



The Official Magazine of the Canadian PH Community



Message from the PHA Canada Team

As the days grow shorter and the crisp air of autumn sets in, we find ourselves reflecting on another meaningful season in the pulmonary hypertension (PH) community. October feels like a time of transition—between the vibrancy of summer and the quieting pace of winter—and it offers a chance to pause, take stock, and celebrate the connections that sustain us.

For our team at PHA Canada, September was a month to remember. We gathered in Toronto for our annual PH Community Conference, which brought together patients, caregivers, and medical professionals from across the country. Walking into a room filled with both familiar and new faces was a powerful reminder of the resilience of this community. The weekend was full of energy—heartfelt conversations, engaging workshops, and powerful stories shared in panel discussions. This conference is more than an educational event; it is a place where people connect, recharge, and feel seen. For those unable to join in person, we're grateful we could offer virtual access so the experience could be shared widely. None of this work would be possible without the generous support of our sponsors, whose commitment helps bring our community together.

In this fall issue of *Connections*, we're excited to focus on a theme often requested by our members: alternative treatments and approaches to living well with PH. Managing PH is never just about medication—it's about supporting the whole person: mind, body, and spirit. While prescription drugs are essential and life-saving, many in the PH community find additional ways to improve quality of life, reduce symptoms, and manage daily challenges.

This issue brings together patient stories on how alternative approaches fit into their lives. From massage therapy to exercise, from cannabis to diet changes, from singing to pulmonary rehabilitation—these strategies may look different for everyone, but all share the goal of helping people with PH live as fully and joyfully as possible. By sharing these experiences, we hope to offer inspiration and highlight the many paths people take to support their wellbeing.

We're also looking ahead with excitement to November, when we will mark PH Awareness Month and come together for our 6-Minute Walk for Breath. This annual event is more than a fundraiser—it's a chance to raise awareness, honour those affected by PH, and show the strength of our community. We encourage you to join us, walk alongside others across the country, and help make our collective voice stronger than ever.

With gratitude,
The PHA Canada Staff Team



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Memo: Inside PHA Canada

Welcome to *Connections*' message board. This is your peek into things happening inside PHA Canada, from changes in leadership to new resources, special events, and more.

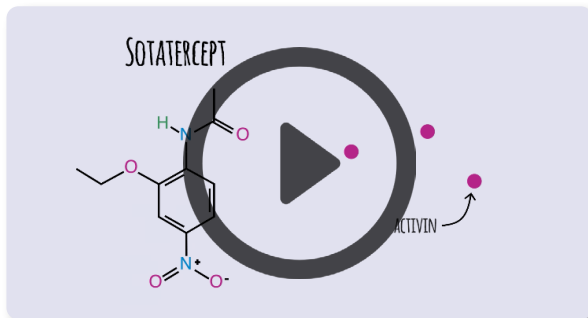


Congratulations to Ashok Pandey!

PHA Canada is proud to celebrate the achievements of Ashok Pandey, one of our dedicated Knowledge Philanthropists. Since joining us in 2021, Ashok has generously contributed to the research section of *Connections* and helped us keep our clinical trials page up to date.

Ashok recently completed his degree in Biomedical Sciences at the University of Guelph and has been accepted to medical school at the University of Limerick in Ireland. While this exciting new chapter means he will be stepping away from his volunteer role with PHA Canada, we are deeply grateful for all he has given to our community.

Congratulations, Ashok, and best wishes for the journey ahead!



New Videos: Understanding PAH Treatments

We're excited to share two brand-new videos created to help our community better understand the latest developments in pulmonary arterial hypertension (PAH) care.

Sotatercept: How the Latest PAH Treatment Works

Learn how this groundbreaking therapy targets the root cause of PAH—and why it represents a major shift in treatment.

Research Update: What's Coming in PAH Treatment

Get a clear overview of the most promising therapies in the pipeline and what they could mean for the future of PAH care.

Watch the videos at phacanada.ca/phvideos



New Volunteer Opportunities at PHA Canada

PHA Canada is seeking passionate community members to join us in three important volunteer roles:

- **Peer Mentors** – Provide encouragement and one-on-one support to others living with PH or caring for someone with PH.
- **Patient Partner Advisory Council (PPAC)** – Help guide PHA Canada’s priorities and programs by bringing patient and caregiver perspectives to the table.
- **Indigenous PH Advisory Council** – Share lived experience and cultural knowledge to ensure PHA Canada’s work is inclusive and responsive to Indigenous communities.

If you’re ready to make a difference, we’d love to hear from you!

Learn more at phacanada.ca/volunteer



Sickboy Podcast



PHA Canada is proud to collaborate with the Sickboy Podcast (CBC) on a special episode of The Breakdown: “From Six Months to Tears of Joy.”

This audio documentary traces PAH’s journey from a once-devastating diagnosis to a condition with new hope. It also spotlights sotatercept, a groundbreaking therapy that targets PAH at its root cause.

Listen to the episode at phacanada.ca/yourstories



Corrections

On page 9 in our last issue, the list of top fundraising teams for the 2024 6-Minute Walk for Breath was incorrect.

The winning teams, in order, were:

1. London - \$12,158
2. Ottawa - \$12,122
3. Mayville - \$12,110

On page 27 in our last issue, Dr. Mehta’s contribution was omitted. The article should have included the text “Reviewed by: Sanjay Mehta MDCM, FRCPC, Founding Board Member/Past Chair/Eternal PHriend of PHA Canada, UWO, London, Ontario,” and Dr. Mehta should have been included in the Contributors list on the inside cover.

Our sincere apologies for these errors.



The 6-Minute Walk for Breath

Join us for the 6-Minute Walk for Breath, a powerful event that brings together the PH community from coast-to-coast to raise awareness for pulmonary hypertension (PH).

Locations so far: St John's, Halifax, Moncton, Hamilton, Ottawa, London, Winnipeg, Regina, Edmonton, Calgary, and Vancouver.
More to come!

Learn more at phacanada.ca/NAM



Saturday
November 22, 2025



1 PM EST



**Multiple locations across
Canada**

Get involved your way:

Join an existing walk
in a participating city

Organize your own local walk
with friends, family, or your
clinic

Walk with us virtually on Zoom
from wherever you are

Your Community

This edition's Community section celebrates the many ways our PH community continues to learn, connect, and inspire change together. From the powerful gathering at the 2025 PH Community Conference—where patients, caregivers, and healthcare professionals came together to share knowledge and drive progress—to the creativity and passion fueling our 2025 community fundraisers, your energy is making a lasting impact. We are proud to honour the generosity of our 2024 donors, whose support has strengthened every step of our work. And, of course, the joy of our PH summer picnics reminds us that connection, laughter, and togetherness are at the heart of our community. Each of these moments reflects what is possible when we unite in support of people affected by pulmonary hypertension.

2025 PH Community Conference

Driving Change, Inspiring Hope

The 2025 PH Community Conference brought together patients, caregivers, families, healthcare providers, and researchers from across Canada for three unforgettable days of learning, connection, and hope. The event celebrated progress in pulmonary hypertension (PH) care while inspiring attendees to continue building a stronger, more united community. With over 300 participants—including those who joined virtually—the conference was a true reflection of our vibrant PH community and the partnerships that make our work possible.



Honouring Our Newest Eternal PHriend

Each year, PHA Canada recognizes individuals who have made a lasting impact on the PH community with the title of Eternal PHriend. At this year's conference in Toronto, we were proud to honour Nicole Dempsey as our newest Eternal PHriend.

Nicole's unwavering dedication, compassion, and contributions to the PH community have touched countless lives. This recognition ensures her efforts will always be remembered as part of PHA Canada's history and legacy.



A Conference That Connects Every Part of the PH Community

What makes the PH Community Conference unique is its ability to bring every part of the PH community together in one space.

The conference began with the annual meetings of two professional networks—the Canadian PH Trials Network (CaPH-Net) and the Canadian PH Professionals Network (CPHPN)—followed by the two-day National PH Medical Think Tank, where physicians, researchers, nurses, and trainees from across Canada gathered to tackle key challenges in PH care. This year's Think Tank also welcomed distinguished keynote speakers from France and the United States, bringing valuable international perspectives to the conversation. The conference concluded with the Patient & Family Symposium, which empowered patients and caregivers with education, resources, and opportunities to connect with one another.

Together, these events highlighted the strength of a united PH community, demonstrating how collaboration across disciplines and experiences drives progress and inspires hope. We extend our sincere thanks to all of the volunteers and planning committee members whose dedication helped make these events such a success.

A special acknowledgment goes to our Platinum Sponsor, Merck, for leading the way with their exceptional support. We are also deeply grateful to all our supporters—Eitan, Gossamer Bio, Johnson & Johnson, Liquidia, McKesson, ProResp, Specialty Health Network by Shoppers, and United Therapeutics Corporation for their commitment to the PH community. Your partnership empowers us to continue our mission and make meaningful progress together.



2024 Donor Recognition

We are deeply grateful to everyone who supported PHA Canada over the past year. From monthly donors and major contributors to event organizers and sponsors, each of you has played an essential role in strengthening our work. Because of your generosity, we have been able to offer critical resources, support services, and education to Canadians affected by pulmonary hypertension. Your involvement in community events has brought people together, while your sponsorship has fueled important initiatives that drive progress.

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Ed Rathonyi
Garth Robertson
Carl Selzer
Jeffrey Skippen
Marilyn Stubberfield
Joan Yearsley

Community Events & Campaigns

Ajax Run/Walk for PH (Ajax, ON)
Books 4 Breath (Victoria, BC)
Dolores's Heavenly Heart (Winnipeg, MB)
GolPH for PH (Milton, ON)
6-Minute Walk for Breath (National)
Paypal Giving Fund Canada (Facebook Fundraising)
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Personal Fundraising Page - Sean Fast
Personal Fundraising Page - Ryan Park

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Skipton Solutions Inc
The Lions Club of Milverton

Corporate Efforts

We are pleased to recognize corporate supporters at the following sponsorship levels, based on the total amount of funding committed during 2024.

Champion - \$75,000 - \$100,000
Gossamer Bio

Platinum - \$100,000 and above
Johnson & Johnson
Merck

Celebrating Our Community Fundraisers



GolPH for PH 2025 Tournament

The Paulin family once again brought the PH community together through GolPH for PH 2025, hosting events across multiple dates and golf courses to raise awareness and funds for pulmonary hypertension. This year's fundraiser was a tremendous success, bringing friends, families, and supporters together in the spirit of fun and generosity—while raising more than \$17,000 in support of vital research efforts. We are deeply grateful to the Paulin family for their dedication and to every participant whose efforts made this year's GolPH for PH such an incredible success.



Two Lambs, Many Big Hearts

The Zloty family showed the true power of compassion with their fundraiser. At the 4H livestock sale, brothers Ethan and Zach auctioned their lambs in support of their sister Olivia, who lives with PH—sparking generous bidding wars and emotional moments that moved the entire crowd. Thanks to the kindness of supporters—including First Choice Meats, 22 West, and Klis Electric—they raised \$672 for the PH community while spreading awareness far beyond the barn. Thank you to the Zloty family for turning two lambs into a powerful story of love, hope, and generosity.



Andrew Barfoot Memorial Car Wash

Family, friends, paramedics, and lacrosse teammates came together in Owen Sound, ON, for a car wash and BBQ in memory of Andrew Barfoot. What began during Andrew's transplant journey has grown into an annual tradition that honours his life and legacy while giving back to the PH community. With 120 vehicles washed, plenty of food served, and countless moments of kindness, the event raised over \$5,000 for PHA Canada. It was a day filled with community spirit and a beautiful tribute to Andrew's generous heart and the lasting impact he made on everyone who knew him.

Fundraising Made Easy

Create a Personal Campaign: We can help you set up your online fundraising page and invite your network to support the cause. It's quick, easy, and impactful.

Host a Virtual Event: Bring people together for a fundraiser from the comfort of your home—trivia nights, bake sales, or anything you dream up!

Learn more at phacanada.ca/fundraise



PH Community Picnics

This summer, members of the PH community gathered in Calgary, Dieppe, London, Ottawa, Regina, Toronto, and Vancouver for our much-loved PH Summer Picnics—an annual tradition that celebrates connection, laughter, and support. Across the country, patients, caregivers, families, and friends came together to share a meal, enjoy the sunshine, and strengthen the bonds that unite our community.

More than just a fun day outdoors, the picnics are a chance for people affected by pulmonary hypertension to connect with others who truly understand their journey. Whether catching up with old friends or meeting someone new, every picnic reminded us that no one faces PH alone.

We extend our heartfelt thanks to the local volunteers who organized and hosted these gatherings, and to everyone who joined in making this summer's picnics such a success. Together, we continue to build a stronger, more connected PH community.



Special Feature

Alternative Treatments for PH

Living with pulmonary hypertension often means navigating more than just prescribed treatments. Many in our community have found that alternative approaches—such as exercise, diet changes, or massage—play a valuable role in easing symptoms, reducing stress, and improving quality of life. In this special feature, we share patient stories alongside insights from a medical professional, highlighting the creative and practical ways people support their health. Together, these perspectives remind us there is no single path to wellbeing, only the one that works for you.

Breathing Beyond the Diagnosis: How Holistic and Alternative Care Can Empower Life with Pulmonary Hypertension

Kelly Gould is a Registered Nurse with Horizon Health Network at The Moncton Hospital, where she serves as the Inpatient Cardiac Educator and Coordinator of the Pulmonary Arterial Hypertension Clinic.



Living with pulmonary hypertension (PH) is more than just managing symptoms and taking medications. It's an everyday journey that affects not only the heart and lungs but also your energy, mindset, and emotional well-being. As a registered nurse working closely with patients diagnosed with PH, I've seen how difficult and isolating this diagnosis can feel. I've also seen the powerful difference that holistic and alternative approaches can make in helping people live fuller, more balanced lives despite the challenges of a chronic disease. These approaches are not about replacing your prescribed medical treatment but enhancing it. When used wisely and safely, they can help manage stress, reduce fatigue, improve mood, and give you back a sense of control over your health.

Understanding Holistic Care in Pulmonary Hypertension

Holistic care means looking at the whole person, not just the disease. This includes your physical health, but also your emotional, mental, social, and even spiritual well-being. With a complex condition like pulmonary hypertension, this whole-person approach is incredibly important. While medical therapies work to manage the symptoms of the disease, holistic and complementary practices can support your quality of life, the part

of your care that matters just as much as test results. Alternative or complementary therapies—for example, gentle movement, breathing techniques, meditation, energy healing, acupuncture, nutrition, and emotional counseling—can be tailored to your personal needs and comfort level.

Breathing Easier: The Power of Mind-Body Practices

For people living with pulmonary hypertension, shortness of breath and fatigue are often daily companions. That's why any practice that helps you connect with your breath and manage stress is so valuable. One example of an effective and gentle option is mindfulness-based stress reduction (MBSR). Simple guided meditation or deep breathing exercises can be done sitting or lying down and can improve oxygen use, lower heart rate, and reduce anxiety. Over time, patients often report sleeping better, worrying less, and feeling more in control. Gentle yoga or chair-based stretching, when approved by your care team, can improve circulation, support flexibility, and help manage physical tension without overexertion.

The key here is gentleness: moving within your limits and listening to your body. Even 10 minutes a day can make a difference. Information regarding these types of practices can be found online or in downloadable apps.

Nutrition and Energy: Fueling Your Body Wisely

Nutrition can be another powerful tool. For pulmonary hypertension patients, reducing sodium intake can help manage fluid retention, and eating a heart-healthy diet supports overall cardiovascular function. But holistic nutrition goes beyond rules—it's about nourishing your body with intention. Working with a nutritionist who understands PH can help you find the right balance of whole foods, anti-inflammatory ingredients, and energy-sustaining meals that won't leave you feeling drained. Staying safely hydrated, managing digestion, and timing meals around your energy peaks and dips can all contribute to improved daily functioning. Some patients also explore natural supplements like omega-3s, magnesium, or CoQ10. However, these must always be discussed with your healthcare provider, as interactions with PH medications are possible. Just because many of these supplements can be purchased without a prescription does not mean they are safe for everyone.

Emotional Support and the Heart-Mind Connection

Chronic illness often brings emotional weight: fear, frustration, grief, and isolation. These feelings are valid, and you are not alone. What I've seen time and time again is that patients who address their emotional well-being feel stronger, more resilient, and more hopeful in their day-to-day lives. Therapies such as counseling, art therapy, and guided imagery can help release emotional tension. Some patients find comfort in spiritual care or connecting with others in pulmonary hypertension support groups. Others turn to reiki or energy healing practices to experience a sense of calm and balance. Whatever resonates with you, the goal is the same: helping you feel emotionally grounded, supported, and connected to a sense of purpose and peace.

Safety First: Partnering with Your Care Team

As a nurse, I always encourage open and honest communication with your PH specialists. Not every alternative therapy is safe for every person, especially with a condition as complex as pulmonary hypertension. For example, strenuous exercise, certain herbs, or aggressive detox programs could be harmful. That's why a collaborative, informed approach is essential. Keep a journal of what you try, how you feel, and any side effects you notice. Share this with your care team. Holistic care is most powerful when it's integrated, not isolated.

A Life Beyond Limits

I've had the privilege of watching many pulmonary hypertension patients go from feeling overwhelmed to feeling empowered. They begin to see their bodies not just as "broken" but as resilient. They discover joy in small daily rituals, sipping herbal tea, stretching with the morning sun, journaling their thoughts. They build habits that don't just extend life but enhance the life they're living.

Holistic and alternative approaches won't change your diagnosis, but they can change your experience of it. They can help you find steadiness in the storms, calm in the chaos, and strength in the stillness. To everyone navigating life with PH: you deserve care that honors all of who you are. You are more than your diagnosis. You are more than your limitations. With a little guidance, an open mind, and the right support, healing is always within reach.

Disclaimer: Always consult your physician or care team before starting any new therapy, exercise, or supplement. Holistic care is most effective when personalized and integrated into your existing medical treatment plan.

Contributed by: Kelly Gould, RN BN CCN(C), Pulmonary Hypertension Clinic Coordinator, Moncton, NB

Alternative Paths: Stories of Living Well with PH

In this section, members of the PH community share the alternative treatments and self-care strategies that help them manage their symptoms and improve their quality of life. These personal stories highlight the many ways people with PH are taking charge of their health, beyond medication alone.

Please note: these personal stories reflect individual experiences and are not medical advice—always consult your healthcare team before trying any new treatments or therapies

Keep a Song in Your Heart

Our virtual Better Breathing Choir allows me to sing weekly from the comfort of my home. Rachelle, a physiotherapist, guides us through body warm-up exercises to loosen muscles in the face, neck, torso, back, arms, and legs. We focus on maintaining an upright posture with our feet planted firmly on the floor. This position opens up the diaphragm and chest, helping us breathe slowly and deeply while gaining better control of our breath.

For breathing warm-ups, we practice deep breaths followed by repetitions of square breathing, pursed-lip breathing to “blow out” 5–10 candles in a single breath, and lip trills and glides.

Dr. Jane Gosine leads us through vocal exercises that focus on mouth positions, diction, and sustaining long phrases while moving up and down scales. She encourages us to incorporate gentle body movements to enhance our vocal experience.

These exercises have improved my diction, lung capacity, and breath control, allowing me to sing longer phrases with a wider note range. I often notice higher oxygen saturation and a more relaxed, pleasant mood. During last month’s pulmonary function tests, I found it easier to hold my breath and exhale for longer. Using pursed-lip breathing during exertion is also helpful in daily activities, such as carrying groceries or laundry, climbing stairs, talking on the phone, or exercising along with fitness videos.

Contributed by: Jeannie Tom, living with PH and Pulmonary Fibrosis, secondary to Scleroderma, since 2010, Toronto, Ontario



The St John’s Better Breathing Choir is open to anyone wishing to improve their breathing through singing and exercises. All sessions are on Wednesdays at 7:30pm. For information about the choir and information on how to join the sessions, contact Dr. Jane Gosine at jgosine@mun.ca.

Finding Balance with Essentrics

Living with pulmonary arterial hypertension requires finding a balance between physical activity and respecting your limits. Among other gentle approaches, several people in my francophone PH community have incorporated Essentrics classes into their routine and are reaping the benefits. Essentrics is a full-body exercise method that combines stretching, strengthening, and fluid movements to improve flexibility, posture, balance, and overall body strength.

I take classes offered through Zoom, led by our wonderful instructor, Julie. The exercises can be done sitting on a chair or using oxygen, depending on your energy level and physical abilities. The movements are gentle, fluid, and accessible to everyone. Everyone works and progresses at their own pace, without pressure to perform, which allows people with PH to stay active while respecting their own condition. I always work according to my current abilities, which is what makes this approach so safe.

I have noticed real benefits: my muscles are more flexible, my posture is improving, and my breathing is becoming more fluid. These small victories make a big difference in my daily life. I find it easier to accomplish my tasks and, above all, I feel energized and relaxed. The mental aspect is not to be overlooked: the classes help release tension and allow me to refocus on myself. In addition, we chat with each other before and after the sessions. Some long-distance friendships have even developed. It's like being with friends and meeting once a week.

Contributed by: Stéphanie Gauthier, living with PAH since 2017, Sherbrooke, QC



Finding Relief Through Touch

When I was diagnosed with PAH 23 years ago, it was overwhelming. The uncertainty of whether I'd see my girls graduate or marry caused a lot of sleepless nights. I was already dealing with pain from fibromyalgia and lupus, and things only got worse.

A friend recommended massage, and I noticed improvement in my symptoms after a couple of treatments. My first massage was a gentle, hands-on experience, but I soon found that I needed deeper pressure. I didn't realize that there were small muscles between the ribs. The therapist informed me that with stress, these tense up and tighten, making it more difficult to take a deep breath. Just lying on the table with the soothing music and warmth is relaxing. This leads to deep, even breathing, and I've dozed off a time or two.

Massage has alleviated much of my pain and has improved my sleep and mental health. I still have some pain, but I find it more manageable. It has improved my breathing and circulation, and increased my walking distance. I make time for regular massages. I've tried Swedish, hot stone, and deep tissue massage, along with aromatherapy, and found them all to be satisfying.

Contributed by: Eleanor Skrumedá, living with PAH since 2002, Parksville, BC



Comfort with Cannabis

When I was suddenly diagnosed with PAH almost 5 years ago, it drastically changed my daily life. And I discovered the various benefits of cannabis.

Did you know cannabis has different properties? Not all products make you "feel high"—that is THC, which contains psychoactive compounds—but other properties like CBD and CBG create a more calming and focused effect. This means that I can be functional, peaceful and happy without undesired side effects.

CBG helps me during the day. If I have a list of tasks or an outing, a gummy with breakfast gives me the energy and focus I need. For a little while, my body forgets that I am sick and breathless. CBD helps me through the evening and during periods of pain. When life becomes overwhelming, an infused juice brings a wave of calm. I feel settled, like being tucked into bed with a favourite blanket. For a few hours, the sharp pangs of pain are muted and the heaviness of illness is lifted.

My local cannabis store offers a multitude of products: gummy candies and chocolates, sodas and flavored waters, bath bombs and lotions, and flavorless capsules. Each package is labeled with the product's concentration and properties, to help make an informed purchase.

As I write, I am in the midst of a SubQ medication site change, which brings unmentionable pain and exhaustion... but with a little help, I am out of bed and remember that I can thrive and celebrate this life.

Contributed by: Angèle Belliveau, living with PAH since 2021, Dieppe, NB



22 Years of Movement

At my first cardiologist appointment after my 2003 PH diagnosis, I asked what I could do to help improve my health. He said, 'exercise to the level of your ability,' and he told me about the Healthy Heart Program. My GP made the referral, then I was given a full multidisciplinary assessment by the Burnaby hospital dietician, cardiac kinesiologist, pharmacist and cardiologist. I started attending three one-hour exercise classes per week. Due to the expertise and supervision, I felt safe knowing I was working within my ability level. I also made friends and enjoyed social times outside of the program. Twenty-two years later, I still attend Healthy Heart at the YMCA and am the oldest (in age and attendance) person in the class.

I have come to appreciate exercise greatly. It inspires me to keep active in other areas of my life as well. It does not matter to me that others in my class achieve more than I do because I have learned to be fully satisfied doing my personal best!

Contributed by: Sharon DiSanto, living with PAH since 2003, Savary Island, BC



Partnering Plants with Medicine

Almost twelve years ago, I received a diagnosis that changed everything: Pulmonary Arterial Hypertension (PAH). At the time, I was overwhelmed—not just by the medical terminology and treatment plans, but by the uncertainty of what life would look like moving forward. I knew I couldn't control everything about this disease, but I was determined to take ownership of what I could. That's when I made a decision that has shaped my journey ever since: I transitioned to a plant-based diet.

Like many newly diagnosed patients, I dove into research. I wanted to understand how lifestyle could support my treatments and improve my quality of life. I kept coming across studies and patient stories highlighting the role of inflammation in chronic illness and how diet could either fuel or fight it.

The more I learned, the more it made sense. A plant-based diet, rich in antioxidants, fiber, and phytonutrients, seemed like a natural ally in my fight against PAH. I wasn't looking for a miracle cure, but I was looking for a way to feel better, manage symptoms, and support my body through the ups and downs of treatment and disease progression.

The changes didn't happen overnight, but they were real and meaningful. I noticed less joint pain and fatigue, which I later learned could be linked to lower systemic inflammation. My body felt less “on edge,” and I had more energy to get through the day. Some of the medications I take can be hard on the digestive system, but a fiber-rich diet helped regulate my gut health and reduce bloating and discomfort. I also found that eating whole, nutrient-dense foods improved my mental clarity, stabilized my mood, and gave me a greater sense of control in the midst of a chronic illness. Of course, it hasn't always been easy. Social events, travel, and even hospital stays can make plant-based eating tricky. But I've learned to plan ahead, advocate for myself, and get creative in the kitchen. Over time, it's become second nature. I also work closely with my healthcare team to ensure I'm getting all the nutrients I need. A plant-based diet isn't a one-size-fits-all solution, but with the right support, it can be a powerful tool.

Living with PAH has taught me to listen to my body, trust my instincts, and never underestimate the power of small, consistent changes. Choosing a plant-based lifestyle was one of the most empowering decisions I've made—not just for my physical health, but for my sense of agency in the face of a complex condition.

Contributed by: Brooke Paulin, living with PAH since 2014, Mississauga, ON



Explore More Ways to Support Your Well-Being

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Radical Acceptance from Both Sides of the Couch

Lisa Harder, a registered psychologist from Edmonton, Alberta, was diagnosed with PAH in 2024. She shares how mindfulness and radical acceptance help her navigate life with PAH.



2024 was probably one of the most difficult years of my life. What should have been marked by positive milestones was overshadowed by diagnoses, medical procedures, and so many tests.

My diagnosis with pulmonary arterial hypertension (PAH) came unexpectedly. I had given birth to my beautiful daughter at the end of 2022, and my career as a psychologist was starting to really take off. I noticed a slight shortness of breath coming upstairs, but this was attributed to needing to lose my postpartum weight. An abnormal result at my annual physical in 2024 triggered a series of tests and referrals, ultimately leading me to the PAH clinic in Edmonton. I was officially diagnosed with pulmonary hypertension in July 2024 and then with idiopathic PAH in August 2024.

All of this left me uncertain, anxious, and grief-stricken about the future, my career, not being around to see my daughter grow up, and not being able to one day happily retire with my husband and fulfill our long-term goals together. Often, we expect that because people are mental health professionals, they know how to deal easily with curveballs life throws at them. Much to many people's surprise (sometimes even our own!), we are fallible human beings.

Two things I frequently discuss with clients in therapy are mindfulness and radical acceptance.

Mindfulness simply means being present in the moment. It doesn't equal meditation (though that is a form of mindfulness!). Some people find doing crafts or beading

helps them to be mindful. Others find mindfulness in activities such as reading, playing music, or doing the dishes.

Radical acceptance is a bit more complicated. It refers to accepting things as they are, recognizing that this is necessary in order to move forward. It's not throwing our hands up in the air and saying "oh well," we are acknowledging fully that there are things in our life that can't change for now or forever, and that is awful.

Both of these concepts have been instrumental in my life. I radically accept that I have PAH and that really sucks; however, I have an amazing care team and specialists I work with. I have been considered low risk since the earlier part of this year. I was very fortunate to receive a diagnosis so quickly and started on medication. I am potentially about to participate in a clinical trial that could significantly impact the longevity of my life.

Having a diagnosis has also helped me examine my values and live according to them, focusing on maintaining a balance. I have strong boundaries between my work and home life, and I have a thriving career. I can be present during family time and have fun with my daughter. I exercise regularly and set aside time for reading daily (my mindfulness practice). While my PAH diagnosis has changed my life in some negative ways, it has also changed my life indirectly in positive ways. I don't take that for granted and am thankful each day.

Contributed by: Lisa Harder, living with PAH since 2024, Edmonton, Alberta

Research Corner

What does the research say about alternative treatments? In this section, we look at recent studies about the potential effects of cannabinoids and of melatonin on pulmonary hypertension. Next, we share a few session summaries from the 2025 Medical Think Tank—see the Medical Think Tank page on our website for more! Finally, we share an update from Lindsay Jefferson, one of the 2024 Paroian Family PH Research Scholarship recipients.

Research Update: Exploring New Paths in Alternative Pulmonary Hypertension Treatments



Melatonin Improves Symptoms, Quality of Life, and Oxidative Stress in PAH

Alicia de la Fuente, Mónica Zagolín, Víctor Parra, Adolfo A. Paz, Alejandro González-Candia, Osvaldo Cabrera, Cristian Olave, Constanza Bahamondes, María José Gaete, Lodz Gudenschwager, Javiera Rivas, and Emilio A. Herrera. Melatonin Improves Quality of Life, Oxidative Stress, and Cardiovascular Function in Pulmonary Arterial Hypertension. *Pulmonary Circulation* 2025, 15(2): e70109.

Background. People with pulmonary arterial hypertension (PAH) experience increased oxidative stress in their lungs and bodies: they have an imbalance between damaging free radical chemicals from oxygen and anti-oxidants (chemicals which fight free radicals). Melatonin is an antioxidant hormone produced by the pineal gland in the brain. It was found to improve pulmonary hypertension in animals. This study evaluated the effects of melatonin therapy in 19 patients with PAH, assessing symptoms, quality of life, exercise capacity, right ventricle function, and the antioxidant capacity of their blood.

Findings. After six months of taking 6 mg of melatonin each night two hours before sleeping, patients reported less severe symptoms, particularly shortness of breath, palpitations, and fatigue. They also had better quality of life and felt more confident that they could perform more activities and thus were likely to continue the melatonin therapy. There was no effect of melatonin on patients' six-minute walk distance, functional class, or

heart-related measurements, although their heart rate at rest was lower. Patients' blood had significantly higher antioxidant capacity, which was related to blood melatonin levels. One study participant dropped out of the study due to melatonin intolerance, but there were no side effects reported.

Implications. Melatonin therapy over 6 months improved patients' symptoms and quality of life. Stability of the six-minute walk distance may be promising, as exercise capacity can often worsen in patients over time. Melatonin is often taken to improve sleep, and it may have improved patients' sleep quality which might explain their improved symptoms and quality of life. This study did not measure sleep, so more studies are necessary to clarify specifically what is causing the improved quality of life. Future studies could also help identify how improved antioxidant capacity with melatonin helps people with PAH. This was a small study, but the promising results could support a larger trial with an appropriate control group.

Contributed by: Robyn Kalda, Manager, Research & Policy

Reviewed by: Dr. Sanjay Mehta MDCM, FRCPC, Founding Board Member/Past Chair/Eternal PHriend of PHA Canada, UWO, London, Ontario

Cannabinoids—A New Perspective in Adjuvant Therapy for Pulmonary Hypertension

Anna Krzyewska, Marta Baranowska-Kuczko, Krzysztof Minczuk, and Hanna Kozłowska. *Cannabinoids—A New Perspective in Adjuvant Therapy for Pulmonary Hypertension*. *International Journal of Molecular Sciences* 2021, 22(18):10048.

Background. Marijuana comes from all parts of the *Cannabis sativa* plant, and consists of about 700 chemicals, more than 100 of which are cannabinoids. These include delta-9-tetrahydrocannabinol (THC), which is psychoactive, and cannabidiol (CBD), which is non-psychoactive. Humans have used cannabinoids for centuries for recreational and medicinal purposes. Cannabinoids can be smoked, inhaled through e-cigarettes (vaping), or ingested as liquids or pills. Cannabinoids mainly act on the brain but can also affect the respiratory and circulatory systems. Cannabinoids are also produced in our bodies, including in the lungs, and there is increased production in patients with pulmonary hypertension (PH). This article summarizes evidence for potentially beneficial effects of cannabinoids on the pulmonary circulation and PH and considers whether cannabinoids could be used as therapy for PH in addition to current medications.

Findings. Cannabinoids can open up blood vessels in the whole body, including in the lungs. This is known as vasodilation, which can lower the pulmonary artery pressure and reduce severity of PH. Many current PH therapies work as vasodilators, which is how they help lessen severity of PH and help patients improve.

Cannabinoids can cause vasodilation in several ways:

- Cannabinoids bind to specific molecules (called receptors) on the outside surface of cells in blood vessels, leading to changes inside the cells which in turn lead to vasodilation.

- Cannabinoids are broken down in the body into other chemicals, including arachidonic acid, which is a basic chemical the body uses to create many other chemicals, including prostacyclin (PGI₂). PGI₂ is normally one of the most important vasodilators in the human lungs, opening up lung blood vessels and lowering pulmonary artery pressure. Indeed, patients with PH are often lacking PGI₂, which can contribute to worse PH. Although we can't use PGI₂ to treat patients with PH, we have versions of PGI₂ known as prostanoids, such as epoprostenol (Caripul) and treprostinil (Remodulin). Selexipag (Uptravi) is a chemical that acts like PGI₂.
- In some patients with PH, specific pores (channels) for potassium are not working in cells in the lung blood vessels. Cannabinoids can improve the working of these potassium channels, which could improve PH.
- In patients with PH, there is evidence for a lack of nitric oxide (NO), which contributes to the severity of PH. Inhaled NO is an important treatment for some patients with PH, including newborn babies and patients in intensive care. Cannabinoids can increase the amount of NO which is made in the body, causing vasodilation.

Implications. Cannabinoids can vasodilate blood vessels in the lungs in several ways, which could improve the severity of PH. However, given the negative effects of anything smoked or vaped, it is unlikely that smoking or vaping marijuana improves PH in patients. It is possible that edible/oral cannabinoid CBD could improve PH in patients, but there are no clinical studies that have been reported, so they cannot yet be recommended as a treatment for PH.

Contributed by: Dr. Sanjay Mehta MDCM, FRCPC, Founding Board Member/Past Chair/Eternal PHriend of PHA Canada, UWO, London, Ontario

Research Updates from the 2025 National PH Medical Think Tank



Held as part of the PH Community Conference in September 2025, the 6th Annual National PH Medical Think Tank convened PH clinicians and academic researchers for a day and a half of scientific sessions sharing the latest in research from across Canada and beyond. We have "translated" research updates from this year's meeting so that you can better understand some of the incredible PH research taking place in Canada.

Why is my patient short of breath? Dyspnea after pulmonary embolism

Presented by: Dr. Devin Phillips, York University

Background. Some people continue to feel short of breath (dyspnea) even after recovering from a pulmonary embolism (PE). In fact, a study found that about one in three PE patients who did not have pulmonary hypertension still experienced significant breathlessness. This ongoing symptom often limits exercise ability and lowers quality of life.

Current status. When we exercise, our body automatically tells us to breathe more. For people who have had a PE, this “drive to breathe” is often stronger than normal. That means they may feel breathless more quickly than others, sometimes reaching severe breathlessness at only half the activity level of people without PE. This shortness of breath is thought to come from the body being more aware of the extra effort needed to breathe. Researchers are exploring different ways to help: exercise programs can improve fitness and quality of life (though not always the breathlessness itself), pulmonary endarterectomy (PEA) surgery has been shown to reduce symptoms and improve breathing capacity, and new medications are showing early promise in helping patients breathe easier and tolerate more activity.

Future. Researchers are now using new exercise testing methods to better understand how the heart and lungs interact in people who still struggle with breathlessness after a PE.

Hemodynamic phenotyping of pulmonary hypertension

Presented by: Dr. Susanna Mak, UHN Pulmonary Hypertension Program, Toronto

Background. Phenotypes are patterns of characteristics that tend to remain consistent. In pulmonary hypertension (PH), this often refers to blood flow measurements, called hemodynamics. Over the past 15 years, the way PH is defined has changed. Most importantly, PH is now diagnosed when mean pulmonary artery pressure (mPAP) is greater than 20 mmHg, rather than the older cutoff of 25 mmHg.

Current status. The current definitions of PH have both strengths and challenges. The new threshold of 20 mmHg is well supported by research showing that healthy individuals do not exceed this level. Another advance is the reintroduction of an “exercise PH” definition, which helps identify patients whose pressures rise abnormally during activity and provides important information about prognosis. On the other hand, there are ongoing challenges in how certain pressures are measured, and the “normal” cut-off values may not be as precise as once thought. These definitions also work better for PH specialists than for heart failure specialists, since patients with left heart disease often show hemodynamic patterns that are harder to interpret and can look similar to those of healthy individuals.

Future. Looking ahead, refining hemodynamic measurements could help doctors better estimate prognosis, especially in patients at intermediate risk. Expanding phenotyping to include heart function and other features of the pulmonary vessels may also provide a more complete picture of PH.

Inflammatory mechanisms in pulmonary arterial hypertension

Presented by Dr. Neil Goldenberg, SickKids Research Institute, Toronto

Background. Pulmonary arterial hypertension (PAH) involves ongoing inflammation in the blood vessels of the lungs. This chronic inflammation causes the vessel walls to thicken and narrow. Researchers are exploring whether controlling inflammation could slow or even reverse these changes in PAH patients.

Current status. In PAH, certain stressors—like low oxygen levels—trigger cells to release proteins that increase inflammation and cause some cells to die in a process called pyroptosis. Blood cells from PAH patients are more sensitive to this response, which may worsen inflammation and damage in the lungs. Reactive oxygen molecules appear to contribute to this heightened sensitivity. Early research shows that targeting a key protein involved in this process, called gasdermin D, can reduce both inflammation and cell damage, offering a possible way to protect lung vessels.

Future. Researchers are now developing a drug that specifically blocks gasdermin D to see whether this approach can help reduce inflammation and improve outcomes for people with PAH.

Research summaries contributed by Robyn Kalda, Manager Research & Policy

For more research summaries, check out the entire series from the 2025 National PH Medical Think Tank at phacanada.ca/researchupdates



Scholarship Recipient Research Update

In 2024, PHA Canada awarded a Paroian Family PH Research Scholarship to Lindsay Jefferson, a master's candidate in the Translational Medicine program at Queen's University. Here, she describes her research project. Jefferson defended her Master's in August 2025. She presented this work as a poster at the Pulmonary Vascular Research Institute's annual meeting in Rio de Janeiro, Brazil, and at the Queen's TIME Symposium, and a review article has now been submitted for publication.

Investigating the Immunometabolism of Macrophages in the Right Ventricle in PAH

This study examined the role of inflammation in causing right ventricular failure in rats with pulmonary arterial hypertension (PAH). Specifically, we examined the mechanism by which macrophages, a white blood cell that increases in number in the right ventricle (RV) during RV failure, contributes to the RV failure that often leads to death in patients with PAH.

We tested the idea that a shift in glucose metabolism plays a role in determining how macrophages act and how they affect right ventricular function in PAH. Specifically, we looked at whether an increase in uncoupled glycolysis (a change in sugar metabolism) contributes to making macrophages more inflammatory and worsening right ventricular failure.

First, we stained right ventricle tissue from rats with dyes that make specific enzymes involved in glycolysis fluorescent, allowing their measurement in macrophages by microscopy. We found that macrophages in the right ventricle when rats had developed RV failure had higher levels of an enzyme (pyruvate dehydrogenase kinase 1 [PDK1]) that favours glycolysis and prevents glucose oxidation. Consistent with a shift in macrophage metabolism to uncoupled glycolysis, there was also higher expression of the glucose transporter that allows glucose into the macrophage, glucose-transporter 1 (GLUT1). Upregulation of PDK1 and GLUT1 is regulated by the pro-inflammatory transcription factor HIF-1 α . Thus, we showed that inflammatory macrophages found in the right ventricle in PAH do increase uncoupled glycolysis.

We next used macrophages from bone marrow (BMDMs) to measure metabolism directly, exploring whether macrophages maintain a PAH phenotype

outside the body. We confirmed that PAH-BMDMs increase uncoupled glycolysis, even though the cultured cells are isolated from the pro-inflammatory environment of the animal with PAH.

BMDM cells from animals with PAH tended to be more active and inflammatory. They produced more of the inflammatory marker His48 and the pro-inflammatory transcription factor NF κ B. The metabolism of the mitochondria also shifted, showing an increase in uncoupled glycolysis, consistent with the findings in macrophages in the RV in animals.

Our lab's previous work indicated that dichloroacetate (DCA), a small molecular drug which inhibits PDK, improves RV function, so we also wanted to evaluate if DCA might nudge PAH macrophages towards being more anti-inflammatory. We observed that therapy with DCA did improve aspects of right ventricular function. Moreover, we harvested BMDM from animals treated with DCA and grew them in the lab. These cells had less His48 than BMDM from rats with PAH that were not treated with DCA, indicating that DCA was able to shift the cells towards being less active and potentially less inflammatory.

We conclude that immunometabolism of glucose may be a pathway that contributes to macrophage mediated inflammation in the RV and PAH. This pathway may constitute a novel therapeutic target.

Contributed by:

Lindsay Jefferson, past
Paroian Family PH
Research Scholarship
recipient (2024)



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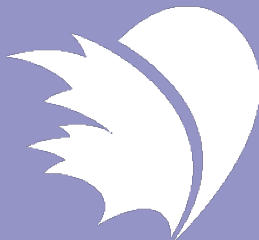
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