Summer 2022

POLIO POST BOX

Polio Regina Incorporated

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Enjoy Your Summer

Message from the President

Diane Lemon

GREETINGS WITH A TRIBUTE TO CAROLE AND WILF TIEFENBACH

Spring has finally arrived and not a minute too soon! We are all anxious to get out to our gardens.

As I assume the role of president, I have a huge void to fill. Instead of having to step into a pair of shoes I have two pairs to fill. Carole and Wilf have been guiding the organization since 2004. They have provided a wonderful contribution for so many years. When they relocate to Winnipeg in the Summer, we are very fortunate that they will continue to serve on the Executive of Polio Regina.

During the pandemic we have taken advantage of Zoom virtual meetings in order to connect with our members. We are happy to provide information at our meetings and are keen to have suggestions of topics of interest. Any suggestions would be appreciated.

I am looking forward to meeting in person at our May 26th gathering.

At the Meetings

February 2022 – Zoom Meeting – **Open Forum:** Our guest speakers Holly Schick, Executive Director, and Linda Anderson, Communication and Ageism Awareness, staff person from the Saskatchewan Seniors Mechanism spoke about how SSM is lobbying for seniors in our province and how ageism affects all of us and how to prevent it. Summaries of their presentations are included later in this edition.

Diane Lemon mentioned a private handicapped transit service called "Driven With Care" but they cost $20 to $70.00 per trip.

Diane Lemon talked about a program on a TV channel that had programming catering to handicapped viewers called AMITV but it is not included in the basic Access channels.

March 2022 – Zoom Meeting – This was our Annual General meeting. Treasurer David Cotcher presented the annual financial statement for 2021 with comparative figures for 2020.

The following people were elected as Executive Officers/Directors of Polio Regina Inc. for 2022-2023:
President – Diane Lemon
Vice-President – Carole Tiefenbach
Secretary – Ivan Jorgensen
Treasurer – David Cotcher
Phone Co-ordinator – Elaine Cotcher
Web Master – David Cotcher
Post Box Editor – Ivan Jorgensen
Directors at Large – Ken Holliday, Wilf Tiefenbach

Odds and Ends: Diane Lemon mentioned the following quote in the Manitoba Polio newsletter:

Accessibility is being able to get into a building.

Diversity is getting invited to the table.

Inclusion is having a voice at the table.

Belonging is having your voice heard at the table!!!

These definitions are from a Social Worker talking about aging: Patient Centred Care-Diagnosis, Physiological Care, Treatment, Side effects. Person Centred Care-Psychological Care. Patient at the table, Patient feelings, and Patient wishes.

Diane also talked about stores tracking you and Zoom calls she had attended:

Aggregators- there are four large companies in the world that track our purchases and that is why after you have shopped in certain grocery stores if you have an app, you will get an email with specials of cents off the items you have purchased.

If you are interested in keeping your brain sharp, there are several universities and hospitals providing Zoom programs. These can be found if you Google "Brain Neuroplasticity"

Dr. Larry Chambers gave an excellent presentation for Alzheimer Society of Sask. titled "Heads Up for Healthier Brains". Diane will be obtaining a copy which some members might be interested in watching.

Dr. Cassidy has developed a program called "The Fountain of Health". It gives practical ideas on keeping your brain sharp. He calls it the THRIVE model.

Open Forum: David Cotcher did the presentation about Post-Polio Syndrome that he presented at a Regina Rotary Club luncheon on February 28th, followed by questions and discussion. A summary of David's presentation is included later in this edition.

April 2022 – Zoom Meeting - Ivan Jorgensen reported that effective fall of 2022, the Saskatchewan Government will be funding the High Dose Flu Vaccine for all adults 65+. This is a specially formulated and more effective life-saving flu vaccine for older adults.

Open Forum: Diane Lemon chaired the Open Forum. She talked about mobility aids and adaptations for the home as well as personal aids and adaptations and asked everyone to share what aids that they are using. The following are some of the suggestions:

- an adjustable bed
- a stairlift to go downstairs to the basement
- a chairlift to get into the house
- an Archimedes tub lift
- there are some companies that rent various aids for short term use
- there is a walker that turns into a wheelchair. It is available online from Costway, Amazon or Walmart.
- a long-handled magnet to pick up things that have dropped on the floor
- a long-handled grabber to reach things
- hand railings on both sides of the stairs
- a bench and railing for the bathtub
- ceiling tracks and a Hoyer lift
- a modified Van that lowers 6" and has a ramp
- a Bruno wheelchair lift that can be driven onto that costs about $1,000
- a Pride Go-Chair that comes apart
- a condo with an elevator and underground parking

IN THIS ISSUE

Saskatchewan Seniors Mechanism

Holly Schick, Executive Director

SSM is a provincial organization that partners with other organizations to address issues and to promote quality of life for all older adults in Saskatchewan. Some activities include:

- Ageism Awareness
- Home Supports Initiative
- Century Club (for those age 90+)
- Addressing Isolation and Mental Health
- Celebrating Seniors Provincial Volunteer Awards
- Gray Matters Magazine

Since 2013, SSM has actively taken the lead in establishing the Age-Friendly initiative in Saskatchewan. In Age-Friendly Communities, the contributions of older adults are not only recognized and valued, but are encouraged and seen as vital. Age-Friendly is a global movement begun through the World Health Organization. "In an age-friendly community, policies, services and structures related to the physical and social environment are designed to support and enable older people to 'age actively' – that is, to live in security, enjoy good health and continue to participate fully in society." (Public Health Agency of Canada) For more information, visit www.agefriendlysk.ca

A current focus for SSM is the Home Supports Initiative which is:

- Raising awareness of the need to greatly expand practical home supports
- Engaging individuals, organizations and communities to grow a powerful movement to demand action
- Engaging with governments providing evidence on positive return on investment
- Collaborating with governments as they make home support programs a reality

Older adults say conclusively that they want to live in their own homes and communities as long as possible. Governments say that they want older adults to live in their own homes. It's time to provide the practical, affordable, accessible supports that are necessary to make this a reality! To do this, SSM is calling for **Real Options**, which will result in **Better Outcomes** at **Lower Costs**.

Real Options for home supports in Saskatchewan should include:

- Practical supports such as assistance with:
  - Housekeeping
  - Yard care
  - Minor home renovations
  - Pet care
- Services to address particular medical and/or personal care needs:
  - Consistent, trusted home care workers
  - Expanded in-home services to cover diverse needs e.g. physiotherapy, education on managing conditions

Real Options result in **Better Outcomes.** Home supports are a win-win for everyone involved:

- Older adults are healthier, happier and able to continue to contribute to their communities – as volunteers, caregivers, workers, mentors, taxpayers, and voters.
- Communities benefit from the contributions of these residents. Provincial government and taxpayers benefit from providing better services at lower costs.
- Long term care facilities benefit from having fewer demands on their human and financial resources, opening up possibilities for creative care options.

Better Outcomes actually have **Lower Costs**. A recent Queen's University study *Ageing Well* demonstrated that providing quality home support was one-third the cost of annual institutional care. A home supports program would require a provincial framework and standards. Municipalities would play an essential role in the process as services would be provided locally by approved providers. Costs to individuals would be based on income.

You can find out more about SSM, the Home Supports Initiative at www.skseniorsmechanism.ca

Presentation on Ageism to Post-Polio Group

Linda Anderson, Communications and Ageism Awareness staff for SSM

Linda declared that all of SSM workflows from their purpose of working toward quality life for all older adults in Saskatchewan. Ageism blocks and challenges how this purpose can be accomplished.

Ageism is defined as thinking and acting towards another person based upon their age. This includes Stereotyping (how we think); Prejudice (how we feel); and Discrimination (how we act). Ageism affects people of all ages but has particularly deleterious effects on the health and well-being of older people. Hazel McCallion, former long-time mayor of Mississauga firmly states that, "Canadians need to confront the reality that, every day, its older citizens deal with the most widely tolerated form of social prejudice in the country: ageism." In a nutshell, ageism is the attitude that young is good, old not so much!

Fortunately, while aging is inevitable, ageism does not have to be!

There are many ways that everyone has been taught to accept ageism from the time we were children. Most of us unconsciously carry within us ageist thinking. This might come out when we don't want to reveal our age in public, don't want to be called 'senior' or look down on older people who show the physical and/or mental effects of aging and have become frail. We are susceptible to the "anti-aging industry" that encourages buying all sorts of expensive products to maintain a "youthful" appearance (e.g. few wrinkles or grey hair). Most of us will have laughed at the grain of truth in ageist greeting cards (e.g. "over the hill" birthday cards).

Linda also explored some of the difficult problems for older people when they encounter ageism in the medical system. Health care workers, including physicians, may have unconscious ageist attitudes that affect how they treat older patients. A doctor may not give the same care and attention to an older person as they do to younger people. The patient's description of their symptoms may be disregarded and attributed to "old age". Even worse, painkillers may be prescribed rather than tests to ascertain the source of the pain the person is experiencing. Older people may be talked down to as though they were slightly incompetent children. "Oh sweetheart (or honey or dear), we will look after you." This type of attitude also leads to the patient not receiving all the facts about the problem or the kinds of tests or treatment that might be necessary.

What to do when we encounter ageism in our regular lives or when we are in a medical situation? Shine the light on it – politely and helpfully – but do not let it just pass by. Linda has found that this approach can open the door or window to real change in attitudes – both others' attitudes and our own. She concluded: **Be Bold. Value Old.**

Malawi Polio Effort

Malawi has launched a vaccination drive against polio after the first case in 30 years was discovered in a child who was paralysed by the virus.

The campaign against wild poliovirus type 1 aims to reach more than 23 million children under five years old in five southern African countries, said the World Health Organisation.

The virus invades the nervous system and can cause total paralysis within hours. There is no known cure.

"This is why there has to be aggressive action when wild polio is identified, especially as this is an illness that is targeted for eradication," Dr Janet Kayita, Acting WHO Representative in Malawi.

The first phase targets 9.4 million children in Malawi, Mozambique, Tanzania and Zambia. Three subsequent rounds—in which Zimbabwe will also take part—are set for April, June and July.

The supplementary vaccinations aim to interrupt the circulation of poliovirus by immunising every child under five years with oral polio vaccine regardless of previous immunisation status. The objective is to reach children who are either not immunised, or only partially protected, and to boost immunity in those who have been immunised.

"Polio is a highly infectious and an untreatable disease that can result in permanent paralysis. In support of Malawi and its neighbours, we are acting fast to halt this outbreak and extinguish the threat through effective vaccinations," said Dr Matshidiso Moeti, WHO Regional Director for Africa.

"The African region has already defeated wild poliovirus due to a monumental effort by countries. We have the know-how and are tirelessly working to ensure that every child lives and thrives in a continent free of polio."

The outbreak is the first in Africa since the region was certified free of indigenous wild poliovirus in 2020. Laboratory analysis linked the strain detected in Malawi to the one circulating in Pakistan's Sindh Province in 2019.

Post-Polio Presentation to Regina Rotary – 2022 February 28

David Cotcher

This is a summary of a presentation to Regina Rotary about post-polio syndrome, which can affect people 15 to 40 years after recovery from polio. I am not a medical expert, but just summarizing information that is available, and my own experience.

Polio:

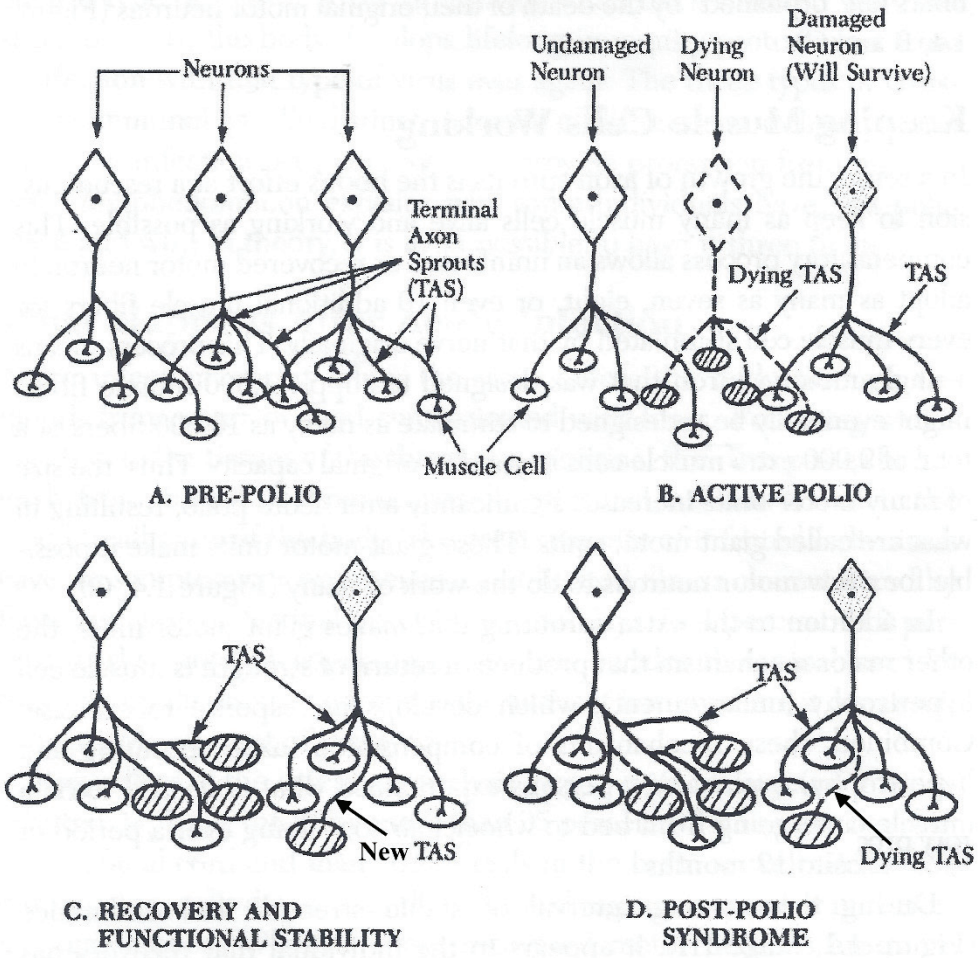
- Poliomyelitis, polio for short, is a disease by a virus that attacks the nervous system.
- About 90 – 95% are asymptomatic or have minor symptoms
- Non-paralytic polio symptoms can include fever, sore throat, headache, vomiting, fatigue, meningitis
- Paralytic polio affects about 1% and affects the spinal cord (spinal polio), the brainstem (bulbar polio) or both (bulbospinal polio).
    - Spinal polio affects the nerves in the spinal column and causes paralysis in muscles in the limbs or rib cage. It more often affects one side of the body.
    - Bulbar polio affects the nerves in the brainstem and causes difficulties in breathing, swallowing, speaking and other body functions.
    - Bulbospinal polio affects both the spinal column and brainstem. It can paralyze the diaphragm and affect nerves controlling breathing requiring a ventilator to breathe. It also may give paralysis to legs or arms and affect other areas.
- Some with paralytic polio have a full recovery but many are left with some degree of paralysis or weakness, often on one side of the body. For example, one weak leg or arm.
- A mechanism for recovery in muscle paralysis is growth of new nerve branches or sprouts that restore muscle control.

Post-Polio Syndrome

- In muscles that were affected by polio, symptoms can reoccur 15 to 40 years after recovery.
- With muscle use over the years, the nerve sprouts that gave recovery can start to break down and give returning symptoms.
- Symptoms include, muscle and joint weakness and pain, fatigue, muscle atrophy, trouble swallowing, sleep related and other breathing problems, low cold tolerance

Post-Polio Mechanism

The presentation discussed a diagram from the book Managing Post-Polio by Dr. Lauro S. Halstead Figure 1.4.



Adapted from Figure 1.4 in the book Managing Post-Polio by Dr. Lauro S. Halstead

A. Pre-Polio shows the neurons (nerve cells) in the brain stem or spinal cord, the terminal axon sprouts (TAS) nerve fibres, and the muscle cells.
B. Active Polio show neurons undamaged, dying, or damaged by the polio virus. Some TAS nerve fibres are dying leaving muscle cells disconnected giving paralysis and/ or weakness.
C. Recovery and Functional Stability shows new TAS nerve fibres growing to connect to muscles cells and give recovery.
D. Post-Polio Syndrome shows TAS nerve fibres dying after years of use and once again giving returning muscle weakness and other symptoms.

Post-Polio Analogy

A post-polio analogy of house electrical wiring was used by Dr. Mavis Matheson in a presentation to Rotaract in 2011. The polio virus is like mice chewing the house electrical wires and some areas lose power. Recovery from polio is analogous to the wiring repaired by thin extension cords restoring power to some areas. After years of use these extension cords are the weak points that break down and cause new loss of power. This is like the returning symptoms of post-polio to muscles affected by polio years before.

My experience:

I was born in August 1953 and had polio at about 18 months old which would be March 1955, before polio vaccinations were available. I was not in hospital, as many were; and I was cared for at home. Since polio usually affects one side of the body more than the other, as I grew, I developed a curvature of my back and rib cage called kyphoscoliosis. This has given me reduced lung capacity, and some upper body weakness. I was fairly active in my younger years and continued in my 20s and 30s. After a lung infection at age 42 in 1995 I had to start supplementary oxygen and continue to need it. Then in 2006, I started having worsening breathing difficulties and was finally in hospital in ICU 3 times in early 2007. With reduced lung capacity, and weaker breathing, I had high CO2 level in my blood. Getting more oxygen in does not help if not exhaling sufficient CO2. I got a tracheostomy and started on a ventilator, which I continue with at home at night. I am very thankful this has stabilized my respiratory condition.

Managing post-polio

Everyone's experiences are different, but these are some typical ways of managing post-polio:

- Moderate activity and exercise, to balance between inactivity and overuse of muscles affected by polio
- Some use mobility aids, walkers, motorized scooters due to progressive weakness
- Heating pads help soreness and cold intolerance
- Breathing support for sleep apnea or other breathing troubles

Polio Regina

- A very small non-profit of seniors who have had polio and their family members
- We provide information on post-polio including with a newsletter, website and other means
- Members have advocated for accessible parking, buildings and facilities (also a benefit for other seniors and disabled people)
- Our meetings typically have a speaker on a health-related topic or other of interest
- Positive minded people who encourage and share experiences.

The good news:

Polio vaccinations are making progress in eliminating polio from the world. They prevent polio and the resulting risk of death and disability. Also, in future years no more people will be getting post-polio syndrome.

Counting your blessings:

I want to conclude on a positive note. Anything we face in life is better with a positive attitude. I have had a lot of encouragement and support by my faith, family, and friends.

One of our long time Polio Regina members named Jeanne moved to Calgary in her 90s to be closer to family. On one her periodic phone calls I asked how she is doing. She said, "I am counting my blessings". She asked how I am doing, and I said some days I have more back soreness. She asked, "But are you counting your blessings?" She has since passed away, but I have never forgotten Jeanne's positive attitude and her question "Are you counting your blessings?" And with that thought I will conclude.

We Remember

Since our last newsletter was distributed two of our active members have passed away. Jim Allonby was very active in the Saskatchewan Awareness of Post Polio Inc. (SAPP) before the Regina Branch became Polio Regina. He was a member of Polio Regina but also continued his affiliation with SAPP. He was once the editor of this newsletter for a sort time.
Javonne Miller was very active in Polio Regina in our early days. She was awarded a Life Membership in 2006.
The following are their obituaries:

James Raymond Allonby (Jim)

November 7, 1946 - December 10, 2021

Allonby, James Raymond. It is with profound sadness that the family of James Raymond Allonby, known to his family and friends as Jim, share the news of his sudden passing after a short, but courageous, battle with cancer. Jim was born November 7, 1946, in Winnipeg, MB, where he was raised along with his sister, Arlene, before moving to Regina, SK. There, Jim married his first wife Patricia and together they had 2 amazing sons, Craig and Chris. Jim was an avid technology enthusiast, spending over 25 years working as an IT analyst, consultant, and network specialist for the Saskatchewan government, and met frequently with longtime friends to discuss all things in the computer and cellular spheres. He was actively involved in the community, serving in various offices for the Knights of Columbus, the Saskatchewan committee for Spinal Cord Injury, a loving brother of the Fraternal Order of Eagles, and the City of Moose Jaw Committee for Human Resources Services. Directly or indirectly, Jim served as a mentor to many and encouraged people to do their best to be proud of their accomplishments and engage with their fellow man. Jim is predeceased by his first wife, Pat, parents Harry and Isobel, and brother-in-law Dan. He will be lovingly remembered by his wife Aline Allonby of Moose Jaw SK, his sister Arlene Clarke of Regina SK, his sons Craig (Lenette) of Calgary AB, and Chris (Odette) of Oakville ON, as well as his nieces, grandchildren, extended family and friends, and those he touched during his life. His life was be celebrated at 11:00am on December 17, 2021, at St. Joseph's Roman Catholic Parish, in Moose Jaw. The family wishes to express their deepest gratitude for the many expressions of kindness and love. In lieu of flowers, the family requests that donations be made in Jim's name to "Memorial Donations: St. Joseph's Roman Catholic Parish Building Fund, 1064 3rd Ave. N.W., Moose Jaw, SK" or to the charity of your choice. Published on December 15, 2021

Javonne Miller (Billington)

October 8, 1927 - March 14, 2022

Javonne passed away peacefully at the age of 94 on March 14, 2022 at Sunset Extendicare, Regina, SK. Born in Bienfait, SK, she was the daughter of Francis and Katie Billington. She finished grade 11 at the age of 16 and worked for the Harry Bradley store. She met her husband Chris at a dance and they were married in 1946. They moved to the Dominion Briquette & Chemical plant where Chris was employed and lived there for the next 10 years.

Their only child Donalyn was born in 1948. In 1952 Javonne contracted polio which changed their lives immensely. They moved to Regina in 1957 where Chris worked at IPSCO for 28 years. She is predeceased by her parents, only brother Dr. Don Billington, and her husband Chris who died in an accidental fall in 1987. It was a terrible loss to the family but Javonne was thankful for the 40 happy years that they had together. Chris and Javonne can now dance together again. Javonne is survived by her daughter Donalyn Price (the Stamp Lady), granddaughter Dr. Nancy Price (Anne), two sister in-laws Margaret Billington (Edmonton, AB) and Irene Snow (Surrey, BC), several cousins, nieces, and nephews. A memorial tea will be held at a later date to celebrate Javonne's life. Friends and relatives are invited to attend. We wish to thank the staff at Sunset Extendicare, especially those special folks who went above and beyond in caring for Javonne. In lieu of flowers, memorial donations may be made to SaskAbilities Camp Easter Seal

(**https://camp.saskabilities.ca/support/donate/**).

Published on March 18, 2022

'Live' Polio Vaccine Fires Up Immune System Providing Protection From Sars-Cov-2 Infection

by Institute of Human Virology at the University of Maryland School of Medicine

Newswise — Baltimore, April 12, 2022— Two new studies from the Global Virus Network, including the University of Maryland's Institute of Human Virology and in partnership with the Petroleum Industry Health Organization of Iran, provide evidence that getting the oral polio vaccine made from live, weakened polio-virus may protect people from COVID-19 infection by stimulating the immune system.

One of these studies demonstrated a lower incidence of COVID infections in countries in which people received the 'live' polio vaccine compared to countries that only received the polio vaccine that does not contain a live virus. These findings were published on March 17, 2022, in PLOS One.

Another report from the research team showed that when young children received the 'live' polio vaccine their mothers, who were indirectly exposed to the poliovirus vaccine, did not get infected with COVID. This study was published late last year in JAMA Network Open.

Within a few hours of exposure to any pathogens — including weakened viruses like those in the oral polio vaccine — the immune system activates its first line-of-defense. This defense produces an immune response to a broad variety of pathogen-related molecules and ramps up the immune system's readiness for invaders — a process sometimes called 'trained innate immunity.' The outcome from one of these newest studies indicate that this trained innate immune response spurred by vaccination using the live polio-virus may provide protection for up to 6 months against COVID infection.

The researchers say that this implies that these live vaccines, technically known as live attenuated vaccines, may be used temporarily to protect people in low-income countries that do not yet have access

to COVID vaccines.

"Although countries like the U.S. and those in Europe are dropping pandemic restrictions, many people in lower income countries remain unvaccinated due to lack of supply. Individuals in these countries are still at high risk for COVID infection and potential complications, particularly since these regions still lack the latest treatments and enough ventilators for those who need them," said co-author **Shyam Kottilil, MBBS, PhD**, Professor of Medicine and Director of the Division of Clinical Care and Research, Institute of Human Virology, Chief of the Division of Infectious Diseases at the University of Maryland School of Medicine, and senior advisor to the GVN. "***These live vaccines may provide a stop gap to reduce hospitalizations and deaths until we can get these people COVID vaccines."***

Senior author on the studies, **Robert Gallo, MD**, The Homer & Martha Gudelsky Distinguished Professor in Medicine, Co-Founder and Director of the Institute of Human Virology at the University of Maryland School of Medicine, a GVN Center of Excellence, and Co-Founder of the GVN and Chair of the GVN's Scientific Leadership Board, said, ***"Early in the COVID-19 pandemic, prior to development of effective vaccines we proposed using live attenuated vaccines as a temporary solution to boost immunity until the vaccine could be developed. This idea directly stemmed from my GVN colleague and co-author Dr. Konstantin Chumakov, whose parents were vaccine researchers in the 1970s Soviet Union. His parents observed that flu rates seemed to drop in those people given the oral polio vaccine. Other GVN colleagues joined us in advocating for studies to determine if these live attenuated vaccines would be a feasible strategy during the coronavirus pandemic. Now we have some of the first evidence that they do offer protection. I hope funders take notice and increase support for these types of trials that study the innate immune response and provide significant hope in mitigating future pandemics."***

Christian Bréchot, MD, PhD, President of the GVN, Associate Vice President for International Partnerships and Innovation at University of South Florida (USF), and Professor, Division of Infectious Disease, Department of Internal Medicine at the USF Health Morsani College of Medicine, the GVN Southeast U.S. Regional Headquarters said, ***"The GVN serves as a catalyst to bring together the world's foremost virologists. We are pleased to work with varying nations to initiate these important clinical trials."***

Co-author **Konstantin Chumakov, PhD**, a GVN Center of Excellence Director said, ***"These observations are yet another confirmation that live vaccines induce broad protection against infections caused by pathogens other than their direct target. They urgently call for the direct prospective clinical studies of this phenomenon that could lead to the development of a novel class of vaccines based on stimulation of trained innate immunity. Such vaccines could become the badly needed universal countermeasure against emerging infections."***

In the *PLOS One* study, the researchers compared infection rates per 100,000 people in 146 countries that received both the live and the injectable polio vaccine, which does not contain live virus, compared to 56 countries that only used the injectable, non-live version. They found infection rates in countries that did not use the live polio vaccine were about three times higher than those that did use the live polio vaccine.

For the *JAMA Network Open* study, the researchers followed 419 mothers in Iran whose young children were given the live polio vaccine compared to 3,771 mothers whose children did not receive the live polio vaccine. None of the mothers whose children received the live polio vaccine developed COVID, whereas 28 mothers whose children did not receive the live polio vaccine did contract COVID within 9 months. Researchers know that polio-virus and even the weakened virus from the vaccine can be shed in the stool. The researchers surmise that the mothers were exposed to virus when caring for their children through bathing and diaper changing.

"It is heartening to find similar study results obtained from very different approaches strengthening our hypothesis that using the oral vaccine may provide protection against SARS-CoV-2, the virus that causes COVID," said the first author on the studies, Farrokh Habibzadeh, MD, Special

Consultant on Public Health for the GVN and the Managing Director of the Research & Development Unit of the Petroleum Industry Health Organization of Shiraz, Iran. He added that, ***"This hypothesis should be tested in additional quality clinical trials, preferably conducted in countries where the oral polio vaccine is currently in use as part of their national immunization for polio."***

Co-author Kristen Stafford, PhD, MPH, Associate Professor of Epidemiology & Public Health at the Institute of Human Virology at the University of Maryland School of Medicine and member of the GVN, said, ***"Some high-income countries declare pandemics over when in fact they just transition to only affecting low-income countries. We do not want this pandemic to become like the HIV-epidemic, where years and years of delays led to millions of excess deaths because the antiretroviral medications were too limited in supply or expensive to reach those disproportionately affected. We need to find simpler, inexpensive solutions to protect people until they can get their full doses and boosters of the COVID vaccines."***

"The important observations that the oral polio vaccine may protect against different infections such as COVID-19 is crucial for future pandemic preparedness. Understanding the mechanisms of protection induced by the oral polio vaccine and other live attenuated vaccines can open the door for the development of improved vaccination strategies to protect against broader infections, and thus provide partial protection against new pathogens during a pandemic until specific vaccines can be developed" said **Mihai Netea, MD, PhD,** of the Department of Internal Medicine and Radboud Center for Infectious Diseases, Radboud University Medical Center, a GVN Center of Excellence, and GVN Center Director.

One of the limitations of the live, weakened vaccines, is that they are not recommended for people with suppressed immune systems, as it could lead to infection.

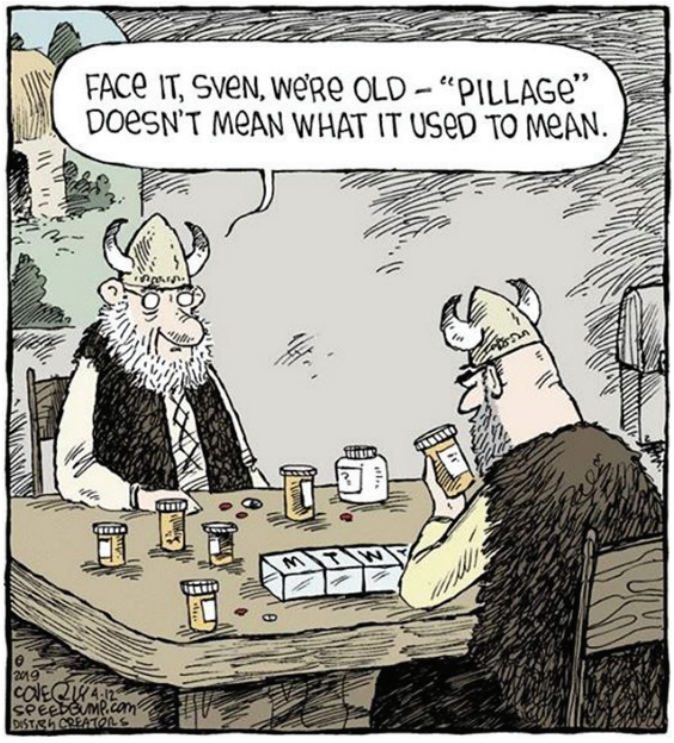
Additional authors on the studies include **Mohammad Sajadi, MD**, Professor of Medicine at the Institute of Human Virology at the University of Maryland School of Medicine and member of the GVN; and Mahboobeh Yadollahie, MD, Ashraf Simi, BScN, Saeid Saeidimehr, MD, (*JAMA Network Open* only), Mohammad Rafiei, MD, (*JAMA Network Open* only), and Iman Hafizi-Rastani, MSc (*PLOS One* only) of the Petroleum Industry Health Organization of Iran.

The authors received no specific funding for this work.

Dr. Kottilil received grants from Gilead for other research and serves on the advisory boards of Merck and Regeneron.

About the Institute of Human Virology

Formed in 1996 as a partnership between the State of Maryland, the City of Baltimore, the University System of Maryland, and the University of Maryland Medical System, the IHV is an institute of the University of Maryland School of Medicine and is home to some of the most globally-recognized and world-renowned experts in all of virology. The IHV combines the disciplines of basic research, epidemiology, and clinical research in a concerted effort to speed the discovery of diagnostics and therapeutics for a wide variety of chronic and deadly viral and immune disorders, most notably HIV, the virus that causes AIDS. For more information, visit ihv.org and follow us on Twitter @IHVmaryland.



Bruno Bytes
Bits and Tidbits from the Post-Polio Coffee House

From **Dr. Richard Bruno, HD, PhD**
Director, International Centre for
Polio Education and author of *The Polio Paradox*
https://www.papolionetwork.org/bruno-bytes.html

On the topic of Anesthesia and Shivering

Question: I had a procedure to replace a heart valve. I warned them ahead of time about polio survivors needing to be careful and showed my Anesthesia Warning Card. When in the operating room they started something intravenously. I began trembling violently, before they gave me something else to put me out. While recovering later that day, I was in a lot of pain and started trembling violently again.

Dr. Bruno's Response: "Trembling" (shivering) is one of the most commonly recognized problems associated with anesthesia. Shivering doesn't mean that any drug you were given is off limits for polio survivors. The drugs are standard for your surgery and for many procedures requiring anesthesia. If you are concerned about shivering before or after surgery, talk to the surgeon and anesthesiologist and ask for pre-op and post-op warming with a "Bair Hugger" to get warm and stay warm.

On the topic of Dopamine and Polio

Question: I found the brain stem and hippocampus could have been affected by polio. This is where dopamine is produced. Research shows people with polio are 40% more likely to be schizophrenic because of lower levels of dopamine. Lack of dopamine is probably what causes schizophrenia.

Dr. Bruno's Response: The question misquotes Nielsen's 2007 Danish database study of polio survivors. The study does not say that, "Research shows people with polio are 40% more likely to be schizophrenic because of lower levels of dopamine." Nielsen didn't mention schizophrenia or dopamine, but stated, "Overall, history of poliomyelitis was associated with a 40% increased risk of being hospitalized for a psychiatric disorder. The overall increased risk of psychiatric hospitalizations *could not* be confined to specific groups of psychiatric disorders. Rather, there seemed to be slightly increased risks of several different disorders, especially *milder* psychiatric disorders. These included personality disorders, substance/alcohol abuse, and other *non-psychotic* mental disorders,» not schizophrenia.

Nielsen continued: " The reason for the higher odds of having mental problems isn't really known, but it might related to the very painful and fearful experience of contracting polio, the stringent isolation from family for several weeks, and the difficulties of then overcoming physical handicaps and social prejudice," not low levels of dopamine. reuters.com/article/us-polio-psychiatric-ills/polio-victims-may-suffer-psychiatric-ills-later-idUSKIM67022820070206

There is a 1997 paper by Eagles suggesting a potential relationship between polio and schizophrenia, which is a hypothesis based on coincidences, not research. Squires addresses the failings of Eagles' hypothesis. Source: link.springer.com/article/10.1023/A:1022486423238

Actually, a decrease in dopamine should REDUCE, not increase, the incidence of schizophrenia. In fact, schizophrenia is treated with antipsychotic medications that block the action of dopamine in the brain. Source: www.netdoctor.co.uk/medicines/brain-nervous-system/a7483/risperdal-risperidone/

Both David Bodian's research from the 1940's and our studies found polio survivors showing evidence of a decrease in brain dopamine due to poliovirus damage to the basal ganglia that produce dopamine, not the brainstem and hippocampus, which do not. Search "FATIGUE and DOPAMINE" in the **ARTICLES**, "BRUNO BYTES" and **INDEX** of the **ENCYCLOPEDIA of POLIO & PPS**

On the topic of EMG and PPS Diagnosis:

Original Post: I understand an EMG is a test used to eliminate other potential problems like ALS. However, according to two physiatrists here, I do not have PPS based on my EMG results. My left leg has shrunk and I've developed scoliosis. I was told my last EMG showed old polio damage. I had non-paralytic polio as a child. I have suffered with

worsening PPS symptoms since the late 90s. No one has an answer for my leg weakness and atrophy while developing scoliosis. I know I need a brace on my left ankle but who do I go to now?

Dr. Bruno's Response: If everything else is ruled out and you have a history of non-paralytic polio, your EMG shows "old polio" (neuron damage), and you have PPS symptoms, you should be treated as having PPS. Since the late 1970s, an office EMG has never been shown to be able to diagnose PPS. You need to see a physiatrist who knows about PPS or is willing to learn.

On the topic of EMG and Previous Polio:

Question: I have a friend, in her 70's who is now developing weakness in her hips. She was around me when I got polio and her cousin was the carrier. The question is can she have a normal EMG and still have had polio? The doctor told her that she could not have had polio because she had a "normal" EMG.

Dr. Bruno's Response: Studies have shown that 10% to 25% of polio survivors have *normal* EMGs because their nerves were damaged but not killed. As a result, there are no neuron "sprouts" to show up on EMG. In one study, almost 10% of patients who had a history of polio muscle weakness, and who were reporting new pain, fatigue or weakness today, had normal EMGs, meaning that there was no EMG evidence that they ever had had polio. Another EMG study found that almost 25% of *paralytic* polio survivors' limbs had no evidence of motor neurons having been killed. Those limbs were classified as having "no clinical polio". However, neurologist Carlos Luciano, using a special "macro" EMG technique, found over-sprouted motor neurons in 85% of muscles that were thought to have had "no clinical polio". This is not surprising since research by David Bodian and Alan McComas showed that seemingly unaffected muscles had lost 40% of their motor neurons to polio.

As for being around you when you had polio and her cousin being the carrier, in 5% to 20% of households where poliovirus attacked one family member, another was also stricken. From 1909 to 1955 more than 2000 family members in more than 1000 households were surveyed in which at least one person had polio. On average if one child in a household became ill he "shared" polio with one other sibling of similar age. Just over half of those who became ill were paralyzed, while the others had flu-like symptoms ranging from a fever, sore throat and nausea to a stiff neck and muscle pain.

This "minor illness" was caused by the poliovirus but may never have been diagnosed as polio at all or may have been called "abortive" or "non-paralytic" polio. In three-quarters of the households the first case of polio was paralytic and the second was "non-paralytic." Bottom line: There's about a 1-in-5 chance that if you had paralytic polio one of your brothers or sisters had non-paralytic polio and may not even have known it.

There is more information on EMG and "Non-Paralytic Polio" in the Encyclopedia of Polio and PPS. You will find numerous articles under the topic of "Poliovirus" in the **Articles section**.

On the topic of Joint Damage

Question: I'm scheduled for a total replacement of my left shoulder. Previous I had my left knee replaced in 2007. I'm also having problems with my major joints on my right side. Can this be from Post-Polio Syndrome?

Dr. Bruno's Response: Joint damage and arthritis are "secondary" PPS, the result of the original "primary" poliovirus damage that caused long lasting muscle weakness.

On the topic of Ketamine Infusions for pain

Question: I'm trying to find information on Ketamine infusion to treat pain for polio survivors.

Dr. Bruno's Response: There's no data on treatment of pain or depression with ketamine in polio survivors yet. My concern is that ketamine is an anesthetic. Therefore, the "normal" dose would be too much for polio survivors and put them out for much longer than non-polio survivors. The usual dose lasts about 2 hours and there are risks: unconsciousness, high blood pressure, dangerously slowed breathing, stomach pain, depression and poor memory. I'd stick to treating the cause of the pain.

Resources:www.webmd.com/depression/features/what-does-ketamine-do-your-brain

www.practicalpainmanagement.com/patient/treatments/medications/ketamine-chronic-pain-management-current-role-future-directions?fbclid=IwAR3yEKo9CoHr3slRAQ7k9VHeEEGOsUCAstOoy7sZkaZet-r-8ZPyNwQgmeE

On the topic of Pain Sensitivity

Question: I've NEVER understood this. You say polio survivors are more sensitive to pain than non-polio survivors but have a higher pain tolerance. How is it that I can have a high pain tolerance and be more sensitive? It feels contradictory to me.

Dr. Bruno's Response: It has been known since the 1970s that the body produces its own morphine-like, painkilling opiates called endorphins and enkephalins. The problem for polio survivors is that the poliovirus killed off brain and spinal cord neurons that produce the body's own opiates. So, polio survivors can't "medicate" themselves against pain, which is why polio survivors need more pain medication than do non-polio survivors.

Our 1984 study showed that polio survivors are TWICE as sensitive to pain as non-polio survivors, likely due to the lack of endorphins and enkephalins (1) "Normal" levels of pain would be doubled in polio survivors and likely intolerable if polio survivors hadn't developed a higher pain tolerance.

Here's another example of sensitivity and developed tolerance. Think about many polio survivors' emotional hypersensitivity to childhood hospital smells (e.g., rubbing alcohol, the smell of wet wool from hot packs). As adults, polio survivors had to develop an increased tolerance to these emotional triggers, or they never would have allowed themselves to enter a hospital again. Sadly, many polio survivors have indeed refused to get medical treatment because they didn't develop an increased tolerance for hospitals and medical facilities. (2) References: (1) Bruno RL, et al. Motor and sensory functioning with changing ambient temperature in post-polio subjects. Late Effects of Poliomyelitis. Miami: Symposia Foundation, 1985.

(2) Bruno RL, Frick NM. The psychology of polio as prelude to Post-Polio Sequelae: Behavior Modification and Psychotherapy. Orthopedics, 1991;14(11):1185-1193. For more information, please read these two articles under the topic of "Psychology" in the Encyclopedia of Polio and PPS: Trauma and Illness as Precipitants of Post-Polio Sequelae and Psychology of Polio as Prelude to Post-Polio Sequelae

On the topic of PPS and Seizures

Question: I have been experiencing seizures, the kind that puts me in an ambulance. Is this polio related?

Dr. Bruno's Response: Seizures are not PPS symptoms. There is one very small Turkish study finding 11 of 91 polio survivors had epilepsy. But epilepsy onset was at 17 years old, not in mid-life as with PPS. Seizures should be treated in polio survivors as in non-polio survivors, with doctors being aware that anti-seizure drugs may cause increased fatigue in polio survivors. www.webmd.com/epilepsy/medications-treat-seizures

On the topic of PPS Spinal Cord Atrophy

Question: A February 2022 study claims that patients diagnosed with PPS have spinal cord "gray matter atrophy" in their necks and also have muscle weakness in their arms, hands and feet. Is spinal cord atrophy the cause of PPS?

Dr. Bruno's Response: I read the study when it was published last month and didn't think it was worth mentioning. Only 20 polio survivors said to have PPS were studied and compared to non-polio survivors, not to polio survivors without PPS. It's no surprise that survivors were found to have spinal cord gray matter atrophy, that is damage to the "gray" spinal cord motor neurons ("polio" means gray in Greek).

This study of only 20 polio survivors, links gray matter atrophy not only to post-polio muscle weakness, but also statistically performs multiple comparisons between gray matter atrophy and other factors, e.g., fatigue, pain, depression, age, sex, age at or time since polio.

Unfortunately, the statistics applied to draw these conclusions are incorrect, the authors themselves stating, "Given the exploratory nature of these...

analyses in this rare disease, we report [statistics] explicitly not adjusted for multiple comparisons." More than 175 subjects would have been required for a valid statistical analysis and appropriate conclusions.

The editors of the journal who published the study of "this rare disease" (having 20 million survivors worldwide) should have required appropriate statistics or rejected the paper outright. Source: www.infectiousdiseaseadvisor.com/home/general-infectious-disease/spinal-cord-gray-matter-atrophy-post-polio-syndrome-functional-decline/?fbclid=IwAR0p6Dw7CsnQTGNYLuOkbl0_D5x7WERseVjoyoEVR201_b9WvCcodAxQqJw

On the topic of Scoliosis and PPS

Question: I am 76 years old and had polio at 3. I never had scoliosis but over a period of a few years I now have some scoliosis. Is this common in those of us with PPS

Dr. Bruno's Response: Scoliosis results from polio-caused muscle weakness that allows back muscles that were less affected to pull the spine toward their side, causing a curve. One estimate from the epidemic years was that 1/3 of young polio survivors developed scoliosis, which resulted in many spinal fusions. Scoliosis can also result from polio survivors' back muscles becoming weaker over time. So, scoliosis is an "indirect" result of PPS.

Reading Exercise

Only very good minds can read this. This is weird, but interesting!

7H15 M3554G3 53RV35 7O PR0V3 H0W 0UR M1ND5 C4N D0 4M4Z1NG 7H1NG5! 1MPR3551V3 7H1NG5! 1N 7H3 B3G1NN1NG 17 WA5 H4RD BU7 N0W, 0N 7H15 LIN3 Y0UR M1ND 1S R34D1NG 17 4U70M471C4LLY W17H 0U7 3V3N 7H1NK1NG 4B0U7 17, B3 PROUD! 0NLY C3R741N P30PL3 C4N R3AD 7H15.

If you can read this, you have a strange mind, too. Only 55 people out of 100 can.

I cdnuolt blveiee that I cluod aulaclty uesdnatnrd what I was rdanieg. The phaonmneal pweor of the hmuan mnid, aoccdrnig to a rscheearch at Cmabrigde Uinervtisy, it dseno't mtaetr in what oerdr the ltteres in a word are, the olny iproamtnt tihng is that the frsit and last ltteer be in the rghit pclae. The rset can be a taotl mses and you can still raed it whotuit a pboerlm. This is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the word as a wlohe. Azanmig huh? Yaeh and I awlyas tghuhot slpeling was ipmorantt!

Web Site:

Check out our website for more information on Polio Regina and links to other useful related information at: http://nonprofits.accesscomm.ca/polio/
or you can just Google **Polio Regina**.

Our email address is: polio@accesscomm.ca

Disclaimer

Information published in the Polio PostBox may not represent the opinion of Polio Regina. It is not to be regarded as Polio Regina's endorsement of treatment, products or individuals. If you have or suspect you may have a health problem, please consult your health care professional.

You Are Invited

Polio Regina is inviting people who have had poliomyelitis and are now experiencing new symptoms such as fatigue, muscle weakness and cold intolerance, to join our self-help support group to learn how they can cope with post polio syndrome. Spouses and partners of polio survivors are also welcome. Polio Regina Inc. was formed to help people from southern Saskatchewan.

Our Objectives:

- To develop, promote and increase awareness of Post Polio Syndrome.
- To disseminate information concerning research and treatment pertaining to Post Polio Syndrome.
- To provide support to survivors of polio, other than financial aid.

Where to Meet

Due to COVID-19 we have been conducting our meetings by Zoom but if the restrictions continue to be lifted, we may resume having our meetings at Nicky's Café at Eighth Avenue and Winnipeg Street. Our next scheduled meetings are September 29 and October 22, 2022, at 3:30 p.m. We will let you know the details prior to the meetings, or you can phone Ivan at 306 757-8051 or email him at ivan.jorgensen@sasktel.net

Alternative methods of payment: Canadahelps.org

There is the option to use Canadahelps.org website which has a Polio Regina page. This will be arranged to deposit the membership/donation directly into the Polio Regina bank account.

1. Go to the website link www.canadahelps.org/charities/polio-regina-inc
2. OR on the Canadahelps.org website enter Polio Regina Inc in the charity search.
3. Enter the amount, your name, address, email address and payment information.
4. Canadahelps issues a receipt directly to the donor by email. They take 4% administration fee and deposit the net amount directly in the Polio Regina bank account.
5. The Polio Regina treasurer, David Cotcher will be able to access the information and acknowledge the membership/donation.

Bank e-transfer

We do not currently have the ability to directly deposit e-transfers in the Polio Regina bank account. However, some have sent e-transfers to treasurer David Cotcher and he takes that amount in cash and deposits in the Polio Regina bank account. Then a receipt will be issued and mailed for the amount. Please contact David Cotcher at email cotcher@sasktel.net or phone 306-949-1796 for these arrangements.

MEMBERSHIP APPLICATION POLIO REGINA Inc.

Name _____

Active ( ) if you had polio Associate ( ) New ( ) Renewal ( )

Address _____

_____

Postal Code _____ Phone: _____

Annual membership fee: (Jan.- Dec.)
$10 Single; $15 family $_____

My donation to Polio Regina Inc.: $_____

Total $_____

Please make cheque payable to: **Polio Regina Inc.** and mail this application form and cheque to:
Polio Regina Inc., 78 Petersmeyer St., Regina, SK S4R 7P7
(Official receipt for income tax purposes will be mailed.)