



BC  
Brain  
Wellness  
Program

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Changing the way British Columbians

**LIVE, AGE, & CARE**

**for chronic brain conditions.**

2022/23

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# A PERSONAL MESSAGE FROM OUR CO-FOUNDERS

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Since its inception in 2019, the BC Brain Wellness Program (The Program) has provided a source of hope and well-being for many. As we mark our 4th anniversary, we are thrilled to share the progress we have made in this annual report.

The overwhelming enthusiasm from participants, volunteers, and the health community has been truly heartening. With their support, The Program has made significant strides in Program Delivery, Education and Research. We are encouraged to see our fellow health care professionals, who believe in the value of social prescribing, choose The Program for their patients.

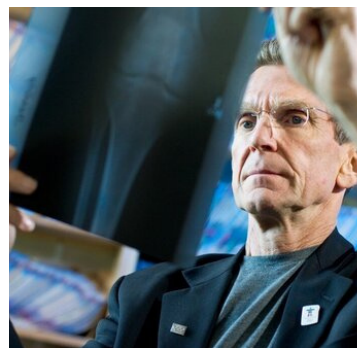
We appreciate your ongoing support and participation in The Program. We remain focused and committed to our goal of changing the way British Columbians Live, Age, & Care for chronic brain conditions.

With excitement and immense gratitude,

Silke and Jack



Dr. Silke Appel-Cresswell



Dr. Jack Taunton



# EXECUTIVE SUMMARY

The BC Brain Wellness Program is leveraging the collective power of clinical care, lifestyle programs, education, and research to deliver a comprehensive and integrated approach to brain wellness for people with chronic brain conditions, care partners and healthy agers.

Over the last two years we have seen incredible growth across our three pillars, **Program Delivery, Education** and **Research**. Multiple stakeholders have engaged with The Program, including the Ministry of Employment, Workforce Development, and Disability Inclusion of Canada and community organizations such as Heart & Stroke, March of Dimes Canada, After Stroke, Spinal Cord Injury of Canada, and BC Brain Injury Association.

Our collaborations with multiple Faculties at UBC continue to expand, enriching the next generation of healthcare professionals.

We have also expanded our research efforts across four major studies and have presented some of our work at major international conferences.

Thanks to the generosity of private donors, The Program provides an innovative and integrated solution and, in its infancy, is building towards a system change.

With ongoing support, we will continue to pursue our long-term vision to change the way British Columbians **Live, Age, & Care** for chronic brain conditions.



# THE CHALLENGE

With **a growing population of seniors in British Columbia**, there is an increase in associated neurological conditions leading to enormous cost for the health care system and an incalculable burden for the affected individuals and their families. Chronic brain conditions often lead to behaviour changes, reduced activity, a sense of helplessness, social isolation, and declining physical and mental health, as well as financial hardship.

**Care partners and their emotional and physical health are key** for positive health outcomes and for the ability of affected individuals to remain living at home. While caring for their affected family members, the health needs of care partners are often neglected, and the demand of caring might surpass the care partner's coping skills.

Furthermore, interventions are usually time-limited (e.g., rehabilitation for four weeks or physiotherapy once per week for 10 weeks), and group classes are often not tailored to participants' functional level but rather offered for a blanket diagnostic label.

It has become even more apparent that **people need support now**. COVID-19 left individuals searching for resources and a community, and often those with the greatest need were underserved.

To expand the benefits from individuals to a large-scale change to the healthcare system, barriers need to be removed and a new approach is required that simultaneously supports patients, care partners and healthy agers.

These complex challenges are growing and require an immediate, adaptive, and expandable solution. **The BC Brain Wellness Program is that solution.**



# THE SOLUTION NOTION

The Program was founded in 2019 by Neurologist, Dr. Silke Appel-Cresswell, and Dr. Jack Taunton.

Clinical observations, supported by research, were the impetus for The Program. People who embraced **healthy lifestyle approaches**, such as regular exercise, healthy eating, reduction of stress and loneliness, and participated in ongoing cognitive and creative activities seemed to enjoy **better clinical outcomes**. Research studies have also shown that healthy lifestyles have been associated with **decreased mortality rates** in neurodegenerative diseases such as Parkinson's disease.

However, these lifestyle approaches are often met with financial and accessibility barriers and the benefits are thus only available to a small number of individuals.

The Program is designed to mitigate that by being **offered at no cost** and by being **available online** with **no time limits**. In its infancy, its innovative and integrated solution is already building toward a system change.

As a learning healthcare model, The Program has three integrated operational pillars, **Program Delivery, Education, and Research**. This unique foundation enables The Program to be a current, responsive, and comprehensive approach to brain wellness, unlike any other program. Since its launch, The Program has made significant advancements in all three pillars, and has made strides in critical operational and developmental projects.

The Program is improving and sustaining quality of life for people living with chronic brain conditions and their care partners. The program also empowers healthy agers to enhance well-being and engage in preventative lifestyle measures, **moving from reaction to prevention**.



To design and implement lifestyle-based programs for people with chronic brain conditions, care partners, and health agers and educate people on the importance of embracing a healthy lifestyle.

## GROWTH

The Program has grown tenfold since its inception and has offered more than **3,000 hours of free classes**. We have **25 online classes** with **700 active participants**. The Program continues to grow with over 50% of classes now carrying waitlists.

We have invested in **training 20-30 instructors**, website and registration system development, and a virtual meeting platform. In this past year alone we have had more than **30,000 visitors to our website**.

## ENGAGEMENT

The Program was showcased by the Faculty of Medicine during UBC's Giving Day in April 2022 and again in 2023. This resulted in donations exceeding \$25,000 and \$52,000 respectively, directly benefiting our program.

In January 2022, we launched a biweekly newsletter, Neuron News, which now has a viewership of more than 4,000 people.

In August 2022, we had the privilege of welcoming the Honourable Carla Qualtrough, Minister of Employment, Workforce Development, and Disability Inclusion of Canada. The Minister highlighted the Enabling Accessibility Funds that we received that allowed us to create a lending library and build the foundation for accessible cooking classes through The Program.

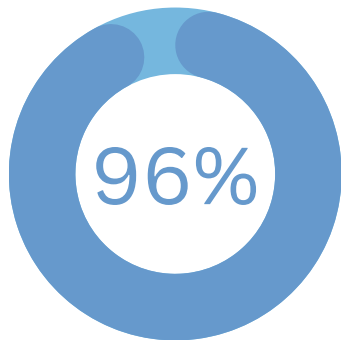
As part of our advocacy work, The Program contributed on a published reference paper, **Advancing Neurorehabilitation and Recovery in British Columbia**. This document is a collaboration between Heart & Stroke, March of Dimes Canada, After Stroke, Spinal Cord Injury of Canada, BC Brain Injury Association, and The Program and is now being used to petition the government on rehabilitation in the province.



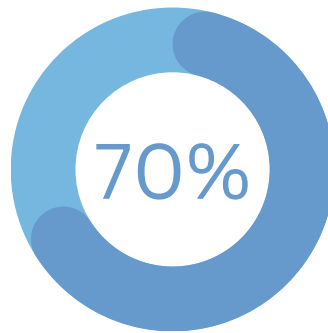
## EVALUATION

Survey results are gathered from participant feedback and provide valuable input that helps shape The Program. Keeping with previous trends, our recent surveys indicates that online program delivery was effective and preferred by the majority of participants.

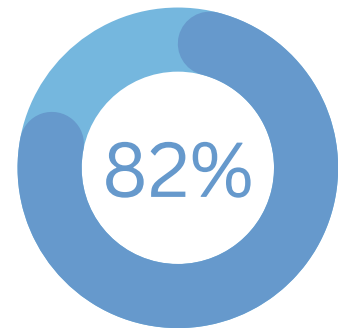
**96% of participants prefer online or hybrid classes.**



**70% participants prefer online classes only**



**82% of participants feel that online classes are effective**



The Program has brought many perceived benefits in physical, cognitive, mental, social health, and condition management. Participants have found a sense of community and connection in the program, leading to unexpected improvements in various areas of their lives. Comments made in the survey on social health include:

“

Originally I just expected to become healthier and more active. To my amazement, I felt much better in all areas of my life including cognitive abilities and a strong sense of community. My depression has decreased quite a bit and I have way more energy.

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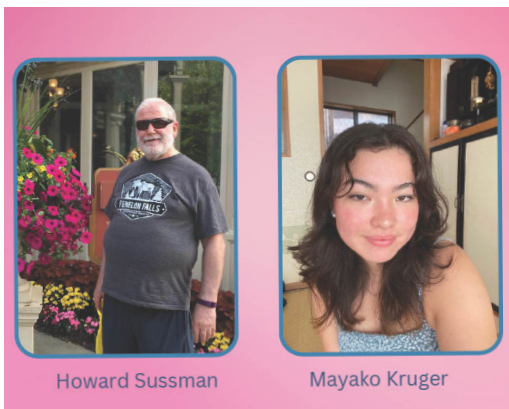


## SPECIALIZED PROJECTS



### ***Care Partner Series and Workshops: The Importance of Supporting Care Partners***

Caring for the caregiver is just as crucial as caring for the person living with a chronic brain condition. In 2022, we launched a Care Partner Series and Workshops, providing support, education, coping strategies, and tools. Participants not only found these workshops informative but also encouraged them to focus on their own brain wellness by joining exercise and creative classes.



Howard Sussman

Mayako Kruger

### ***The Intergenerational Storytelling Project: Connecting Different Generations***

The Program launched a second and third iteration of the Intergenerational Storytelling Project and due to its success, expanded to a Intergenerational Conversations Project. The project pairs a UBC student with a senior participant to create an abridged storybook containing meaningful memories. This project presents a unique opportunity for individuals of different generations to connect and share their life experiences.



Sue Bayley, Artist and Program Participant

### ***Creative Collective Initiative: Celebrating Art and Brain Wellness***

Our community is home to many talented artists, and in 2023 we launched the Creative Collective to showcase their work on our website, newsletter, and social media. By highlighting the significance of art in promoting brain wellness, we hope to inspire others to embrace creative expression as a means of relaxation, coping, and personal growth.



## TEAM MEMBER PROFILE

### *Meet Elaine Book: An Exceptional Social Worker and Parkinson's Advocate*

Elaine Book, is a founding member of The Program. In her role as Team Lead, Specialized Projects and Stakeholder Integration, she has been instrumental in its growth and development, including the Care Partner Series and Workshops, Intergenerational Storytelling Project, the Creative Collective, Blog and Participant Advisory Group.

With over 30 years of experience in Social Work, Elaine has worked in various hospital and community settings, with a particular focus on the geriatric population. She serves as the Center Coordinator and Clinic Social Worker for the Pacific Parkinson's Research Centre at UBC, and plays an active role in the World Parkinson Congress and with the Parkinson's Foundation Team Training.

Additionally, Elaine is a Clinical Instructor at UBC's Faculty of Medicine, Neurology division, and is involved in research projects, with a focus on providing support for people with Parkinson's and their caregivers.

Elaine is dedicated to raising awareness and developing resources for Parkinson's patients and their families.





To enrich the educational experience of the next generation of healthcare professionals and raise interest in the field of brain conditions among students and practitioners.

Building off the initial collaboration with the Physical Therapy Research Clinic (PTRC) at UBC, the Education pillar has expanded to the School of Kinesiology and the UBC Dietetics program. Through in-person exercise classes and virtual nutritional counselling, these opportunities provide students an integrated education and work experience.

## **SCHOOL OF KINESIOLOGY COLLABORATION: In-Person Classes**

Together with the School of Kinesiology, we launched a Work integrated Learning (WiL) course in the Fall of 2022. The goal of the WiL course is to increase knowledge regarding the role of exercise in chronic brain conditions, to gain a greater understanding of how movement is impacted by different conditions and how to safely administer exercises for people with chronic conditions.

To date, 18 Kinesiology students have completed the course, 8 are currently enrolled, and 8 are scheduled to start in January 2024. This course utilizes the Jack and Darlene Poole Research Gym and the Bodyworks Gym at the School of Kinesiology and provides students the opportunity to develop their knowledge and confidence in working with people who have chronic neurological conditions.

### **Student Comment:**

*“The human connection is one of the most valuable aspects of this course. While we learn about various conditions in lectures, it is different when you meet people who have real-life, lived experience. In school it can be easy to overlook the human aspect of the diseases we learn about, but during this course I learned how to genuinely connect with participants, have difficult conversations, and understand the situation from their perspective.”*



## UBC DIETETICS COLLABORATION: Nutrition Counselling

There is a need to increase nutrition counselling services to participants in The Program and a need to increase clinical opportunities for students. In January of 2023, UBC Dietetics students, under the supervision of a licensed dietician, began offering virtual nutrition counselling sessions to participants in The Program. This pilot project was offered to 36 individuals and feedback is informing future projects and plans.

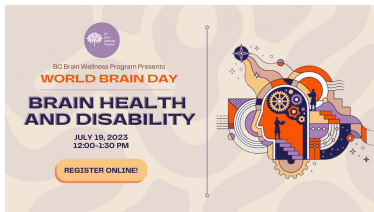
This collaboration is also exploring a student-led, team-based care model. This approach could serve as a blueprint for effective lifestyle behaviour change to support healthy aging in people with chronic brain conditions, and a novel educational approach for students and clinical instructors. We anticipate a trial to launch in 2024.

## EVENTS



### Reflecting on World Brain Day: Our Annual Virtual Brain Health Conference

Every year we honour World Brain Day by hosting virtual Brain Health Conferences. In 2022, the theme was "Brain Health for All," which gave us the opportunity to contemplate what brain health represents to us. We were privileged to have Dr. Silke Appel-Cresswell, our Co-Founder, and Dr. Roger Wong, the Vice Dean of Education at UBC's Faculty of Medicine, as our keynote speakers. In 2023 we explored "Brain Health and Disability: Leave No One Behind", which aligns with our vision and mission.



### Music Care Conference

In 2022, academic and community conferences made a comeback, and the Program played a vital role as the lead partner for the 14th Annual Canadian Music Care Conference – Music & Wellness, presented by Room 217. The conference featured an array of fantastic keynote speakers and included a musical performance by Susan Aglukark, Music Canada's 2022 Humanitarian Juno Award winner.





To investigate lifestyle approaches and the implementation of lifestyle approaches for brain wellness.

Research is a fundamental part of The Program and will provide the evidence needed to obtain buy-in from stakeholders such as community partners, the government, and insurance companies. We have four ongoing research projects and actively share research findings at international conferences.

## IMPACT 360

Pacific Parkinson's  
RESEARCH INSTITUTE

Emerging evidence suggests that combined interventions are more powerful than isolated ones but more research is urgently needed. This is a crucial step on the path to integrating lifestyle interventions into standard clinical care and thus fundamentally change the way we live, age, and care for chronic brain conditions. We aim to investigate the impact of the multimodal (exercise + diet + mindfulness) intervention on a 360-degree view of health and the underlying mechanisms of benefit in people with and without chronic brain conditions.

The study will serve as the framework for the Research Pillar of The Program. Insights from the study will directly inform program delivery and optimize The Program as a learning healthcare system. Data and biological samples collected here will also provide excellent leverage for future follow-up grant applications to external agencies. The comprehensive assessment will be crucial to elucidate underlying mechanisms and identify potential biomarkers and factors predicting outcomes, all contributing to a more personalized approach to the treatment and prevention of brain disorders of aging. The Health Aging arm of the study is supported by our founding private donor. The Parkinson's disease arm of the study will be funded by donations made to the Pacific Parkinson's Research Institute ([www.pacificparkinsons.org](http://www.pacificparkinsons.org)).



## KETOGENIC DIET INTERVENTIONS IN PARKINSON'S DISEASE (PD): SAFEGUARDING THE GUT MICROBIOME



Weston Family  
Foundation

Classical ketogenic diets have shown to be beneficial in PD and non-PD populations but are associated with alterations in the gut microbiome. This study aims to investigate the safety of modified Mediterranean-ketogenic interventions that are thought to be safer alternatives to the classical ketogenic diet, as it relates to the gut microbiome health in people with PD. The study is supported by the Weston Family Foundation, Weston Family Microbiome Initiative.

## TARGETING APATHY WITH AN AUDIO INTERVENTION IN PARKINSON'S DISEASE



There are limited treatments for apathy in PD, and this remains a major unmet need. One possible way to address apathy is listening to music, which has been shown to help improve apathy in older adults. Little work has explored the mechanism by which music targets apathy. Thus, this study aims to understand how music listening can impact the brain towards decreasing apathy in PD populations. This study is supported by the Rick's Heart Foundation.

## SINGWELL VIRTUAL SINGING COLLECTIVE



In collaboration with UBC's School of Music, UBC's Faculty of Education, and others, we will investigate the effects of the introduction of virtual music technology during group singing on social connectedness and well-being. This study is in collaboration with and receives funds from, *The SingWell Project*, a SSHRC Partnership Grant-funded initiative.

## WORLD PARKINSON'S CONGRESS 2023



In July 2023, Dr. Appel-Cresswell and Elaine Book represented The Program at the 6th World Parkinson's Congress in Barcelona, Spain. They presented posters on the Intergenerational Storytelling Project, the Care Partner Program and The Program in general, with this last poster prestigiously selected to part of a poster tour.

# FROM IMMEDIATE IMPACT TO A BETTER FUTURE

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Success looks like preventive care as the new standard.

Lifestyle-based approaches are integrated into care and access is readily available to British Columbians from the comfort and safety of their own home. Increased implementation of social prescription from health care professionals demonstrates this shift to comprehensive and preventative care.

We now need to demonstrate the viability and impact of the program on a larger scale, while continuing to provide excellent Program Delivery, Educational opportunities, and Research activities. Bringing this to life requires partners who believe in this vision of a preventive model of healthcare.

We need financial support to begin a robust evaluation and expansion phase, to investigate the impact of The Program from participant, community, and economic perspectives.

With investment, we can realize the dream of changing the way we **Live, Age, & Care** for chronic brain conditions.

# ACKNOWLEDGEMENTS



The ongoing delivery of our classes and educational events would not be possible without the generous support of donors like you, as the Program does not receive any operational funding from government.

Thank you to UBC Faculty of Medicine, VGH/UBC Hospital Foundation and the Djavad Mowafaghian Centre for Brain Health for their ongoing support.

We have heard from so many participants who have shared their amazing stories and experiences about the program. We know it is working. Now we need to ensure that we can continue to provide The Program and to reach many more people.

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*We thank you for your continued support of Brain Wellness, Beyond All Boundaries.*

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## CONTACT

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