



## Bruno “Bytes”

June, 2019

From Dr. Richard L. Bruno, HD, PhD  
Bits and Tidbits from the Post-Polio Coffee House

### On the topic of Dopamine Loss and the PPS Brain (6/14/2019)

Original Post: Is the loss of dopamine in our brain an ongoing problem or was it a one shot deal with the poliovirus?

Dr. Bruno’s Response: The initial polio attacked certain dopamine producing neurons in the brain. That was a one shot deal. The problem is that dopamine producing neurons die on their own over time in everyone, whether or not they had polio. By age 50 everyone has lost about 33% of those neurons. So the normal loss of dopamine neurons is amplified in polio survivors since they start at a loss.

Additional Post: What does this mean for polio survivors? What side effects or symptoms should we expect because of having too few dopamine neurons?

Dr. Bruno’s Response: Fatigue, word finding difficulty and trouble concentrating. Rest and good sleep decreases all Post-Polio “brain” symptoms. Look under “Fatigue” in the [Articles](#) section of the Encyclopedia of Polio and PPS.

### On the topic of “Fatigue” and the “Inability to Find Words” (6/27/2019)

Original Post: Am I the only one having a problem with word finding trouble, when you know what the word is, but you just can't get it to come out? Word retrieval (or more accurately “non” retrieval) was one of my earliest PPS symptoms. Especially when I’m stressed or fatigued can I totally forget words. Sometimes my words end up going away mid-sentence!

Dr. Bruno’s Response: You’re not alone. You can find the research article(s) behind this issue under “Word Finding Difficulty” in the [Articles](#) section of the Encyclopedia of Polio and PPS. Poliovirus damage done to the brain and its dopamine producing neurons causes brain fatigue and word finding difficulty. In our 1990 International Post-Polio Survey, between 70% and 96% of respondents having fatigue also reported difficulty with concentration, focusing attention, mind wandering, memory, thinking quickly **and word finding**; 77% reporting moderate to severe difficulty with these brain functions. But, it’s important for you to know that word finding difficulty was reported by polio survivors in their 40s and **never** were associated with dementia. (You can find an article on word finding difficulty causing false positive findings on a [Mental Status Exam](#) under “Fatigue” in the Articles section of the Encyclopedia of Polio and PPS. This definitely would be of value to share with your physician).

### On the topic of Disability Access to Physician’s Offices

(6/16/2019)

Dr. Bruno’s Original Post: [THIS](#) is the ADA-required access that every medical professional/hospital who accepts Medicare/Medicaid MUST provide.



## [On the topic of Exercise](#) (6/22/2019)

Dr. Bruno's Original Post: There have been many posts in the Coffee House lately about doctors and PTs demanding that polio survivors exercise "to strengthen their heart muscles" or to "prevent loss of muscle mass and tone." Time to review what the published research actually says about exercise in polio survivors. Search references [Pub Med](#) (the US National Library of Medicine at the National Institutes of Health) and in The Polio Paradox.

Please read: [Should Polio Survivors do Exercise for Strengthening? No Way!](#) It is one of four [articles](#) on this topic in the Encyclopedia of Polio and PPS.

## [On the topic of Cardiac Rehab Exercise](#) (6/26/2019)

Dr. Bruno's Original Post: In 37+ years of evaluating, treating and studying polio survivors I have never seen one who has had a heart attack, heart bypass surgery or heart failure who has 1) been able to do exercise required for cardiac rehabilitation or 2) suffered as a result of their inability to do cardiac rehabilitation. Please read: [Cardiac Rehabilitation: Should Polio Survivors Just Say No?](#)

## [On the topic of Muscle Fatigue](#) (6/24/2019)

Original Post: I thought this [video](#) was really interesting. Which bit of the process that causes nerves to make muscles contract isn't functioning properly in polio survivors?

Dr. Bruno's Response: In polio survivors, it's the reduced number of remaining, poliovirus-damaged motor neurons that can't make and release enough acetylcholine (the chemical that tells muscle fibers to contract) that is responsible for muscle weakness and rapid muscle fatigue. Muscle fibers have a smaller mass in polio survivors but work just fine. But the loss of muscle mass tells you that motor neurons are overloaded and can't function to supply chemicals and nutrients to muscle fibers, so the fibers shrink in size. The worst thing a polio survivor can do is do exercise that makes muscle fibers bigger, putting more demand on remaining, poliovirus-damaged motor neurons. Increasing muscle mass is like plugging several toasters into an electrical outlet that can only turn on one. You're gonna blow a fuse, and the "blown fuse" causes muscle fatigue and motor neuron death.



## [On the topic of Cardiac Medications and PPS](#) (6/22/2019)

Original Post: I have AFIB (atrial fibrillation) and normally it does not bother me. I take a very low dose of metoprolol at night, time release. If I take it during the day I'm too tired to function. My cardiologist retired so I'm with a new one who doesn't recognize PPS fatigue. Could this be a "beta blocker" issue?

Dr. Bruno's Response: Beta blockers like metoprolol are especially sedating in polio survivors. When taken at night you sleep through the sedation. When taken during the day, you just sleep. For information, please [Cardiac Drugs, High Blood Pressure and PPS](#) under the topic "Medications" in the ENCYCLOPEDIA of POLIO & PPS.

## On the topic of Healthy Weight Loss (6/24/2019)

Original Post: I really need to take off about 10 pounds. Kidneys/liver always show up weak or compromised. I can't move enough to exercise it off and I don't even eat enough to count calories.

Dr. Bruno's Response: Americans are not very good at taking care of themselves. American's with disabilities often are no better, and maybe a little worse, at self-care because it takes so much time to do things non-disabled folk do in a flash, like showering and dressing. There's hardly any time or energy left for planning meals, shopping, cooking ... or even eating. However, people with disabilities pay a higher price for lack of self-care than do people without disabilities. For those who use wheelchairs good eating habits and proper nutrition are essential, not only for general good health, but also to prevent bowel and urinary problems, to prevent weight gain, and to maintain a decent level of energy.

I recommend you talk to your physician about finding a registered dietician. Make notes ahead of your appointment as to what your current eating habits are including your strongest likes and dislikes.

Take a look at the article "[Post-Polio Protein Power: Eat Well, Be Well](#)" and two additional articles on this topic in the Encyclopedia as well.

Additional Post: This is great advice. Seeing a registered dietician was money well spent. I was clear regarding what I was/was not willing/able to do to burn calories. I was taught that, when considering foods to buy, the nutrition information labels are my friends.

Additional Bruno "Bytes" are available for you to share in the Encyclopedia of Polio and Post-Polio Sequelae.

Go to: <http://www.papolionetwork.org/bruno-bytes.html>

Scroll down the page (through the Current Month posts).

Previous months are located there, in easily printable PDF format and are available by "clicking" on them, Would you like to see Dr. Bruno in "action"? Check out the [Video Library](#).

Looking for a particular topic? Check out the Bruno Bytes [Index by Subject](#)"