



IMPACT IN MOTION

YOUR LEADERSHIP IN ACTION

Fall/Winter 2021

BREAKTHROUGHS AND BREAKING NEWS

The quest to cure osteoarthritic back pain

The problem: Osteoarthritis (OA) is the most common form of arthritis. In the back, it can occur when the protective cartilage of the joints in the spine wear down, leading to inflammation, nerve pain and muscle spasms. Low back pain, such as pain caused by OA, is the single greatest cause of years lived with disability in young and middle-aged people.

The current situation: Surprisingly little is known about the cause of OA pain and no early treatment options are available. The treatments that do exist — like physiotherapy or pain medication — may only slow degeneration of the intervertebral discs, the discs that hold the vertebrae together and allow them to move, acting like a shock absorber for the spine. But these treatments don't stop the progression of the disease. And invasive surgery to remove discs or fuse vertebrae come with their own risks and often lead to further degeneration of disc tissue.

The research: Dr. Lisbet Haglund and her team at McGill University, supported by the Arthritis Society's generous Leadership Circle donors, are studying whether senolytic therapies can reduce or eliminate inflammation, arthritis and pain in the lower back.

Senolytic therapies cause senescent cells (cells that are no longer multiplying but create joint inflammation) to undergo apoptosis, or programmed cell death. This research is testing the potential of two senolytic therapies — the natural compound o-Vanillin and an approved drug called RG-7112.

The goal: Dr. Haglund's research may one day lead to drugs that can safely target and kill senescent cells in intervertebral discs and surrounding spinal cord and tissue. That could lead to reduced inflammation, stopping arthritis in its tracks, providing relief from painful disc degeneration, and even allowing new tissues to form.

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If we could remove senescent cells, we may be able to reduce inflammation and pain, and possibly allow tissues to repair themselves. It would be an enormous benefit to patients and our healthcare system."

— DR. LISBET HAGLUND

RESEARCHER PROFILE

Medical cannabis and pain: Dr. Hance Clarke

Dr. Hance Clarke and his colleagues at Toronto's University Health Network are conducting a five-year research project to explore how and why cannabis might be useful for the pain of osteoarthritis. Dr. Clarke's team is studying whether cannabinoids, the chemicals found in cannabis, are actually reaching joint cartilage, bone tissue and spinal fluid.

The team is hoping to answer the questions: What are the major cannabinoids that are affecting these tissues? Do any anti-inflammatory effects of cannabis stem from

the patient's central nervous system or is it a joint-specific response, or both? Is there any evidence of an alteration of cytokine levels?

Since cytokines regulate the immune response, understanding their role in arthritis and how cannabinoids affect them has implications for everyone living with osteoarthritis.

"With scientific rigor, we'll hopefully get some answers. Our findings can inform treatment options going forward." — Dr. Hance Clarke

Your support is truly leading the way

In addition to funding research into the use of cannabis for medical purposes, the Arthritis Society is a leading advocate for dealing with medical cannabis the same way as other treatments, urging the Canadian government to eliminate the tax and expand access to pharmacy distribution.

TOOLS AT YOUR FINGERTIPS

***flourish* — The Podcast!**

Listening is a great way to learn. So we're happy to share our latest initiative, **flourish – The Podcast!** In this podcast, we dig deeper into stories designed to help you move through life with arthritis. Listen to the inspiring discussions at home, in your car or while taking a walk.

You can access our podcast right now through music streaming services like Spotify, Anchor FM, and Apple Music. Our podcast is also available on our website and our YouTube channel.

Subscribe today, so you don't miss an episode!

Get started with our first episode, where we spoke with Cristina Montoya, a

registered dietician living with rheumatoid arthritis. It's a lively

conversation about the importance of good nutrition, what a healthy diet looks like, and some of the myths surrounding certain diets and foods. Enjoy!

Subscribe to our podcast at arthritis.ca/podcast



One step at a time

“I realized exercise was going to be my way of managing my arthritis. I knew I could overcome this.”



As a former competitive sprinter, Sandra had always maintained a healthy diet and a regular running routine. But when a pain in her knee became persistent, her doctor referred her to a rheumatologist who diagnosed her with osteoarthritis (OA). Her next question was, “Now what?”

Sandra soaked up information on the Arthritis Society website. It became her “home for a month. I read everything.”

And the answer to “Now what?": Exercise. Sandra started working with a personal trainer who

suggested she strengthen her knees. “It was so hard at first. These little exercises would hurt, and they were a pain in the butt to do, but slowly I could feel the muscles around my knee getting stronger and the pain would get more manageable.”

Now Sandra walks about 10 km a day as a mail carrier — a new career she started in July 2020. “My friends thought I was nuts for getting this job. They kept saying, ‘You have arthritis, how do you do it?’ and I tell them, ‘One step at a time.’”

Fighting the fire of arthritis with the fire of innovation

Why now?

The arthritis community is changing rapidly. Advancements in technology, greater collaboration between stakeholders and an alarming increase in the number of new arthritis diagnoses are bringing both opportunities and challenges.

Why the Arthritis Society?

Because of your generosity over the years, we are a trusted source of arthritis information and funding, with a nationwide infrastructure to support stakeholders from the academic, research, care delivery and patient communities across the country. And with the continued support of committed donors like you, we can play a pivotal role in the future of arthritis care by becoming **the** innovation hub for the Canadian arthritis ecosystem.

How are we investing in innovation?

Our goal is simple, yet ambitious: invest in the most game-changing research, products, ideas and clinical interventions to improve the lives of people living with arthritis.

In the coming months, the Arthritis Society will be launching a multi-million-dollar fundraising campaign to raise funds to enable these advances. This bold plan will enable us to fund high-risk, high-reward research, social impact projects, and arthritis ideators — those entrepreneurs who are charting a new course for the future of arthritis care and treatment.

We hope you'll join us on this journey.

We understand that the greatest advancements in arthritis care will come only through bold and breakthrough thinking. The Arthritis Society is ready for this challenge.



WHAT TO DO IF YOUR JOINT SURGERY HAS BEEN DELAYED

REMAIN AS ACTIVE AS POSSIBLE!

When it hurts to move, it may seem like a good idea to stop. However, research suggests the opposite. The less we move, the stiffer and more painful our joints become. Being inactive is a greater health hazard. Regular activity can help:

- Increase energy levels
- Improve mood
- Reduce risk of chronic disease and help improve quality of life
- Reduce the risk of falls
- Maintain muscle strength
- Reduce pain

REDUCING WAIT TIMES for joint replacement surgeries is a top priority for the Arthritis Society. Additional delays due to COVID-19 have made the need more urgent. The Arthritis Society has released a report that proposes recommendations to deal with the backlog of joint replacement surgeries. Learn more at arthritis.ca/advocacy

Naturally, it can be hard to motivate yourself to get active when you're in pain. Here are some smart strategies:

- Choose a stress-free activity that you enjoy. It's even better if it lets you get outdoors and enjoy alone time or being with others — whichever works best for you.
- If walking is painful, or your balance is poor, don't hesitate to use devices such as walking poles, cane(s) or a walker.
- Activities that put less of a load on painful hip and knee joints include walking with hiking poles, using an elliptical machine, biking, rowing, swimming, aqua fit, walking in water, yoga, chair yoga and tai chi.
- Manage your pain and energy levels by pacing yourself. Enjoy a bit of activity then take a break or try something different.
- The stronger you are before surgery, the faster you'll be able to return to your everyday and leisure activities afterwards. For simple strengthening exercises you can do at home, look for the Arthritis Society's osteoarthritis exercise videos at arthritis.ca/OAExercise

Donate today to help create a future free from arthritis.



Giving is easy:

By phone: 1-855-834-4427

Online: arthritis.ca/givenow

By mail: Return the form attached to our letter in the enclosed postage-paid envelope.

THANK YOU for your inspiring generosity and partnership.