Bruno Bytes
4th Quarter, 2023
From Richard L. Bruno, HD, PhD
Director, International Centre for Polio Education

Bowel, Bladder and Gut Issues

Question: Dr. Bruno, I keep on trying to block out anything to do with the Polio . . . and I truly think this is not healthy. That being said, if I had any medical training, I'd look into the neuro-pathways of the very few times that I felt the throat muscles give out when I was taking a sip of water; causing me to really choke. In addition, I'd research the very few instances that for about 2 to 3 days, my bowels just seem to get into a 'funk' and decide not to push what they should (like in a rhythmic sequence); but yet I'll be in cramps with nothing moving until I gather up the courage to buy over the counter, what I seem to need.
I'm uncomfortable bringing up issues like this at our Support Group. Deep down, I know it has something to do with the Polio.
Dr. Bruno's Response: I think I get the gist of your question. It sounds like you are asking about the polio being related to occasional constipation and how to handle it.
The polio belly article dealing with constipation is Slow Guts and Polio Survivors.
You can find more information in the Encyclopedia of Polio and PPS. Look in the Index under the topics of Muscle Weakness and/or Bowel/Bladder.

With regards to not blocking out your thinking about past polio experiences or current symptoms that may be related to polio, I agree that that's not the best thing that one can do for their mental or physical health. This is where a good psychotherapist comes in handy so that you can discuss the underlying fear of just "thinking" about polio. I hope this helps.

Fatigue

Question: I am tired all the time but sometimes I forget just how bad it gets. I swear I could sleep away the rest of my life! The doctor ordered 2 pages worth of blood tests. They have already ruled out thyroid & all the 'normal' things like vitamin deficiencies. What's left to do?

Dr. Bruno's Response: First of all, a sleep study is vital for all polio survivors with fatigue to show if you have disordered breathing – obstructive or central sleep apnea or shallow breathing – that is disturbing your sleep. Sleep disordered breathing can be treated with positive pressure ventilation using BiPAP, a machine that cycles blowing air into your lungs at one pressure and then decreases the pressure to allow you to exhale and prevent carbon dioxide from building up.

Second, as part of the sleep study, electrodes need to be placed on your muscles, legs and arms. Our research has found that 50% of polio survivors have muscle twitching that disturbs sleep and that half of them don't even know it! We found that a low dose of alprazolam 60 minutes before bed stops twitching and allows sleeping.

Finally, we did do a study of bromocriptine, a drug used to treat Parkinson's disease, in polio survivors who did not respond to The Post-Polio Institute "conserve to preserve" treatment and lifestyle modifications. We found that bromocriptine was somewhat helpful in reducing daytime fatigue. However, the side effects were unpleasant and of those taking the drug there were a handful of patients ~~out of all~~ who did not respond to self-care treatments. I don't recommend taking the drug.
I recommend these articles: Abnormal Movements in Sleep as Post-Polio Sequelae and Bromocriptine in the Treatment of Post-Polio Fatigue "

For more information, go to the Encyclopedia of Polio and PPS and look in the Index under the topics "Fatigue" and "Abnormal Movements"

Getting Polio Twice

Question: My husband was in the hospital for 15 months in an iron lung from 1943-1944. He got polio for the 2nd time after getting the vaccine in 1955. He was back in the hospital, that time for 9 months. He remembers being told that he got the virus the second time from the vaccine in the sugar cube. Wasn't the sugar cube the Sabin Vaccine in 1960?

This article mentions the Salk vaccine only being by injection. But, some people remember getting their first vaccine (which would have been Salk) by sugar cube. I got my first (1955) by injection and later one by sugar cube. Was the Salk vaccine always injected (or) was it also given on sugar cubes?

Dr. Bruno's Response: First of all, the Sabin *oral* vaccine never was in injectable form and was released in 1962, so it couldn't have caused your husband's second bout of polio in 1955.

You have to remember that the Salk vaccine was at best 72% effective and that individuals did *not* develop the same degree of immunity to all three types of poliovirus in the vaccine. It's possible that he got polio twice because he was inadequately immunized against one or two of the three types of poliovirus he didn't catch in 1943.

What's worse, known as the Cutter Incident, thousands of doses of Salk polio vaccine were distributed in 1955 that contained live poliovirus because the virus was inadequately killed. So it's possible for the Salk vaccine to have given him polio and again because he was inadequately immunized against the types of poliovirus he didn't have in 1943.

Issues Related to Surgery

Question: Next week I'm going under the knife to repair the meniscus in my right knee. This is the "good" leg, so I am hoping that I will be more mobile.

Dr. Bruno's Response: Please make sure the surgeon and the anesthesiologist know about:
Preventing Complications in Polio Survivors Undergoing Surgery (or) Receiving Anesthesia.

If you haven't already, please download the Anesthesia Warning Card (available in both English and Spanish) and give it to your physician AND anesthesiologist. The QR code gives them easy access to multiple articles and the biographies of the authors.
www.polionetwork.org/anesthesia-card

We are hearing from the survivors that by showing your physician and anesthesiologist this card, the information begins a conversation between patient and doctor that may otherwise not have taken place.

ANESTHESIA WARNING!

I am a **Polio Survivor**

- **Easily Sedated**, and can be difficult to wake
- Can have difficulty **breathing** and **swallowing** with anesthsia
- **Hypersensitive** to **pain** and **cold**

May need heated blanket and increased pain medication post-op

www.polionetwork.org/anesthesia-card

I am a Polio Survivor with Post-Polio Sequelae

Name:______________________

I have these Symptoms (checked):

- ☐ Overwhelming Fatigue
- ☐ Muscle Weakness
- ☐ Muscle and Join Pain
- ☐ Sleep Disorders
- ☐ Cold Intolerance
- ☐ Difficulty Swallowing
- ☐ Difficulty Breathing
- ☐ Sensitivity to Anesthesia

(Scan Code for Anesthesia Information - Over)
www.polionetwork.org/anesthesia-card

Muscle Weakness and the Cold Weather

Question: Why do my muscles get weaker in cold weather? My polio leg muscle is feeling cold all the time and much weaker. It's frightening.
Dr. Bruno's Response: YES they can feel this way. You are NOT alone.
"The Effects of Cold on Polio Survivors" and "Of Frozen Fingers and Polio Feet" are just two of the articles in the Encyclopedia of Polio and PPS on this topic. Look up "Temperature" in the Index for more information.

Medications: Using them Correctly

Dr. Bruno's Original Post: A Prescription New Year's Resolution – because with medications, many times, Less is More!

We have to take an active role and know the "why and what" before taking or changing meds. What's most important is that discussion with our physicians is VITAL.

A Baby Boomer's New Year Resolution: Ask Your Doctor About Your Medicines

Newswise - by Saint Louis University Medical Center

"If you're 65 or older and taking more than four medications, resolve to talk to your doctor about doing a New Year's triage to make sure too many pills aren't making you sick, advises Milta Little, D.O., associate professor of geriatrics at Saint Louis University.

As people grow older, they can develop a litany of health problems and see multiple specialists who prescribe various drugs to treat common conditions such as osteoporosis, high blood pressure, diabetes, heart disease, arthritis and memory loss. 'Drugs may not play well with each other, and problems can snowball for older adults who take five or more medicines,' Little said.

'As a geriatrician who quarterbacks the health care of my patients, I think six medicines usually is too many, and studies have shown mortality is higher among patients who are taking 10 medicines. I love to analyze medicines my patients are taking because reducing the number of drugs often makes them feel so much better. Many times, less is more.'

Every patient is unique with different health goals and challenges that change as a person ages, which is why one-size-fits-all guidelines don't work, Little adds. She advocates an annual medicine check-up, where patients ask doctors to assess the drugs they are taking, being mindful that vitamins, supplements and over-the-counter medicines count, too.

'Supplements and other nonprescription medications, which are often less rigorously regulated than prescription medications, are a major cause of dangerous drug-drug interaction in elderly patients," Little said. "I don't recommend a multi-vitamin or gingko for brain health for everyone. The supplements are for specific people, and I prescribe them like anything else, only for those who need them.' "

Here are questions Little asks as she analyzes the medicines her patients take:

"How old is my patient? Guidelines on what constitutes good health loosen with age. For instance, a good blood pressure for a younger adult – 120/60 – is much lower than a healthy blood pressure for an older adult – 160/90. And a person who has a blood pressure with a top (systolic) number that's too low – 130 – could fall or become dizzy, which creates additional health risks. 'My prescriptions for patients who are 65 are different than those for patients who are 80,' Little said. 'For patients who are 100, I probably wouldn't prescribe any medicine at all. If they've lived to be 100, it's probably nothing doctors did.' "

"How long has the patient taken the medicine? Prescriptions are not forever, and should be reviewed periodically to make sure they're still necessary. 'It may have been appropriate for you 10 years ago, but may not be today,' she says. 'Under your doctor's guidance, don't be afraid to try going off your medicine.' For instance, there is no evidence that shows a 76-year-old patient who has high cholesterol but hasn't had a heart attack or stroke within the last year would benefit from taking a statin, although he might have been prescribed the statin 16 years ago, when it likely could help."

"Is the dosage right? As people grow older their bodies change. A smaller dose of medication might yield the same response as a younger adult. Often times, a half-dose of a psychotropic medication works better in older patients than a full dose, as does a smaller dose of medicine for osteoporosis. 'Start low and go slow,' Little says. 'You can always give more but you can't take it out of the body once it's given.' "

continued . . .

"What are the drug's side effects? A medicine might address one problem, but create another. For instance, antidepressants can cause frequent urination, which can lead to incontinence. Statins and blood thinners worsen frailty, which makes patient vulnerable to more medical problems. An anti-diuretic for blood pressure can worsen symptoms of gout, which is a form of arthritis."

"How well do medicines play with each other? Drugs given for one illness could make another condition worse. Medicine given for acid reflux can reduce the effectiveness of blood thinners because of the way the medicines are broken down in the liver."

" 'Some older adults believe taking a pill will make them healthier, which is not always the case, particularly when they're taking many pills for different health issues. Too many medicines can make older adults feel fatigued, and undermine the quality of their lives,' said Little, who is the author of an editorial on overmedication in the elderly that appeared in a 2016 issue of JAMDA. ' We have a lot of evidence that non-medical treatments, such as exercise, yoga and massages, work better in improving a person's health. But they're work.' "

Established in 1836, Saint Louis University School of Medicine has the distinction of awarding the first medical degree west of the Mississippi River. The school educates physicians and biomedical scientists, conducts medical research, and provides health care on a local, national and international level. Research at the school seeks new cures and treatments in five key areas: infectious disease, liver disease, cancer, heart/lung disease, and aging and brain disorders.
Article Source

Polio Eradication: A Brief Review of 2023

From Dr. Bruno: Every week, I post the status of global polio eradication in the Post-Polio Coffee House. This outstanding article from the Global Polio Eradication Initiative, summarizes of the work that was done in 2023 and their goals for 2024.

GPEI – a brief review of 2023 and full focus on 2024

As the year draws to a close, efforts intensify against the virus in 2024

"The Global Polio Eradication Initiative has two goals laid out in its current strategy: to interrupt all remaining transmission of endemic wild poliovirus type 1 (WPV1) and to stop all outbreaks of variant poliovirus type 2 (cVDPV2). 2023 was a critical year for progressing on each of these, and while our urgent and diligent work to end polio must continue into 2024, the GPEI achieved incredible things in the past twelve months."

Continuing Work In Endemic Countries
"Despite significant geo-political and environmental challenges in the two remaining WPV1-endemic countries, Pakistan and Afghanistan, the polio programme has continued to reach greater numbers of children with polio vaccines."

Progress On Variant Polio Outbreaks
"Thanks to the novel oral polio vaccine type 2 (nOPV2), strong political commitment and community-based efforts to reach more children with the vaccine, the number of cases of variant poliovirus type 2 (cVDPV2) continued to decline in 2023.

Nearly 1 billion doses of nOPV2, a comparably safe, effective, but more genetically stable version of the existing type 2 oral polio vaccine (mOPV2), have now been administered across 35 countries, protecting millions of children from illness and paralysis."

The Complete Article from the Global Polio Eradication Initiative:

https://polioeradication.org/news-post/gpei-a-brief-review-of-2023-and-full-focus-on-2024/

Polio Outbreaks in the US and "Wild" Polio

Question: Is it true there haven't been any polio outbreaks in the US since 1979? I've never understood "wild" polio vs the other.

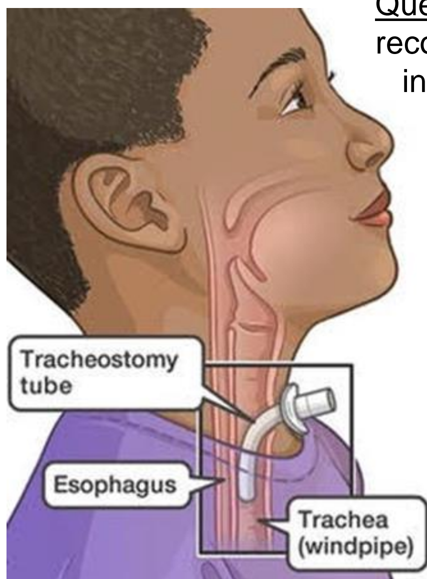
Dr. Bruno's Response: There haven't been any *wild* polio cases since 1979 (that came from a source within the US). In the 1980s there were outbreaks among

- the Amish in Minnesota, when the virus was brought in from the Netherlands;
- one woman who was not vaccinated developed bulbar polio and brought it in from Mexico;
- and an immunodeficient woman in Minnesota retained the vaccine strain and passed it to her children who were not paralyzed.

Wild poliovirus is the real thing, the original, found in nature that's been around at least since the pyramids were built. The "other" polioviruses are vaccine strains, either the live, oral vaccines (which are wild polioviruses passed through monkeys until they becomes non-neuron-killing polioviruses) or injectable polio vaccines where polioviruses were killed with formaldehyde.

Problem is that the live, oral vaccine can sometimes mutate and become neuron-killing again. This article explains what happened in New York in 2022: Polio. It's happened again, right here in the US.
www.polionetwork.org/archive/fq6l7k0468c4mmyzi4yw8ckuggjn97

Tracheostomy vs Tracheotomy



Question: I read that a breathing specialist at Rutgers University does NOT recommend tracheostomies for polio survivors. Can you give me more information? And what is the difference between a tracheostomy and a tracheotomy?

Dr. Bruno's Response: A tracheotomy is an incision made on the front of the neck, below the vocal cords, opening a direct emergency airway to the lungs through the trachea (windpipe) allowing a person to breathe without the use of the nose or mouth.

A tracheostomy is a permanent, surgically-created stoma (opening) into the trachea.

Dr. John Bach, the physician that I describe as the world's expert on breathing and polio, says NO polio survivor should have a tracheostomy unless there is damage to the upper airway stopping the flow of air. The treatment for sleep- disordered breathing or inadequate breathing during the day is the use of positive pressure ventilation via a volume ventilator, not CPAP.

Dr. Bach's website, videos and contact information:

- www.BreatheNVS.com (or) www.doctorbach.com
- Videos:
    - John R. Bach, MD - Faculty Video Profile
    - John R. Bach, MD - Noninvasive ventilatory care in patients with breathing muscle weakness
    - John R. Bach, MD - Ways to Avoid Respiratory Complications with Polio and Post-Polio Syndrome
- Email Contact: bachjr@njms.rutgers.edu (He does answer emails).

For more information – go to www.polionetwork.org.

- See Living with Post-Polio Syndrome (under the Header Post-Polio Syndrome).
- Look in the Index under "John Bach".

Vision Issues and PPS

Dr. Bruno's Post: Polio survivors occasionally ask if poliovirus affected vision. The poliovirus was actually injected into the visual part of the brain of monkeys and had no effect on the neurons, as if they had no poliovirus receptors and couldn't be damaged. The optic nerve is not affected by poliovirus and muscles that allow the eyes to focus should not be affected.

Since sympathetic/vagus nerves were damaged, pupil opening/closing could be affected. But I have not seen pupil problems treating hundreds of polio survivors.

Certainly, voluntary facial muscles (that move the eyes and open and close the lids) could be affected by poliovirus. Polio survivors can have lag ophthalmias, where they don't completely close their eyes, causing dry eyes and disturbed sleep.

This article explains more: "Abnormal Eye Movements and PPS".