptations, and a determined spirit will propel you forward. Let's explore some solutions to overcome common hurdles and unlock the full joys of cycling.

With a well-fitting prosthetic device, you'll discover the joy of the ride! Let's dive into specific equipment considerations for each level of amputation.

Cycling for Upper Limb Amputees

Here are some common challenges and potential solutions.

- **Grip and Control:** Gripping the handlebars and managing brakes and shifters can be difficult. Solutions include customized grips, prosthetic attachments, and handlebar modifications (like foot-driven brake set-ups). Consider voluntary opening hands or hooks, or custom attachments designed for secure handlebar grip, and brake and gear operation. Partner with your prosthetist and a bike shop specializing in adaptive cycling to find the perfect solutions. Explore streamlined one-handed brake and shifter modifications.
- **Balance and Stability:** Cycling with one hand requires good core strength and balance for control, especially on turns and uneven terrain. Start with a stationary bike to build confidence and strengthen your core. Consider auxiliary handlebars for added support.
- **Prosthetic Fit and Function:** A comfortable, well-fitting prosthesis is essential. Collaborate closely with your prosthetist to ensure optimal fit, explore grip options, and make cycling-specific adjustments.
- **Prosthetics for Cycling:** Work with your prosthetist to ensure that your prosthesis provides both comfort and secure functionality for confident cycling.

Tailoring your bicycle for a comfortable and empowering cycling experience is important too. Most upright bicy-

cles are suitable for upper limb amputees with good core and upper body strength. Tricycles offer an alternative for those needing greater stability. Handcycles and recumbent bikes use hand cranks for propulsion, making them an option for upper limb amputees or those with limited leg mobility. They come in various styles, from sporty trikes to stable quad cycles – a lot of options!

Seat considerations are important too. A supportive backrest can provide stability for those with limited core or back strength. Integrated lumbar support in the seat helps maintain proper posture, reducing fatigue and maximizing your cycling enjoyment.

Cycling with an above-elbow amputation requires adaptability and determination, but the rewards – freedom, fitness and personal growth – are immeasurable. With the right prosthetic components and bike adjustments, and an unwavering spirit, above-elbow amputees can experience the joys of cycling too. Your prosthetist is your greatest ally in unlocking your cycling potential! Explore options for above-elbow prosthetic devices and attachments designed to maximize grip and control. Body-powered prostheses offer durability, while myoelectric options provide a wider range of grip control. For increased stability, discuss the benefits of an elbow unit with locking capabilities.

Cycling for Lower Limb Amputees

Cycling with a below-knee amputation can be achieved with your standard walking prosthesis, but there are still important factors to address. Prioritizing a secure socket fit, proactive care for your residual limb, and exploring foot attachment options are key for enjoying long, comfortable rides and reaching your cycling potential.

Finding the perfect bike is your gateway to enjoyable and accessible cycling as a lower limb amputee. Choose the bike type that puts comfort, effortless mounting, and a personalized fit at the forefront of your experience.

- **Low-Entry Bikes:** Say goodbye to awkward mounting! These bikes let you swing your leg effortlessly over the saddle. They're especially good for above-knee amputees.
- **Recumbent Bikes:** Cycling reimaged – that's the magic of recumbents! With its laid-back design and ample back support, these bikes prioritize comfort. They

minimize pressure on your lower back, letting you cruise in complete relaxation.

Seat considerations for lower limb amputees are also important. A slightly wider seat offers stability and distributes weight evenly, providing a sense of built-in support. Ample padding is crucial for preventing discomfort in sensitive areas. Gel or memory foam inserts add a layer of plushness, making those long rides even more enjoyable. Specialized seats (saddles) feature a cut-out to reduce pressure, which can be especially beneficial for amputees whose prosthesis may not fully conform to traditional seats.

For above-knee amputees, priorities will be maximizing power transfer, ensuring optimal prosthetic knee mobility, and a focus on comfort throughout long, exhilarating rides. With the right prosthetic components, cycling-specific adjustments, and a focus on technique, the transformative power of cycling awaits.

For upper extremity amputees, simple bike adjustments can make a world of difference in your safety, endurance, and cycling enjoyment. Seek out a bike shop specializing in adaptive cycling for expert guidance with:



- **Handlebar Grip:**

Non-slip grips, larger diameters, or extensions designed for a secure hold.

- **One-Handed Control:** Modifications can streamline brake and shifter operation to a single side of the handlebars.

- **Extra Support:** An auxiliary handlebar provides an additional gripping point, maximizing stability.

- **Bar Ends:** Extensions offering multiple hand positions, reducing fatigue during longer rides.

- **Mirrors:** Navigate traffic with greater confidence.

- **E-Bikes:** Consider the extra support an electric-assist bike provides on challenging terrain or for fatigue.



To optimize knee function, enhance power transfer, and ensure a comfortable, empowering cycling experience, here are some considerations:

- **Power Transfer:** Focus on developing a smooth, efficient pedaling motion. Work with your prosthetist to explore specialized components designed to maximize power transfer.

- **Knee Flexion:** Collaborate with your prosthetist to ensure that your prosthetic knee joint allows for a comfortable range of motion while cycling. Discuss specialized cycling-specific knees that can enhance the natural feel of your pedaling.

- **Socket Comfort:** A well-fitting prosthetic socket is crucial for cycling success. Work with your prosthetist to achieve a precise fit, paying particular attention to comfort during the pedaling motion. Consider a lowered posterior brim in your socket for easier knee flexion.



Key Factors for Above-Knee Amputees

From your prosthetic knee joint to your foot connection, these factors can transform your cycling experience.

- **Knee Joints:** Discuss options with your prosthetist.
- **Standard Knees:** Consider single-axis knees for stability or polycentric knees for more natural movement.
- **Cycling-Specific Knees:** Explore designs with different modes optimized for road, mountain, or leisure cycling.
- **Prosthetic Feet:** Your prosthetic foot plays a vital role in your cycling experience. Standard feet, your everyday prosthetic foot, can provide a solid base for casual cycling. Flexible feet offer greater dynamism and improved responsiveness to changing terrain, enhancing your pedal control. And if you're passionate about cycling, consider specialized feet designed for high-intensity workouts or competitive endeavours.
- **Physical Therapy:** Build strength, flexibility, and range of motion to enhance your cycling power and overall experience. A physical therapist can design a targeted plan to overcome cycling-specific challenges.



Pedal Connection

Foot/pedal interface is another biking big decision. Experiment to find the ideal set-up for stability, control, and power transfer. Explore secure attachment methods like straps, toe clips, or clipless pedals. Your prosthetist can guide you toward the best option based on your experience level and cycling goals.

Flat pedals offer simplicity and adjustability, making them perfect for beginners or casual rides. Straps and toe clips are more secure, providing better connection and power transfer as you build strength and confidence. Clipless pedals are the ultimate connection! Clipless systems maximize energy transfer and stability – ideal once you're comfortable with cycling.

Collaborate with a bicycle fitter or your prosthetist to analyze your pedal stroke. Even slight adjustments to your prosthetic foot's alignment on the pedal can significantly optimize your power and comfort.

Enjoy the Ride!



Now Water Resistant

SmartPuck

- ✓ **Set it and forget it** smart app
- ✓ **Drop-in vacuum** for easy sealing
- ✓ **Easy operation** for comfort
- ✓ **Customizable settings** to match activities

PATENT: US9119735 B2

Tune into our Weekly
Educational Webinars

www.coyote.us/events



Manufactured & Supported by Coyote®

Knee Covers

Fits the C-Leg 4

- ✓ Fun designs and colors
- ✓ Helps protect
- ✓ Cushioned surface



FEATURE

Amalie HENZE

Difficult Roads
to Promising
Destinations



By Max Warfield



She's an Ontario teen who loves to hike trails, dance, paint, read and put on make-up... and trying new things. She loves high school but misses time when dealing with a nagging health issue. Her Crohn's condition has landed her in the hospital many times since she was fifteen, each visit serious, and each a marathon of needles and tubes and new medicines. But Amalie Henze's spirits always remained bright.

One October she is doing well, working at a wedding and then the next day she is in intensive care fighting for her life. She had stomach pain again but this time it was a different issue. Infection raged quickly into sepsis.

The fight for survival threw Amalie's life in a new direction. She was just eighteen when doctors confided to her parents, as they wheeled her away for surgery, "She's not going to survive this, but we will at least find out what caused it," shares Amanda Henze, Amalie's mother. "Crohn's is a quality of life issue, not... this... sepsis," continues Amanda, remembering her bewilderment. "But Amalie, bright and beautiful, is a fighter. She came through."

She came through, but at the expense of both of her hands and feet. Now a four-way amputee, a daunting path of difficulty and uncertainty lie ahead but her strong will and buoyant ways predict that her future remains bright.

"There was so much grief during that time," Amanda explains, "and at the same time, pure joy that she made it! I remember a doctor saying, 'I cannot believe that this child lived. There is no reason other than this kid is destined for something. This kid has purpose!'"

Many months later Amalie is putting the pieces back together.

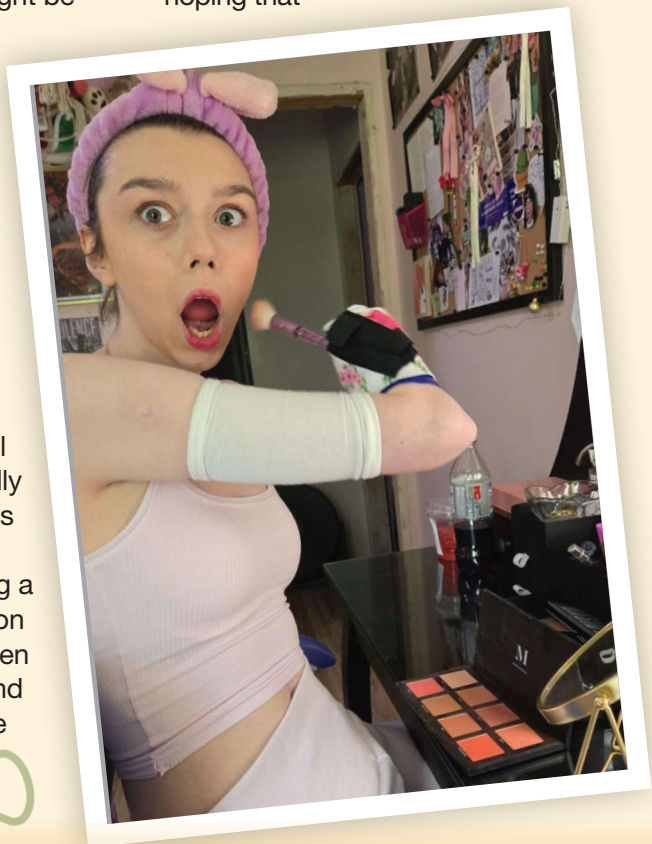
Her Crohn's disease has greatly improved, always giving her hope that it's in the past before it flares back up. "That's okay," tells Amalie in a cheerful tone. "It's a process."

Amalie is working hard to do her best on many fronts now, including finishing high school with the same optimism. "I am waiting for a specific I-pad to do my work on and it has been hard to get connected with a school board that wants to take me on as a student. They might assume the worst or might not realize how much I can do or they might be afraid that they won't be helpful enough," she ruminates as Reyna, the family's orange cat, interrupts with noisy mewling. Amalie giggles along with her mom and sister Anais in the background. When her health and the red tape allows, she is ready for class.

"I'm antsy to get back into it. I really liked school when I was able to actually go. My favourite subject is English, but I like others, too. I wouldn't mind being a writer. I like art but more on my own time, doing it when I don't have a deadline and I can put my own creative spin on things.

"Plans?" she asks out loud. "I want an online school; I'm not going back to class in person. I didn't really thrive in that environment anyway."

She explains that there was a lot of pressure to figure out her life at age eighteen and know exactly what she wanted to do. Sharing that now with a disability, there is more of a challenge. "But this [surviving sepsis] gave me time to think about what I want to do. Less what my teachers think I would be good at and more what I think I can do. More me. I am figuring out what my passion is. I'm hoping that



finishing high school will give me a better idea of what I want to do.” Reyna meows in agreement, met with a laugh from Amalie, Amanda and Anais. Their pet dog Hiro, a husky, behaves quietly in another room. “She’s worth the allergy aggravation we have,” Amalie laughs.

When asked about her passions, Amalie says she used to be a gymnast and worked at a fancy hotel setting up for weddings. “But that was just a job. I am a perfectionist and I *did* thrive in that environment.

“I grew up in the YouTube generation. We would watch a lot of stuff on the internet growing up. Career-wise I would like to do more videos... the only thing, in Canada, it’s difficult to monetize.”

Amalie is using social media to share her story of sepsis recovery publicly, creating videos that can be seen on TikTok, Instagram, YouTube and other sites. Educating others about sepsis is important to her.

“Amalie is great on Instagram,” applauds Ottawa’s Christine Caron, a board member with the Amputee Coalition of Canada and the Canadian Sepsis Foundation. Caron lost both of her legs and one arm after a dog bite sent her into septic shock.

Amalie met Caron through a mutual doctor. “Christine visited me,” said Amalie. “She’s so funny. She taught me about prosthetics. She’s

been a big help because we have similar amputations. She’s been so helpful.”

“A tall, pretty girl educating people about sepsis and recovery while putting on make-up who is not all about herself!” enthuses Caron about Amalie’s commitment to more awareness.

Sepsis education is Caron’s passion as well. “You can’t ‘catch’ sepsis,” she says, insisting that everyone should know that any infection can progress to it. Misconceptions about sepsis fuel Caron’s determination to clarify the issue to patients and medical professionals, as it can be complicated and misunderstood. Miscommunication, fear of lawsuits, and the need for more science, seems to slow progress.

“Sepsis is not an infection,” emphasizes Caron. “It’s the body’s own toxic response to an infection – viral, bacterial, fungal or parasitic

– that has breached the body’s safety barriers like the skin, or mucosal lining in the nose and mouth or digestive system.”

This response involves inflamma-

tion and clotting that damages tissue and organs. Sepsis is the pathway between infection and death for most infectious diseases. Anyone can develop an infection; it does not discriminate. Sepsis is a medical emergency that impacts people of all ages and all areas of health-care. Diagnosis can be tricky, but early recognition

of the infection’s progression and timely medical intervention can save lives and limbs.

“Sepsis has been my main focus on social media because my situation sounds crazy, like getting that much infection was a one-off, but it’s not,” asserts Amalie. “I am one of the lucky ones. Not lucky in all ways, but most sepsis victims pass away, unfortunately. I want to help those who re-search sepsis. I hope to do more with the Canadian Sepsis Foundation.



Christine Caron, Amputee Coalition of Canada and Canadian Sepsis Foundation





"Everything is a slow process; I am new to everything," understands Amalie. "I'm waiting on my new prosthetic arm. There is a five-year window for sepsis before all the dust settles. I'm still working through a lot of things. Health first!"

The youngest of three, with a sister and a brother, Amalie feels fortunate to have wonderful family support. Her support system however, branches out beyond family. "I have two friends who I've been close with since Grade 10. One is in college, and the other works full-time in a hair salon which is very helpful. I did lose some friends through this whole thing but it might be for the better anyway. I'm happy with the ones I still have."

She also brags of her fine health care at Hamilton General Rehabilitation Centre. Reyna the cat chimes in again with a loud meow. "And the other patients who were there with me were really supportive too, especially because I was the youngest one there. They would look out for me."

"Nicole is my prosthetist who I see on a regular basis. Now it will be more often. My arm fitting process is starting to pick up and I am really excited about that. I will have a lot of new myoelectric technology. The arm I'm getting is high tech. I had special surgery for it called TMR [targeted muscle reinnervation] where doctors rerouted my nerves so I can have better control over my prosthetic arms with less pain. It's going to allow me to have more freedom."

Amalie first experimented with prosthetic sleeves with her lower limb prostheses but moved to a pin mechanism which has provided her with much more independence. With a little creativity, a loop replaces the button which she can manage with her elbow to pull and release the pin herself.

When it comes to cosmetic attributes of her new arms, Amalie was asked if she wanted more realistic looking prostheses, an offer to match her skin tone. "I didn't," she says adamantly. "I want to lean into the robot look. Like steampunk."



Everyone knows that you have a prosthetic device anyway, so why try to hide the fact. I want to be just like... 'Yeah, I've got a cool robot arm!' I can then just share my story with everyone."

Amalie's mother Amanda reflects after a sigh. "This could have happened to anybody... it's almost like, we were the family that could handle it. I have some medical experience. I know how to transfer her. I know how to be a caregiver. Her dad is a really big guy, which helps get her around too." Add to that, Amanda's company specializes in adaptive clothing, and was recognized with an award for its accessibility work a number of years ago.

But the family needed to make changes. Amanda explains that their home needed to be completely renovated to meet Amalie's needs. "Nothing was accessible. There is not a single thing that wasn't changed or paused. I had to stop working. My son moved home from college... came back home to help. We had to rip out all of the carpet and get hardwood floors. We got a stair lift, with all of the bedrooms being upstairs. Not a single thing in our lives was the same."

"Amalie is very determined," Amanda attests. "We get creative



"I am going to be super independent, even though I need help right now. I'm going to figure it out! When I get my prostheses, they will open up my world."

trying to get things right. At first, we were like, 'Oh, she can't turn a door handle.' So we got differently shaped handles. Every little thing, we try to make it work."

"I am going to be super independent, even though I need help right now," assures Amalie. "I'm going to figure it out! When I get my prostheses, they will open up my world."

Although it's taking a long time, Amalie has her componentry picked out. She'll be fit with a special suction mechanism to accommodate the loss of both hands. Usually, when missing one hand, an amputee has the other hand to help put it on and take it off.

"It will be mentally exhausting, learning this new skill," acknowledges Amanda, "but it's a learning experience for the professionals too because with that level of septic shock, typically you don't survive. Whatever happens, we'll figure it out."

Amanda consistently tells Amalie that she is going to be okay. "I tell her, 'you are just going to have a different story, an interesting story'... like, I am 5'1" and my husband is 6'9" and our girls are tall like super models. Amalie was insecure about it and hadn't quite

embraced being tall. Her prosthetist has suggested starting her out shorter until she gets her balance. Amalie was amazed – now, she can pick her height!"

"I've seen accessibility and inclusion being a big thing in the fashion world," Amalie notes. "I wouldn't mind getting into modeling. My sister's been in the modeling industry. I know she could help me out with it. I've always had an interest in doing it. I want to try out everything that comes my way. Trying everything once is a good goal in life that everyone should have," she professes.

Amalie has not done a lot of traveling but it is something she wants to do too, particularly seeing Europe where she has family. A recent New Brunswick trip to at-

tend a wedding was her first taste of traveling outside of Ontario with a disability. Her mother shares a family laugh that transpired at a rest stop when Anais popped the trunk to get her sister's legs to the watchful stares of strangers.

With increasing confidence as her life as an amputee evolves, Amalie has already constructed a motivating message for others who are new to the journey like her: "It might be scary at first, but it does get better. There's still plenty of opportunities in the world, even with disabilities. And I think that with time, we're only going to come that much further when it comes to having a disability and what we're able to do. So, I feel like we should be excited for the future, not upset that it is over."

ABOUT THE AUTHOR:

Max Warfield was born in Ridgefield, Connecticut, now making his home on the southern shores of Lake Ontario. A correspondent for the *Lockport Union Sun & Journal* and the *Niagara Gazette*, Warfield has also written and published numerous novels.





Elias Brown
AK, Proteor Quattro MPK

Motion is a language
and your momentum speaks volumes.



info@proteor.com | shop.proteorusa.com | 855-450-7300

f t y in p #FluentInMotion #HumanFirst

PROTEOR
QUATTRO
MICROPROCESSOR KNEE





Barking up the *Right Tree*

**GOOD PET CHOICES FOR
AMPUTEE OWNERS**

By Brenda McCarthy, R.N.

Adapting to life after an amputation can be a profound journey filled with moments of challenge, resilience and triumph. The road to recovery is deeply personal and varies from one individual to another. Certain factors can act as powerful sources of support, comfort and joy. One such factor is pet ownership.

The companionship of a loyal animal can bring unparalleled emotional and even physical benefits. For those living with an amputation or limb difference it's no different of course, but there are some unique things to consider when welcoming a pet into their lives.

At the heart of pet ownership lies the unwavering companionship animals provide. Whether it's a dog that greets you with a wagging tail, a cat that curls up by your side, or even a bird that chirps cheerfully, the connection with a pet fosters a profound sense of belonging and love.

Research shows that the health benefits of owning a pet are undeniable. Interacting with pets has been shown to increase oxytocin levels, the "feel-good" hormone, reducing feelings of loneliness and promoting happiness.

Physical activity is a vital component of health, particularly for those adapting to life with a prosthesis or managing other physical changes in one's body. Pets, especially dogs, can act as motivators for movement. A daily walk with a dog can improve cardiovascular health and build strength. Even playful interactions with smaller animals like cats, rabbits, and birds, can help with mobility and coordination. And the act of caring for a pet – feeding, grooming, playing with them – creates a structured routine that is good for mental health.

While the rewards of pet ownership are immense, if living with limb loss or limb difference, it's important to thoughtfully weigh certain practical considerations before bringing a pet home.



KEEPING PACE



Different pets come with different needs, and it's important to match these with your physical abilities. High-energy and working dog breeds may require frequent walks or playtime. This can be demanding during early stages of recovery, or when experiencing pain or other health complications that make daily walks difficult. Smaller pets on the other hand can offer companionship without as much physical effort, making them ideal for those with limited mobility.

If you're considering a dog, breeds with calmer temperaments or lower exercise needs like Golden

Retrievers or Bulldogs might be more manageable. It's also a good idea to explore the possibility of adopting an older, well-trained pet instead of a younger, more demanding one.

And while you want to be gentle with your pet, your pet might not be gentle with you! If you welcome a dog into your life, obedience classes are a must. If you're a lower limb amputee, and a dog yanks on a leash with you on the other end, you can be thrown off balance or the extra pressure put on your socket could be painful. In the case of upper extremity amputees, while prosthetic hooks and hands can take a fair amount of pressure and have adjustable grip strength, a big dog trying to chase a squirrel might be too much. Talk to your prosthetist, as some myoelectric devices can be calibrated to accommodate for pets.



HOME IMPROVEMENTS



Assess your living space to ensure that it is safe and accessible for both you and your pet. If you're using a mobility aid such as a wheelchair or prosthetic device, consider whether the layout of your home allows you to care for an animal comfortably.

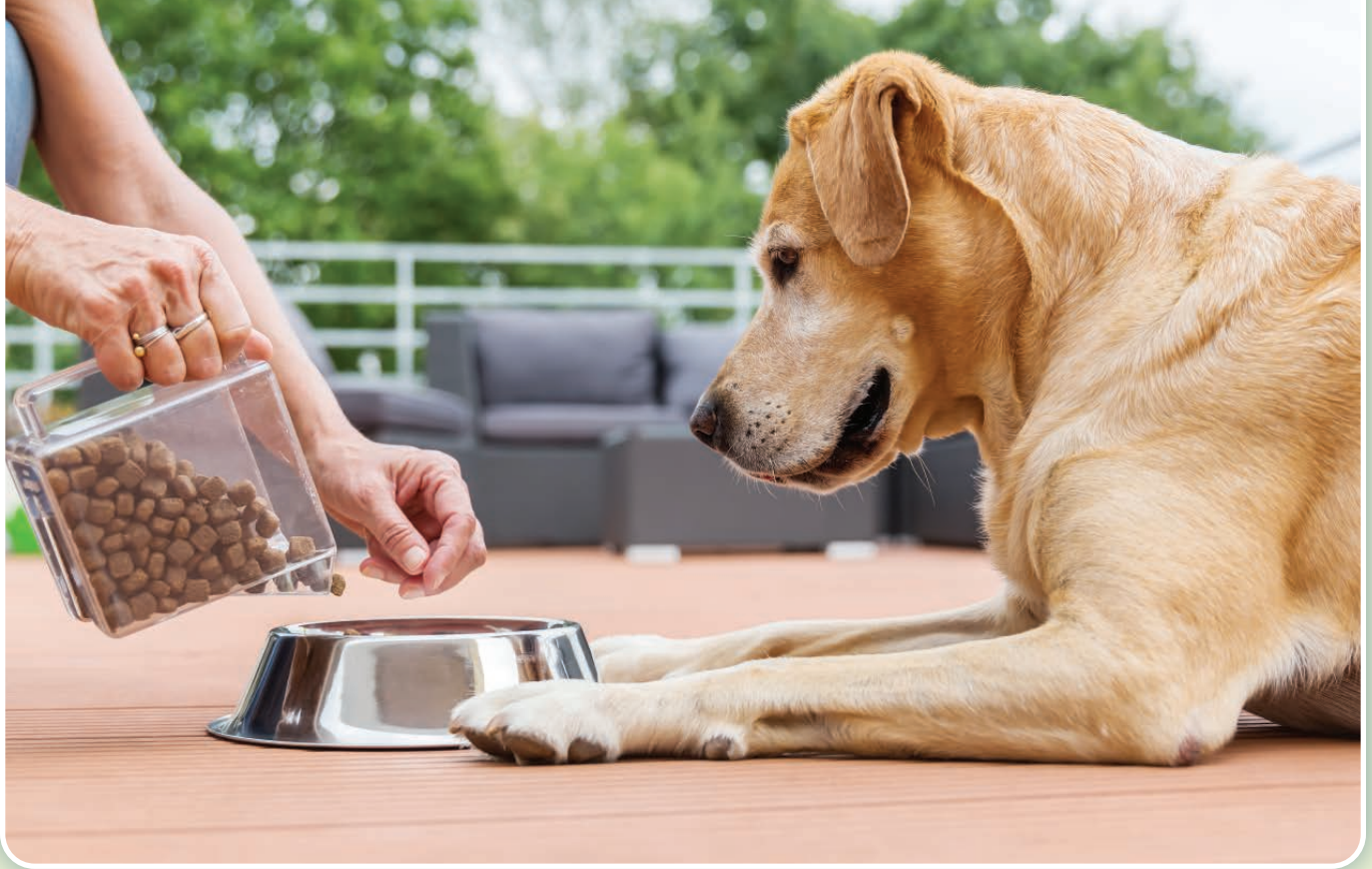
Having a fenced backyard for dogs is ideal. You can also make pet-friendly modifications such as a feeding area at a height that you can easily reach to make dinner time smoother for you and your companion.

Keeping your home clean and clutter-free is important too, especially if you are a lower limb amputee. Pet toys and treats can be a tripping hazard and make navigating with a wheelchair more difficult. Another big hazard is pet hair. Most cats and dogs shed. You won't feel pet hair accumulating on the bottom of your prosthetic foot which can cause you to slip and fall, especially when collecting on the bottom of a sock. An easy solution, wear indoor shoes and sweep or vacuum floors daily.

AT YOUR SERVICE

For some individuals, investing in a trained assistance animal can offer not only companionship but also practical support. Service dogs, for example, can assist with tasks such as retrieving items, opening doors, or even providing stability while walking. Partnering with reputable organizations that train service animals will ensure that the animal that you bring home is a good match for your lifestyle and specific needs.





PET CARE BY PROXY

There might be times when caring for a pet will be more challenging. There can be times when you can't wear your prosthesis, because you are physically unable to, or it's in for repairs. It's comforting to have the snuggles of a pet during these frustrating periods, but it's also stressful when you can't meet their needs.

It's times like these when a support system of family, friends, neighbours and maybe a pet service can come in handy. They can help with exercise, carrying bags of food and kitty litter, and take over backyard clean up. Backup care will ensure that your pet's needs are met, even during moments when you require additional rest or recovery.

For dog owners, off-leash parks are an option if your four-legged pal is well behaved so that you can sit on a bench or stand and throw a ball for a game of fetch (remember the reference to "obedience training" above).

DOG OWNER TIP

Amputees who own dogs tell us a Chuckit! is a must-have. This ball throwing "contraption" saves bending down and picking up a ball and sends it flying with little stress on the thrower or the prosthesis.



ABOUT THE AUTHOR:

A mental health nurse, Brenda McCarthy has had countless pets over the years. From horses, dogs and cats, to rabbits, budgies and hamsters... and even Pepper her pet Pygmy Goat. She's witnessed firsthand the positive impact of animals on her own well-being and that of others.





Let me reintroduce myself. My name is Tony and two years ago I had a below-the-knee amputation. I've shared my story in thrive magazine previously and I received such positive response to my articles that I was asked to share more about my journey as a new amputee and a 50-something-year-old.

Upon arriving home after my amputation I waited patiently for the call for a green light to begin my rehab. I had no idea what to expect when I first arrived at Hamilton Health Rehab three months post-surgery, but I was prepared to give it my all to recover and be able to walk again.

I quickly realized how invested my team was in every step of my journey. It's hard to express how it felt the first time I stood up with my prosthetic leg, but it was total elation! I also had the opportunity to meet a community of other amputees and share experiences.

As a leg amputee, learning to balance can be challenging. To graduate from rehab I had to walk with a tray of empty glasses. I dropped the entire tray on my first attempt... sounds simple if you have two good legs but very challenging with one! Walking with a prosthesis has its challenges with weight distribution so my rehab doctor suggested that I try Tai Chi.

I remember my first day at Tai Chi; I was on full display. The other students were truly fascinated as they watched me remove and attach my leg. My coordination with putting my hands to feet was unsteady but I appreciated that the instructor saw my insecurity and assured me that everyone needs support when starting out.

From my first Tai Chi class to where I am today has been fulfilling. Each class is a journey of learning to improve my balance, focus on breathing, increase my flexibility and mobility, and strengthen my muscles to reduce the risk of falls. I quickly began looking forward to golfing with ParaGolf Ontario. My family gifted me golf lessons with a PGA Pro. I am excited to better my game!

Winters can be terrifying for me. I constantly check the weather for ice and snow. I am not afraid to admit that I cancelled my plans some mornings. But as the weather warms, I always look forward to swinging my clubs again.

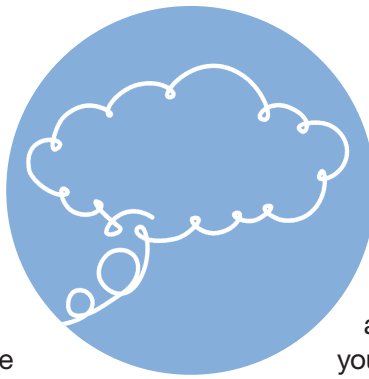
What I realized early on was that there are many challenges still to face. Some tasks take longer now and negative emotions can creep up. When I think about my lost body part and how others perceive me now can be brutal. Every part of my life had to be reevaluated. I was so focused on my physical health that I didn't realize that my mental health was just as vital.

LEARNING TO LIVE A *Balanced Life*

By Tony Korosak

Prior to my amputation I never suffered from anxiety or depression, so you can imagine my shock when that was pointed out by my doctors. I'm still learning how to live life with my prosthesis. And even though I have a loving and supportive family, in my mind I felt like I needed an outlet to express struggles that may not be seen on the outside. My wife suggested that I consider therapy and my rehab doctor encouraged me to seek support.

Through my therapy I realized that I felt broken and not having control over certain areas of my life was causing anxiety. Leading up to my amputation I was just a few years away from retirement. I'm now on long-term disability. I can only speak from my experience, but I have learned that some benefit companies seem to have the mindset that recovery for an amputee

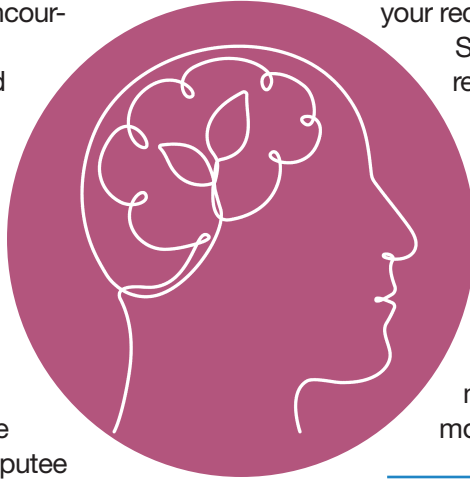


is similar to a broken limb... broken one day and back on the job the next.

I fully understand that benefit companies need updates, but the lack of empathy or compassion can make one feel dismissed, frustrated, anxious and even isolated, as if what you are experiencing is not being taken seriously. This adds more stress and can halt your recovery.

Sharing about my entry into therapy with my rehab doctor reminded her of another amputee facing similar challenges. Even though every amputee's journey is our own, we still have a connection of experiences and challenges.

I've learned to focus on today and not panic about tomorrow. Sharing my experiences with others is therapeutic. Thank-you *thrive* readers; your support means more than you realize. Check out more of my story on Instagram: @al3gup.



Next-level performance.

The **TRS Criterium+**, designed for competition, can be used with most all types of bicycles from road bikes to the more rugged terrain, gravel, and dirt bikes. Available in three models, the Criterium handlebar adapter is up for any challenge or environment you are ready to conquer.

Contact your prosthetist and start riding!

www.fillauer.com



Fillauer®

© Fillauer 2025

FIT

FOR *Life*



ENGINEERING

Prosthetic Socket Comfort

With an amputee-centered approach, Quebec-based Ethnocare has innovated a prosthetic solution to manage residual limb volume fluctuation for better comfort, stability and limb health for lower extremity amputees. Thrive publisher Jeff Tiessen met with one of the company's founders – Louis-Philippe Garneau – to learn more about the product and what it means for Canada's leg amputee community.



Ethnocare Founders (l to r): Louis-Philippe Garneau, Marc-Antoine Malouin and Vincent Breton.

thrive: *Let's talk about the product first. What is it exactly?*

Louis-Philippe: It's called Overlay and it's a transtibial and transfemoral prosthetic device that uses air-based technology to adapt to residual limb volume changes throughout the day. It has a breathable fabric sleeve with an integrated air expansion system to allow users to adjust the fit of their prosthesis without removing it. It's very simple to use. Just press the pump and improve the fit in the socket.

thrive: *As a prosthetic option or solution, what problem is it solving?*

Louis-Philippe: The Overlay addresses one of the biggest challenges amputees face and that's maintaining a proper prosthetic fit throughout the day. As the residual limb's volume fluctuates, amputees often have to remove their prosthesis to add or remove socks multiple times a day. It's an uncomfortable and inconvenient process. But what Overlay does is improve socket fit by providing improved comfort and gait, and reducing the movement inside the prosthesis which reduces the risk of falls. So, it's offering comfort and stability. And we know that the fit of the socket is a main driver of activity.

thrive: *Where did the idea for the product come from?*

Louis-Philippe: Our first product is born out of a personal story. In 2012, my mom had a bilateral amputation, and I watched her struggle daily with discomfort related to her prosthetic sockets. I saw a massive unmet need and I started to research it at university. My team and I did ethnographic research in five rehab centres in Canada, with 30 healthcare professionals and patients. There's been amazing innovation in the foot and knee technologies and socket materials, but an underserving of technology related to the connection between the human and the bionic device. This is why we decided to find a solution to offer the user more comfort, a better fit... something that is better than prosthetic socks for managing limb volume.

thrive: *Does the prosthetist need to create the socket with your product in mind to make room for it?*

Louis-Philippe: It's a good question. There are a couple of ways you can use it. It's retrofitted. So, if you have at least one millimetre of room in the socket, you can use the product because it's about one millimetre in terms of thickness. But if you

want to create the socket so that you can use it at your maximum volume, the prosthetist can make the socket one mm bigger. It goes over the liner, and then into the socket, so we don't change the interface between the limb and the socket. So, you don't have to change the prosthesis or the liner. You're just done with socks. You don't have to use them anymore.

thrive: *What did the development or design process entail?*

Louis-Philippe: Ethnocare's user-centered design approach began with ethnographic research involving professionals and patients in rehabilitation centers. In university, I studied product design as an undergrad at Laval University, which is a distinct discipline, a mix of engineering and social science to research and better understand a defined problem. and then develop a solution. I'm one of three founders. With the results of the research being quite successful



Louis-Philippe Garneau and his mother Line, the first user of the Overlay.

we decided to create a company to make a real impact. You can have ideas. You can have a prototype, but if you don't put it in the market, if you don't develop something, it will always be just an idea. So, we decided to act on it and develop solutions for people.

thrive: *Did you need to seek financial support or investors?*

Louis-Philippe: Absolutely. In the beginning, what we were doing was mostly based on grants and bursaries. But we wanted to grow and actually produce the product. So, we raised funds. It was a seed round with venture capital firms and a private investor. It was a 2.5-million-dollar round of financing, including the Government of Quebec. We launched in 2022 and are now in more than 30 countries and on every continent except Antarctica.

thrive: *What kind of feedback are you getting from amputees?*

Louis-Philippe: The feedback is very good. We constantly hear that it's a "game changer." Volume fluctuation is an issue that is the same for amputees wherever they are in the world. Users consistently report improved comfort, increased confidence, and greater mobility. Many describe Overlay as transformative, giving them the ability to adjust on the go and stay active longer.

thrive: *Has there been any push-back or resistance to the product as there sometimes can be with innovative entries to any established industry?*

Louis-Philippe: For the profession, it's a seamless integration in the existing workflow and since it has a positive outcome for patients and clients, prosthetists are quite appreciative of it. And it's not expensive to try. You just put it over the liner and you have a real-time assessment. We developed it in collaboration with prosthetists and doctors, with their input, before putting it on the market. Feedback tells us that Overlay reduces follow-up visits related to fit issues.

We support prosthetists with the Ethnocare Academy which is an educational platform providing training, best practices, and updates on new technologies. The goal is to contribute to a knowledgeable, confident network of practitioners who deliver the best outcomes to users.

That said, at first, we were a bit naive when we decided to go into the health field, thinking every innovation is well received. What we found out is that there is a reimbursement system that is very strict and very hard to penetrate and very hard to have an impact on. You've got to be creative to put a product on the market in that type

of environment. In Canada, there's a different system in each province with different reimbursement codes. It's pretty complex, but we have a whole team working on that.

thrive: *Yet, there are clearly medical benefits associated with Overlay?*

Louis-Philippe: Of course. Volume fluctuation can cause a number of issues. A shift in the prosthesis can cause pressure points. Pistoning will induce shear forces that can increase the potential for skin injuries, discomfort, and pressure points in the socket. That can affect gait cycle because the body is compensating for pain, and also for the misalignment. This compensatory mechanism can cause a hip problem, or a knee problem, and then a back problem. Also, the stability of the socket is very important for prosthetic control. A poor fitting socket will increase the risk of a fall. All of those things are manageable when you have a solution for socket fit.

thrive: *What does the future look like as Ethnocare envisions it for itself and the amputee community?*

Louis-Philippe: Ethnocare envisions a future where prosthetics are intelligent, adaptive, and empowering. Overlay is just the beginning. The company is developing an ecosystem that integrates hardware and software, aiming to become a global leader in next-gen orthopedic solutions. Ethnocare isn't just a company. We believe in building a world where no physical limitation defines a person's potential. Through innovation, empathy, and collaboration, we're turning that vision into reality one step and one empowered user at a time. A lot of innovation from us is still to come for better mobility and better quality of life.

To learn more about the Overlay, visit ethnocare.ca.



ETHNOCARE

OVERLAY

The Overlay helps you stay comfortable in your socket – no more socks needed.

It uses air to adjust to your limb throughout the day, so your fit stays just right. Made from a soft, breathable fabric, the Overlay has a built-in air system that you control yourself. **If your socket starts feeling loose, just press the pump, it adjusts instantly, without having to take off your prosthesis or add socks.** It's comfort, on your terms.



OVERLAY TF

The Overlay TF is made for **above-the-knee** amputees. It helps keep your leg secure by reducing unwanted movement inside the socket. That means fewer adjustments, **more comfort**, and a more secure feeling every time you put on your prosthesis.

OVERLAY TT

The Overlay TT is designed for **below the knee** amputees. It helps to stop rotation or pistoning inside the socket, so **your prosthesis feels more stable and comfortable**. You can adjust the fit yourself no more constant sock changes or discomfort throughout the day.



ETHNOCARE

Contact us :



Ethnocare.ca



clinics@ethnocare.ca



+1 (418) 934-5669 

How to get the Overlay ?

Option 1:

Ask your prosthetist. The Overlay is available in all the clinics in Canada.

Option 2 :

Get the Overlay directly on our website. You can have 50% off using the code **Thrive50**.

Testimonials



Website





Amputee Coach ON CALL

By Lynn DeCola

Let me begin by telling you how very excited I am about the opportunity that I've been offered to regularly contribute to *thrive* magazine as an Amputee Coach, starting with this issue.

I'm often asked what I do, so I want to share a little bit here. I'm an above-knee amputee with over 30 years of personal and professional experience in orthotics, prosthetics, and amputee care.

After my amputation, I completed a work hardening program in hopes of returning to my position as a package delivery driver. Unfortunately, I lost my job due to my amputation and was unable to return to that career.

It was during that difficult time that my prosthetist introduced me to the field of orthotics and prosthetics, and that opened a whole new path for me. Over the years, I've had the privilege of working with amputees in their homes, rehabilitation centres, doctors' offices and hospitals, giving me a well-rounded understanding of the challenges amputees face in everyday life.

I am a Certified Prosthetist Orthotist (CPO), Technician, Mental



Health First Aider, and Amputee Coach. Today, I focus on helping amputees across North America through in-person and virtual appointments, as well as Zoom sessions, offering education, guidance, and peer support. I also have extensive experience in working

thrive PODCAST

Compelling Stories and Expert Advice



Life & Limb

A monthly podcast about Living Well with Limb Loss

LEARN FROM THE BEST • *Featuring Special Guests...*



HOSTED BY
thrive publisher
Jeff Tiessen



Megan Williamson
*Defying Age
with Movement*



Mike Laughlin
*Firefighter's Triumph
over Trauma*



Martin Robinson
*Prosthetist
Relations*



Larissa Camp
*Surviving Limb Loss
from Violence*



Courtney Gilmour
*Normalizing Disability
with Comedy*



Unstoppable Tracy
*Taking Action on
Attitude Change*



Christa Couture
*Living Life after
Losing Everything*

For more on these guests and others, visit thrivemag.ca.

Where Can
You Listen?



EPISODES AVAILABLE at <https://thrivemag.ca/podcasts/episodes>.

Made Possible with
the Support of



with wound care professionals and in designing offloading devices to help reduce the risk of amputations and revision surgeries.

This background enables me to quickly identify potential problems and offer solutions or guidance as individuals work with their own care team, whether they are managing life after amputation or aiming to prevent further procedures.

I no longer design, fabricate, or adjust orthotic or prosthetic devices. That work belongs to your healthcare professionals. They provide clinical care.

Orthotists and prosthetists are highly skilled professionals, some of whom work within business settings, and like any business, services can vary for many reasons. As an amputee coach, I provide independent support to amputees.



My role is to help amputees better understand the process, learn to identify challenges (whether limb-related or prosthesis-related), and offer tools and encouragement as they work with their own prosthetist, physical therapist, and broader healthcare team.

I also lead free, twice-weekly, live and interactive Zoom meetings through Amputees Preparing Amputees 4 Life (APA4L), a welcoming space where amputees can share experiences and learn from one another. There is no sponsorship which allows for truly open

conversation and support. Just real conversations and support from amputees with lived experience, preparing amputees for life.

I encourage amputees to avoid comparing themselves to other amputees. Every amputee's journey is different, and my goal is to help each person find confidence, comfort, and a better quality of life, whether they choose to wear a prosthesis or not.

So, for my first installment, I'm sharing my answer to a very common question...

“How can you tell if you truly can’t wear a lower limb prosthesis OR if it’s a prosthetic problem that could be addressed?”

It's not always easy to figure out. Sometimes people are told that their unique residual limb anatomy is the reason why they can't wear their prosthesis. But in reality, problems with the fit, suspension, alignment, or even footwear can prevent a prosthesis from being wearable or functional. Here are some things to consider:

Residual Limb Anatomy: Shape, length, skin, bone, soft tissue and contractures play a role, but many of these factors can be accommodated with proper socket design, suspension systems, and alignment.

Fit and Suspension: If the socket doesn't fit properly or stay on securely, it can be difficult and

sometimes impossible to wear.

Alignment: If the alignment of the prosthesis is off, it can cause pain, instability and fatigue, making it feel like “I just can't wear this leg.”

Footwear: An improper supportive or protective shoe (or none at all) can throw off your gait, cause discomfort, or affect the alignment of the entire prosthesis.

Here's the key point. Before concluding that your limb shape makes it impossible to wear a prosthesis, it's worth exploring whether these other factors can be improved upon. Many times, the right design, adjustments, or team approach can make the difference.

If you or someone you care about is facing amputation or prosthetic challenges, I invite you to join Amputees Preparing Amputees 4 Life (facebook.com/groups/872511703389474/) for guidance and support, or reach out to me directly at facebook.com/Improvingqualityoflifeafteramputation for affordable coaching.

Learn more about Lynn DeCola by visiting <https://lifelongprosthetics.com>.



Saturday
Dinner Party.
Slicing and Dicing for 8.

Made possible by a
Certified Prosthetist.

National Orthotics & Prosthetics Day • SEPTEMBER 19, 2025

*Celebrate your Prosthetist
or Orthotist with YOUR impact story!*

Share how your practitioner or device has impacted your life.
Use hashtag #NationalOPDay and tag @opcanada_official.



Orthotics Prosthetics Canada

A person with a prosthetic leg is standing on a paved area next to a swimming pool. The person is wearing a blue and black swimsuit. The pool is in the background, and the scene is brightly lit.

DIVING IN

A BEGINNER'S GUIDE TO Adaptive Swimming

Contributed by Amputee Coalition

First published in inMotion, Spring 2025

The day began with a mix of nerves and excitement. For many attendees at last year's Amputee Coalition Annual Conference the thought of getting back in the water – some for the first time since their amputation – was a bit overwhelming. But as the session unfolded, it quickly transformed into a powerful step towards a newfound confidence in the water.



Swimming with limb loss or limb difference can feel like a big challenge. From body acceptance to the actual mechanics of swimming, things can feel impossible at first. The key? Accepting that your mind has to be in the water. It's a simple concept, but it can be a big mental hurdle, especially for those adjusting to their new bodies.

But as conference goers eased into the pool, one attendee captured the spirit of the event perfectly. After a moment of hesitation, he shouted, "Just do it!" and cannon-balled into the pool.

His words rang true for everyone: "Whatever it is, do it, but do it... adaptively and safely." Whether you want to run, walk, hike, swim... "just do it." But as the swimmers all learned that day, having the tools to do so safely is the best of both worlds.

Instructor Chris Doerger was a reassuring presence, guiding the group through each step. "Floating is safety in the water," she explained. "Once you get past that, it's simply about how you move from position to position." Her advice struck a chord with the participants, many of whom were discovering a new relationship with their bodies. It was a reminder that, in the water, there are no limitations.

By the end of the session, the pool was filled with laughter, splashes, and a strong sense of achievement. What started as a challenge turned into a celebration of adaptability and freedom. For those who participated, it wasn't just about swimming. It was about reclaiming a part of themselves and realizing that, with the right mindset and support, anything is possible. "With every stroke," Doerger encouraged, "you're not just moving through the water; you're moving toward a stronger, more empowered you."

Tips for Safe and Fun Swimming

Don't Swim Alone: Safety First! Always bring a friend or join a class until you're completely comfortable in the water.

Embrace Your New Body: After an amputation it's totally normal to feel self-conscious, but don't let that hold you back! Swimming is an amazing way to reconnect with your body in a new way, boosting both your confidence and strength.

Know Your Prosthesis: Not all prosthetic devices are waterproof or made for water. Check with your prosthetist or the manufacturer to make sure that yours is water compatible. If not, leave it on the deck or the beach. But if you prefer more stability, swim legs are a great option.

Find Your Balance: Your body's balance has changed. Focus on where you place your head — lifting it might make your hips drop, while keeping it down helps you float horizontally, which is perfect for chilling on your back.

Master the Basics: Start with floating and breathing. Get comfortable with how your body moves in the water. Practice floating on your back and then on your stomach with your face submerged.

Stay Safe in the Sun: Don't forget the sunscreen — especially on your residual limb(s)! A protective sleeve might be handy too, and have a backup for after your swim.

Entry and Exit: Whether you roll, ease down a ramp, use a knee pad, or prop yourself up with towels, find a comfortable way to get in and out of the water. And when you're done, dry your stump thoroughly before putting your prosthesis back on.

Listen to Your Body:

Swimming can be a workout, so stay hydrated, take breaks when you need to, and enjoy the water at your own pace. Swimming isn't just about exercise — it's about reconnecting with yourself and enjoying the freedom that the water offers for a fun and safe swimming experience!



SAFETY DISCLAIMER: Before diving into any swimming activity, always prioritize your safety. While swimming is a fantastic way to stay active and have fun, it's important to consider your unique needs. Consult with your healthcare provider or physical therapist to ensure that you're prepared and equipped for safe swimming. Always use appropriate assistive devices and take it at your own pace. This article is for informational purposes. Remember, your safety is the top priority — take care!



As an amputee, one of the most empowering things that you can do when planning a trip is to truly know your limits. That may sound like a restriction. But in reality, it's the key to unlocking more enjoyable travel experiences.



The idea for this article came to me around 2:20 a.m. (a normal occurrence). I immediately sent myself an email reminder that said, “You limit yourself when you deny yourself permission to utilize tools or devices that will help you to travel, or live life, more freely.”

That’s not a statement of disability. Using devices that allow you to do all the things that you want to do makes you a person with ability.

When we travel, there’s a pressure to “keep up,” to push boundaries, and to make the most of every moment (thanks a lot FOMO... “fear of missing out”). While there’s nothing wrong with challenging yourself, ignoring your physical limits can turn an otherwise amazing trip into a painful or exhausting ordeal and a trip that you’ll remember for all the wrong reasons.

For amputees, understanding your energy levels, mobility range, and recovery needs, isn’t about holding yourself back – it’s about setting yourself up for success.

I’ve learned this firsthand over years of travel with an above-knee prosthesis. Some days I can walk for hours and feel great. Other days, swelling, or socket discomfort, means that I need to take a lot of breaks. It also means limiting stair climbing, or switching to a mobility device. The key is being realistic about your body’s capacity on any given day and planning accordingly.

TRAVEL SMART

Know Your Limits as an Amputee

By Tanya Rabe

Here are a few practical ways to travel smarter by knowing your limits.

1 Be Honest with Yourself (and Others)

It's easy to say "yes" to everything on a trip, but your body might disagree halfway through day two. Look at your itinerary and ask: "Is this too much walking? Too many hours without a break? Are there accessible options if I need them?" Ask yourself too: "Should I have a mobility device just in case (always yes)?" Communicating your needs clearly with travel companions, guides or travel agents shares expectations and reduces stress.

2 Pace Your Days

Plan your itinerary to include rest days or lighter activity days between excursions. Build in buffer time so you're not rushing from one place to the next. Your energy is a valuable resource – spend it wisely.

3 Use Mobility Aids or Take Your Limb Off

There's no shame in using a wheelchair, cane, or crutches, even if you only use them occasionally. When I'm on a cruise, I ALWAYS rent a mobility scooter for time on the ship (some are huge!). If you are an arm amputee, take your arm(s) off and give yourself a break! It's not a step backward – it's a smart way to conserve energy and avoid wear and tear on your residual limb.



4 Prioritize Accessible Accommodation

If you know that stairs are tough for you, don't book a charming historic hotel with no elevator just because it looks beautiful online. Choose accommodations and transportation that match your mobility needs. The trip will be far more enjoyable if you're not struggling just to get to your room. Accessible accommodations will be addressed in a future installment.

5 Listen to Your Body

Travel can be exciting, but it can also push your limits – often without you even realizing it. Pay attention to early signs of fatigue, skin irritation, or pain. It's okay to change your plans, cancel an activity, or just rest. The goal isn't to check every box; it's to have a meaningful, enjoyable experience.

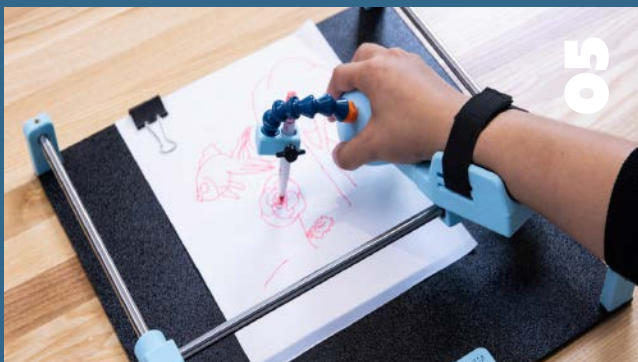


Accommodating your limits isn't weakness – it's wisdom. When you plan travel around what you can do comfortably, you'll find yourself more present, less anxious, and better able to enjoy the journey. After all, travel should feel like freedom, not like a test.

Do you have a travel story, question, or tips that you'd like to share? Email me at tanya@rightfootadventures.ca.

ACCIDENTALLY ACCESSIBLE®

AND INTENTIONALLY AWESOME PRODUCTS AND SERVICES FOR YOUR UNLIMBITED® LIFE



ACCIDENTALLYACCESSIBLE.COM

BY KIMBERLEY BARREDA



Healthy Eating by Lynda's Healthy Kitchen

Removing Chronic Inflammation Through Diet. Flavourful, nutrient-packed recipes tailored to reduce inflammation while supporting thyroid health. From \$24.95. ISBN: 9798305569100



Yarbo Pro Modular Robotic Lawn Mower

The app controlled Pro is made to handle the toughest grass types and most challenging terrains on both residential and commercial properties. From \$4999.95 at <https://yarbo.com>.

01. Propel 5-In-1 Electric Watercraft

Propel blends the thrill of a jet ski, the freedom of a paddleboard, and the silent flight of a foil into one intuitive system. Switch modes from standing to seated in minutes without tools or complicated assembly. From \$13,079.00 at <https://propelfoil.com>.

03. Luna Ring

The Luna Ring is a high-precision smart ring designed to monitor and enhance your overall well-being, discreetly tracking over 70 health metrics. Integrated with Luna AI, it offers personalized coaching on fitness, nutrition, and recovery. From \$330.00 at <https://lunazone.com>.

02. ActiveWick by Arctic Cool

ActiveWick technology pulls moisture away from the skin and disperses it throughout the garment allowing you to cool faster and feel dry sooner! UPF 50+ Protection creates a barrier for 98% of the sun's harmful rays. From \$9.95 at <https://arcticcool.com>.

04. Inflatable Pool / Boat Ramp

These inflatable ramps can be used on boats, docks, pools and more. Deep weighted-mesh with integrated steps creates easy entrance and exit for everyone. Comes with multiple D-ring tie-downs, traction pad and two 8ft tie lines. From \$179.95 at <https://solsticewatersports.com>.

05. Guided Hands®

Guided Hands® enables individuals with limited hand mobility to write, paint, draw, and access technology. The sliding system encourages the use of gross motor skills in the shoulders, rather than the limited fine motor skills in the hands. The full range of products has been thoughtfully created to promote communication, independence and self-expression. From \$699.95 at <https://www.imaginablesolutions.com>.

06. Nulu Knife

The NULU is a next generation kitchen knife that reimagines the relationship between body and blade. The handle is positioned at the center of the cutting arc to deliver force directly through the arm and hand. The result is a uniquely versatile knife that can deftly handle the majority of kitchen cutting tasks all with low impact on muscles and joints. From \$79.99 at <https://nuluknives.com>.

A woman with a prosthetic leg is sitting on a concrete ledge. She is wearing a white t-shirt with the word "RHYTHM" in blue, denim shorts, and brown sandals. She is smiling and looking at the camera. The background is a wall of blue and white tiles. There are some white squares on the wall and on the ledge.

FINAL WORD

RHYTHM

*"No matter the
trial you face,
do not lose
the peace and
rhythm of life."*

– Eric R. Asher

ottobock.

NEW! *Genium X4.* Redefining human potential.

The new X4 is the next revolutionary step in advanced knee technology. Its unmatched functionality and cutting-edge digital ecosystem provide a whole new mobility experience for users.

Live life in effortless motion.



Learn more today!



#WeEmpowerPeople
www.ottobock.com





Navii®

Expand Your World

Navii was designed to keep moving and exploring through almost any environment, and expand the envelope of what's possible for you.

Our newest MPK is built to perform—offering IP68+ More protection (dust-tight and suitable continuous water immersion), Next Gen Actuator technology, and a Manual Standing Lock for powerful stability and stumble recovery support. Navii delivers unmatched freedom of movement, comfort, and safety—so movement feels more natural than ever, with low-friction swing dynamics and consistent transitions through every step.

Explore effortless comfort, safety, and freedom with Navii.



Learn more about Navii

