IMPACT IN MOTION

BUILDING A BRIGHTER FUTURE: YOUR GENEROSITY AT WORK

Arthritis SOCIETY CANADA

Spring 2025

Thanks to your generosity, we are making significant advancements in transforming care for people living with arthritis and forging partnerships to revolutionize health outcomes.

One key initiative is our collaboration with the University of Alberta on the Newborn Arthritis Prevention Screening (NAPS) Project, which harnesses cutting-edge AI technology to eliminate hip dysplasia in infants and reduce the risk of osteoarthritis later in life through early detection.

Transformative progress like this — and so much more — is only possible because of you. You are driving meaningful change for millions living with arthritis. Thank you!

– Trish Barbato, President and CEO

Your impact: Advancing research, changing lives

How visual exposure to green light can reduce joint pain

Dr. Jason McDougall, Dalhousie University (NS)

The finding: Researchers have discovered a fascinating way to ease joint pain: simply being exposed to low-level green light. This groundbreaking study found that green light can help reduce osteoarthritis pain by boosting natural pain-relieving molecules in the blood. This activates the body's own pain and stress management system, the endocannabinoid system.

The future: For many living with arthritis, current medications don't always provide relief and can come with safety concerns. That's why alternative treatments like green light therapy are so exciting. This innovative approach shows real potential to ease osteoarthritis pain, offering a safer, brighter path for managing this challenging condition.

Does a high-fat, high-sugar diet impact all joints the same way?

Nada Abughazaleh & Dr. Walter Herzog, University of Calgary (AB)

The finding: A study on the effects of a high-fat, high-sugar diet on joint health revealed a surprising result: shoulder joints appeared protected from the diet's negative impacts, contrasting with previous research on knee joints. Interestingly, while fiber supplementation helped prevent male samples from developing obesity, it had no such effect on females. This suggests that metabolic osteoarthritis — a type of arthritis linked to obesity — doesn't impact all joints in the same way.

The future: This discovery highlights how factors like joint biology, sex hormones, gut bacteria, structural differences, immune response, and biomechanics may significantly influence the onset or progression of metabolic osteoarthritis. By deepening our understanding of these differences, we can create more precise, targeted treatments to better address the unique needs of people living with osteoarthritis.

To learn more about research initiatives made possible by the generosity of donors like you, visit **arthritis.ca/research**

Creating the healthcare of tomorrow

The NAPS Project: Ending hip dysplasia

Each year, 10,500 babies in Canada are expected to be born with Developmental Dysplasia of the Hip, or hip dysplasia — a condition that, if undiagnosed, can lead to lifelong pain, irreversible joint damage, and mobility challenges.

Hip dysplasia increases the risk of hip osteoarthritis and is the leading cause of hip replacements in people under 40. Sadly, current screening approaches may miss up to 90 per cent of infant hip dysplasia cases. Yet, when detected in newborns, hip dysplasia can be easily corrected with a soft brace, eliminating a future of pain and mobility issues as they grow.

Arthritis Society Canada, in partnership with Dr. Jacob Jaremko and his team at the University of Alberta, is **revolutionizing hip dysplasia diagnosis** through the Newborn Arthritis Prevention Screening (NAPS) Project. This groundbreaking initiative uses advanced AI technology embedded in a portable ultrasound device that can fit in your pocket.

This simple yet advanced technology, developed by Dr. Jaremko and the Medo AI team (now part of Exo), quickly and affordably detects hip dysplasia in seconds, allowing healthcare providers like nurses and physicians to perform accurate scans with minimal training, paving the way for timely and life-changing treatment.

With your support, we are focusing on healthcare services in rural and remote communities, ensuring that high-risk populations have access to this life-changing technology.

Learn more about how you can prevent a lifetime of pain for the next generation:

arthritis.ca/NAPS

Emma's story: How early detection could have changed her life

When Jasmin learned her daughter Emma's hip dysplasia could have been detected at birth with a simple hand-held ultrasound scan, her heart sank.

Emma was diagnosed with severe hip dysplasia before her second birthday, beginning a difficult journey for her and her family — challenging decisions, anxious thoughts, a major surgery with a long recovery, and countless appointments. Like every newborn in Canada, Emma's hips were checked at birth by physically maneuvering them. No signs of concern were found. Everything seemed fine — until one day, Emma's parents became concerned when they noticed one of her legs appeared longer than the other. After another physical screening, they were told not to worry.

At 21 months, Emma started walking, but with a limp. "She didn't have any pain, but all my concerns came rushing back," says Jasmin. She sought help from a chiropractor who immediately recognized signs of possible hip dysplasia and urged an X-ray. The results were devastating — Emma's femur was completely detached from her hip; she needed surgery urgently.

Jasmin was overwhelmed. "The surgery sounded so extreme and very invasive. How do you explain this to a two-year-old who just learned to walk, that she's going to wake up and not be able to move?" she recalls. And was a painful surgery necessary when Emma wasn't showing any signs of discomfort? **The surgeon explained that if left untreated, hip dysplasia would lead to osteoarthritis and likely a hip replacement in early adulthood.**

The surgery went forward. "I had to think of future Emma," says Jasmin. "If we didn't deal with her hip dysplasia now, it would catch up with her."

Emma is now in preschool and continues with physiotherapy and follow-up appointments. A year after surgery, signs suggest that a gap may be re-emerging in her hip, raising the possibility of another surgery. For now, Jasmin is focusing on helping Emma grow stronger, but the worry lingers.

"If Emma had been offered an ultrasound at birth, it's possible we could have avoided so much pain, and spared the healthcare system so much expense," Jasmin reflects.

Arthritis Society Canada is investing in an innovative initiative to do just that. The Newborn Arthritis Prevention Screening (NAPS) Project uses 3D technology aided by AI in a portable, hand-held ultrasound probe to quickly, affordably, and accurately detect hip dysplasia in infants. Early diagnosis and treatment offer hope for a pain-free future.

"If Emma had been offered an ultrasound at birth, it's possible we could have avoided so much pain, and spared the healthcare system so much expense."

- Jasmin

Living well with arthritis: Take back control

Arthritis and microbiota: Three tips to promote good gut bacteria

Did you know researchers have found a protein in people living with rheumatoid arthritis that, when processed by gut bacteria, triggers inflammation? Healthy eating habits help gut bacteria develop properly and can reduce inflammation — here are three tips:

1. **Increase your intake of plant-based foods**
   Vegetables, nuts, cereals, legumes and fruits are rich in a variety of fibers that promote gut health.
2. **Think colourful plates**
   Bright-coloured fruits and vegetables are rich in pigments, which are usually high in antioxidants that support gut microbiota.
3. **Choose home-cooked meals**
   Guide what you eat by crafting home-cooked meals, thus avoiding modified ingredients and 'ultra-processed' foods.

Discover our many anti-inflammatory recipes and get cooking at **arthritis.ca/flourish**

Arthritis Talks

Arthritis Talks connects thousands of people with subject-matter experts on topics like arthritis medications, pain management, living well with arthritis, and caregiving strategies. Upcoming talks in this free webinar series will cover a range of topics like Spondyloarthritis, and Tips and Tricks to Manage our Joints. To view previously recorded webinars and find out more about our upcoming events, visit **arthritis.ca/arthritistalks**

We want your input: Arthritis Action Plan

Arthritis Society Canada is taking bold steps to tackle the growing social and economic costs of arthritis. Arthritis Society Canada, acting as the backbone organization, is working together with 20 partners nationwide across the arthritis ecosystem to drive Canada's largest co-created Arthritis Action Plan — engaging 1 million voices to transform arthritis care, research and innovation. And we want to hear from you. Your voice matters. Help shape the future by sharing your input at **arthritisactionplan.ca**

Donate today to help create a brighter future for people living with arthritis.

Giving is easy:

By phone: 1.855.834.4427
Online: arthritis.ca/givenow
By mail: Return the enclosed form in the postage-paid envelope

Arthritis™ SOCIETY CANADA

Your incredible support inspires hope and drives change — thank you!