

MS PROGRESS Report

One young woman's journey with MS

Meet Christina Andaya



It's no myth that many young people are affected by multiple sclerosis (MS) — and that living with this disease during such formative years can be difficult. Christina's story serves as an example that you don't have to stop doing what you love just because you're diagnosed with MS.

Since Christina's diagnosis in 2016, her symptoms include debilitating fatigue, back pain, and uncontrollable muscle spasms — and her therapy often comes with serious side effects. She began to feel helpless knowing that there wasn't an immediate solution to make her MS go away, and that her symptoms could reappear at any time.

“MS picked the wrong girl”

“MS can be lonely and isolating,” says Christina. “It's hard to cope with the fact that my family and friends can't fully understand what I'm going through — and

then there's the constant uncertainty of what will happen to me next ...” However, Christina didn't let fear take over. Instead, she chose to be a fighter.

Ever since her diagnosis at 21, Christina has refused to let MS stop her from living her life to the fullest and following her many passions and dreams.

She finds joy in competing in the Ms. Galaxy Canada Pageant as a ‘MS-Fighting Beauty Queen’. She is also pursuing her Masters in Sociology at York University in Toronto.

On top of that, Christina is extremely passionate about connecting with young people who have been diagnosed with MS and may be looking for support. She created a Q&A on her Instagram page where her followers are welcome to ask questions about her journey. Christina's advocacy is helping to spread MS awareness and bring comfort to young people during a difficult time in their lives.

Christina's MS has taught her that every day is a gift — and she continues to live her life with outstanding perseverance. That same fighting spirit she brings to the pageant stage is with her everywhere she goes.

Whether at school, work, home with her family, or on Instagram answering questions about her life with MS, Christina is a symbol of strength and a source of inspiration.



To learn more about Christina's story, watch her video testimonial at mssociety.ca/Christina.



MESSAGE FROM THE PRESIDENT

Dr. Pamela Valentine

As we welcome another spring, I want to extend a heartfelt thanks, and reiterate how important your support is – to the advancement of groundbreaking research, and to the care of our MS community.

At the MS Society of Canada, we're committed to helping Canadians living with the challenges of this disease, both physically and mentally. That's why I'm happy to share that we have exciting programs in the works that will provide mental health resources as well as give people living with MS an outlet to connect with others in similar situations.

With your support, we can continue to provide unique resources to Canadians living with MS and advance fundamental research that will help lead to exciting breakthroughs. Right now, researchers are uncovering crucial knowledge about MS and expanding our understanding of this complex disease more than ever before. Thanks to friends like you, the MS Society of Canada can invest in high-quality research aimed at discovering effective treatments and, one day, a cure.

In this issue of your *MS Progress Report*, you will read about how we are funding vital research projects and expanding on new discoveries. Your partnership also helps us maintain resources like our MS Knowledge Network, which offers information and connection when people need it most.

For the over 90,000 Canadians living with MS, your generosity makes an incredible difference. And I know that with caring friends like you by our side, we will create a future free from MS. On behalf of the MS community, thank you in advance for your loyalty and compassion.

Sincerely,

Dr. Pamela Valentine
President and Chief Executive Officer
Multiple Sclerosis Society of Canada



LIGHT:

Dr. Kristen Krysko, MD



“The support from the MS Society of Canada and their incredible donors is critical for my research, as I would not be able to perform this work without their financial support.”

Dr. Kristen Krysko's research focuses on a lesser-known aspect of MS – women's health during pregnancy and postpartum, the period after delivery. As a neurologist with a clinic focusing on women's health in this area, Dr. Krysko's research aims to uncover the mysteries of MS in pregnancy and postpartum with hopes to improve the treatment and care of women with MS in her clinic and beyond.

The most common test used to monitor MS is magnetic resonance imaging (MRI) – but because this method is not typically used during pregnancy, Dr. Krysko has found other effective methods to indicate disease activity. Research shows that there are new biomarkers that could help monitor inflammatory disease activity and disability progression through a simple blood test.

What exactly is Dr. Krysko studying in her most recent research project? Dr. Krysko plans to generate a better understanding of how emerging blood biomarkers can be used to monitor MS around pregnancy and predict who is at high risk of relapses after delivery. One way Dr. Krysko will achieve this is by comparing the levels of blood biomarkers in women who are pregnant with and without MS and determining whether these biomarker levels change with relapses during and after pregnancy.

Right now, the resources available to women who are pregnant and living with MS is extremely limited. Thanks to researchers like Dr. Krysko, this critical information is being brought to the surface.

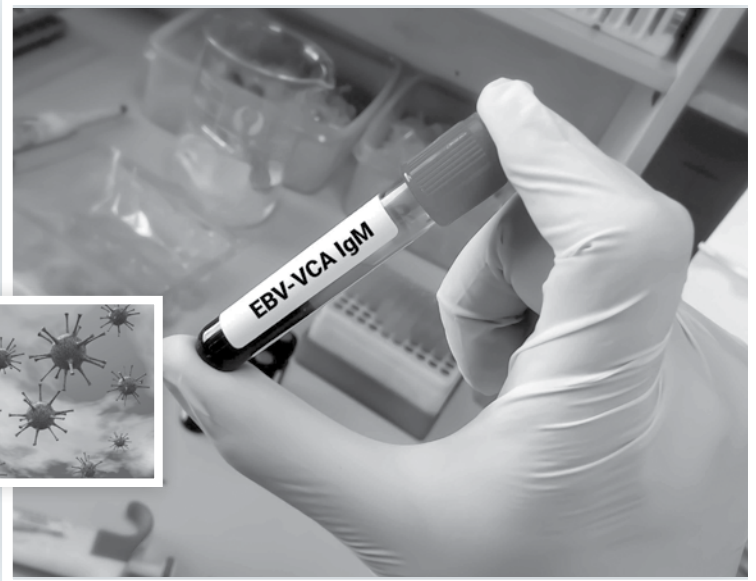
Dr. Krysko is extremely dedicated to her work and is always looking for opportunities to advance research in MS. “When I see challenges in the clinic, I enjoy designing research studies to help answer the questions raised,” she says. “These clinical challenges inspire me to do research in this area so we can better monitor and treat our patients.”

Understanding the correlation between EBV and MS

A deeper dive into what we know about EBV being a precursor to MS

MS is thought to be caused by a combination of genetics, lifestyle, and environmental factors. Researchers have long suspected the Epstein-Barr Virus (EBV) – a virus that causes infectious mononucleosis – to be a strong contributing risk factor for MS. A recent Harvard study suggests that EBV acts as an initial trigger required for MS onset. In this study, EBV infection increased the risk of MS by 32-fold. While EBV is likely necessary, it is not sufficient to trigger MS, and it is believed that other factors are needed. Fortunately, further research is being done to provide even more insight into the connection between EBV and MS.

In another recent study by Stanford University, researchers suggest ‘molecular mimicry’ as a potential mechanism of how EBV infection may trigger MS. Following EBV infection, people with MS developed



antibodies related to a specific part of the virus protein, EBNA1 protein. Through molecular mimicry, these antibodies could also target similar host's proteins, specifically GlialCAM, a component of the myelin sheath – the protective covering of nerve fibers in the central nervous system. This would trigger an autoimmune response that could damage the myelin sheath in people with MS.

Currently, the MS Society is funding several research studies to understand the role of EBV in MS like that of Dr. Marc Horwitz.

Dr. Horwitz and his team at the University of British Columbia are developing mouse models with human-like immune systems to examine how EBV infection affects immune cell populations and increases the susceptibility and progression of MS.

An adaptive approach to improving limb function



A common symptom for those living with MS is immobilized hand function. Mobility impairment makes completing daily tasks difficult – resulting in a lack of independence and an overall decrease in quality of life.

Thanks to a research grant awarded by the MS Society, Dr. Mike Holmes's research

will investigate how adaptive robotics training programs can improve mobility function in people with MS. This research will use a state-of-the-art robotic device to provide repetitive movement therapy to the less affected limb – and with a cross over effect, the untrained immobilized limb will experience improvements in muscular strength and functional tasks.

Dr. Holmes hopes his findings will demonstrate the importance of using various types of treatments such as physical training, and not just taking a pharmacological approach to managing MS.

In this study, participants will undergo a robotic training protocol of the hand and wrist. Training will occur three times a week for six consecutive weeks and pre/post/follow-up assessments will include clinical evaluations of function, muscular strength, and physiology of the nervous system to determine how the training translates to real-life benefits.

If proven effective, this treatment has the potential to enhance the rehabilitative process and greatly improve overall function and quality of life for people living with MS.

Build connections this World MS Day on May 30, 2023

Join members of the international MS community for World MS Day 2023, as we work to combat the disease and challenge the barriers it can create – barriers that too often leave those who live with MS feeling lonely and isolated. That's why our goals are to help people build community connections, foster self-connection and make the right connections to the health care they need and deserve.

Join the conversation when you post your own **#MSConnections**

Leave a legacy of hope for Canadians living with MS

You can invest in a world free of MS and leave a legacy of hope with a bequest to the MS Society of Canada. Your legacy gift will help generations of Canadians living with MS and support research searching for new treatments and therapies.

For more information about legacy giving, contact us at mslegacy@mssociety.ca or 1-800-268-7582.



Bloomex is a proud new partner of the MS Society of Canada and will be donating 15% of their sales from a special selection of orders. If you or someone you know are looking to purchase a flower arrangement and want to support the MS Society, please visit bloomex.ca/mssc/ for more information.



250 Dundas Street West, Suite 500
Toronto, ON M5T 2Z5
1-800-361-2985
mssociety.ca
donorservice@mssociety.ca

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