



Bruno “Bytes”

4th Quarter 2020

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

On the topic of Accurate Blood Pressure Readings and Upper Arm Muscle Atrophy

Question: How accurate is taking blood pressure on a polio survivor's very thin upper arms with almost no muscle even if you choose a child cuff? I understand that home machines use a different method to pick up the blood pressure than the manual system of a stethoscope and sphygmomanometer. So does monitoring at home using a machine give an accurate reading? My own readings seem to vary a lot even between arms and between readings. Could this be because of damage to the vagus nerve by polio impacts blood pressure?

Dr. Bruno's Response: I would ask your GP to use a child's cuff in addition to them taking your blood pressure (BP) in both arms. A BP cuff that is too large will give false low readings, while an overly small cuff will give readings that are falsely high. I would not use the home automatic BP machines without a properly sized cuff and without comparing your home machine's measurements to those in your doctor's office using a proper sized cuff.

Blood pressure can be taken at the forearm, and there are machines that take BP at the wrist. However, these can give artificially elevated BP readings that also need to be compared to measurements in your doctor's office taken with a proper cuff.

(<https://www.livestrong.com/article/174826-how-to-place-a-blood-pressure-cuff-on-the-forearm/>)

Certainly the autonomic nervous system - the vagus and sympathetic branches, both damaged by the poliovirus - is central in determining blood pressure. We found a relationship between low blood pressure, fainting and fatigue severity in polio survivors. ([Chronic Fatigue, Fainting and Autonomic Dysfunction](#)). But even without the extreme of plummeting blood pressure and fainting, common bodily events can affect blood pressure: a big meal can lower while a full bladder and pain can raise BP.

For more information on blood pressure and the autonomic nervous system in polio survivors search the ENCYCLOPEDIA of POLIO & PPS “Complete Index” and “Articles (by Subject)” at <https://www.papolionetwork.org/encyclopedia.html>

On the topic of Bone Growth Stimulators

Question: Has anyone used a bone growth stimulator for a broken bone?

Dr. Bruno's Response: Electric stimulation and ultrasound can speed bone healing. Ask your orthopedist if a bone growth stimulator could help you heal more quickly and if osteoporosis interferes with use of stimulators.



From Healthline: https://www.healthline.com/health/bone-stimulator?fbclid=IwAR1ZO9qY4WNiKT38Rz_AO2k0SkUTWGyl_USgOWgZRR7BWxK-4tGr5J1dEI0#how-they-work

From Exogen: https://www.exogen.com/us/what-is-a-bone-stimulator/?fbclid=IwAR2j0TzYKrBER_991d9BRZ7nCMzXX3qbnDQxBESANMoLnUoHYWrDIJv-vDk

On the topic of Cholesterol Medications

Question: I was taking statins for cholesterol a while back and had to stop taking them because of terrible jaw pain. Now the doctor wants to put me on Ezetimibe (Zetia). Are there any known side effects for PPS patients with this?

Dr. Bruno's Response: All statins have side effects, the most common being calf muscle pain. Ezetimibe (Zetia) has the least muscle pain of all the cholesterol-lowering drugs, but it can still cause pain in the calf muscles and headaches. www.webmd.com/drugs/2/drug-64336/zetia-oral/details/list-sideeffects

You should have [Creatine Kinase](#) (CK) measured in your blood *before* and during treatment with any statin to measure muscle damage, which is rare. You should always keep a log of symptoms before and while taking any new drug.

On the topic of Creatine, Muscle Strength and Pain

Question: Does anyone take micronized [creatine](#) as a supplement? My physical therapist says this may be beneficial to decrease the latent pain I have following physical therapy. She only works with me on stretching and range of motion and I don't necessarily have pain during my session. But I seem to have pain once I return home for the next 24-48 hours.

Dr. Bruno's Response: First, if you have pain 24-48 hours after PT you're doing the wrong thing in PT. Second, research on creatine has been mixed. Although some studies have found that it helps improve performance — *not* reduce pain — during short periods of exercise, there is no evidence that creatine helps with endurance, which is what polio survivors need. Research also shows that not everyone's muscles respond to creatine and some see no benefit.

Also, certain drugs, including anti-inflammatories, like ibuprofen and naproxen, and diuretics can have dangerous interactions with creatine. Taking creatine with stimulants like caffeine and ephedra also can cause unwanted side effects. Further, creatine is not recommended for people with kidney or liver disease or diabetes. If you are taking any medication that could affect your blood sugar be aware that creatine may lower blood sugar levels, which is not good for polio survivors.

As always, talk to your doctor before using creatine or any supplement.

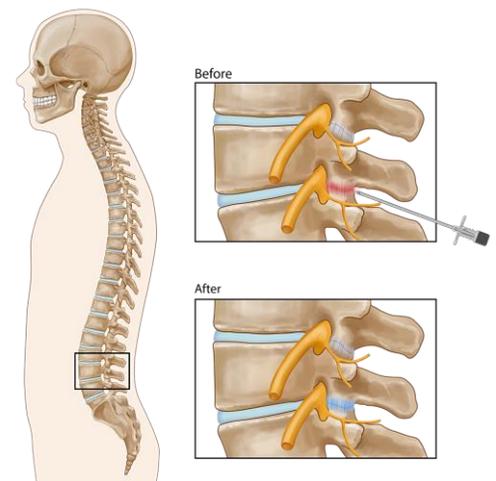
On the topic of Epidurals and Facet Joint Injections

Question: I have a bulge at L4/5 in spine and have been offered a spinal injection to help with the pain. I also have stenosis in multiple places on my spine. The injection would be done at a major teaching hospital so I know I would be in safe hands.

Is this injection is very painful? Is it worth getting done? Is it risky? Should I leave well alone?

Dr. Bruno's Response: Spinal injections - epidural and facet joint injections - can be very helpful in treating stenosis (pinched nerves of pressure on the spinal cord). There are always risks. But they can be reduced by hiring a doctor who is an expert at spinal injections.

Lumbar epidurals can cause "pressure pain" as a steroid and local anesthetic are injected in a very small space (the spinal cord is the diameter of a pencil, epidural space even smaller) and can trigger fainting. I would discuss a brief anesthetic (like low dose propofol) for lumbar epidurals.



Read more by searching [Anesthesia](#) in the Encyclopedia. (www.papolionetwork.org/encyclopedia.html)

On the topic of using Human Growth Hormone

Question: I am a polio survivor with PPS. I just read an article on how HGH injections might help with muscle weakness in polio survivors. What is your opinion on that?

Dr. Bruno's Response: Human Growth Hormone (HGH) was found not to reduce post-polio muscle weakness in a large, well-conducted US/Canadian study in the 1990s. HGH is of no use in PPS.

On the topic of using the Index for the Complete Encyclopedia of Polio and PPS

The complete [instructions](#) for use and searching are easily available under the topic "[Index](#)". This index includes all entries into the Encyclopedia and Bruno Bytes since 2014. It is updated quarterly.



On the topic of Magnesium Citrate vs Magnesium Glycinate

Question: I have been feeling much more tired recently and having some bad nights. I feel wide awake and just can't get to sleep. My PPS doctor has suggested I try magnesium citrate a couple of hours before going to bed. He says this may help with relaxation and overall fatigue. I don't like taking medication unless I really have to. Will magnesium citrate help me sleep?

Dr. Bruno's Response: [Magnesium CITRATE](#) is for treating constipation and is used to prep for a colonoscopy. There is some evidence that [magnesium GLYCINATE](#) may decrease anxiety and insomnia. This study may help: The effect of magnesium supplementation on primary insomnia in elderly: A double-blind placebo-controlled clinical trial: <https://pubmed.ncbi.nlm.nih.gov/23853635/>

Please note that magnesium supplements have not been approved by the FDA to do anything, including treat insomnia ([Magnesium – the different types](#)).

On the topic of using Laxatives and Domperidone for Constipation

Question: Could you write about laxative compounds *not* to take? In addition, could you recommend a laxative to use for pain medication related constipation?

Dr. Bruno's Response: Laxatives of any kind should only be taken when needed to prevent becoming laxative dependent. Reglan is used when the gut stops moving but should never be taken by polio survivors since it can cause Parkinson's-like symptoms that last years. [Miralax](#) seems to be the safest laxative, along with [suppositories](#). And diet is very important to keep things moving, for example drinking lots of water and having a big salad before dinner. If you feel you need a laxative frequently, talk to your doctor:

- Taking [Colace](#), Dulcolax and [Senna](#) frequently can cause laxative dependence.
- Again, polio survivors should *never* take [Reglan](#) since it can cause Parkinson's-like symptoms.
- [Domperidone](#) (available with a prescription from Canada) can be substituted for Reglan, since it doesn't cross into the brain.
- Note that *both* Domperidone and Reglan can slow electrical conduction through the heart.
- [Methylnaltrexone](#) by injection is used to treat constipation caused by opioid (narcotic) pain medications.

Additional Question: You suggest that Domperidone may be helpful for constipation and I have found this to be so. It also helps with some nausea I had. But the instructions advise not to take it for more than 7 days and my GP in the UK is very cautious about possible side effects. I took it initially for about 10 days, without any ill effects, but stopped. I am wondering what your advice would be about how long an interval to allow before I take it again?

Dr. Bruno's Response: Poliovirus-damage to the vagus parasympathetic nerve seems to be the cause of slow guts in polio survivors. Domperidone bypasses the vagus and indirectly stimulates the intestines to get moving. But Domperidone should only be taken when the stomach stops emptying or the intestines stop moving. Also Domperidone can slow conduction through the heart and your gut can become dependent upon it: www.ema.europa.eu/en/medicines/human/referrals/domperidone-containing-medicines?fbclid=IwAR08syL9vNQj7sUsIifSZIaUkwK7bRzmpVxkVn26s6sRpHPZ0ukOsSXdvy4

Once you take Domperidone and your intestines start contracting on their own, you need to establish a bowel program. As part of this, you keep a daily poo log, increase your intake of water, eat a salad before dinner, create a time every day when you sit on the throne and occasionally take laxatives, preferably Miralax (polyethylene glycol) to help you when you haven't had a bowel movement for three days.

Talk to your doctor about all of this.

On the topic of Nerve Pain

Question: I am wondering about what I think is nerve pain in my ribs. The latest episode began when I lay sideways on my right shoulder, then spread to what felt like a spasm pain in my left rib area. Since I have a severe scoliosis and wear a plastic body jacket to sit up, I can't get comfortable sitting or lying. I end up taking a low, short-term dose of narcotic pills (which I hate to do) to try and break the spasms until hopefully it goes away.

Dr. Bruno's Response: You need a diagnosis regarding the cause of the pain. Is it "nerve pain" or muscle spasm or both? Scoliosis and wearing a body jacket are going to put pressure in different parts of your spine and joints that certainly can cause pain. Pain could be radiating from nerve entrapment in your right shoulder or pinching nerves in your neck. So talking to your doctor about an MRI of your neck would be the first place to look.

If spasm is the issue narcotics aren't the answer. Something like Valium would be more appropriate. A proper head pillow and a body pillow may be of help to take the load off your ribs and shoulder, give you some cushioning and better positioning in bed. You may need a new body jacket, but again, diagnosis is the issue. You don't need a post-polio specialist to diagnose and treat this. A local physical medicine ([physiatrist](#)) doctor would be of help.

On the topic of Shoulders

Dr. Bruno's Original Post: [Shoulder Anatomy Animated – A tutorial](#). This is an excellent video that helps you understand how the shoulder works so that you can understand how *not* to cause more muscle weakness and pain.

On the topic of Valium-Like drugs causing Dementia

Question: I took Ativan for sleep for about eight years for sleep. Now I read that it causes neurodegenerative disease. Does anyone feel like they have experienced this?

Dr. Bruno's Response: Use of benzodiazepines and nonbenzodiazepines (Z-drugs) did not appear associated with subsequent dementia, according to a nationwide Danish study published in the American Journal of Psychiatry in April 2020. 171,287 (75.9%) subjects used benzodiazepines or Z-drugs. During follow-up of 6.1 years, 9,776 (4.2%) received a dementia diagnosis. The investigators found no association between any use of benzodiazepines or Z-drugs - the cumulative dose or number of prescriptions - and dementia.

(www.healio.com/news/psychiatry/20200414/benzodiazepines-zdrugs-do-not-increase-dementia-risk)

On the topic of Sexual Dysfunction

Question: There is a disagreement between my doctors as to whether or not post-polio syndrome can contribute to a diagnosis of an erectile dysfunction. As an expert in PPS what is your opinion and reasons whether PPS can or can't contribute to erectile dysfunction.

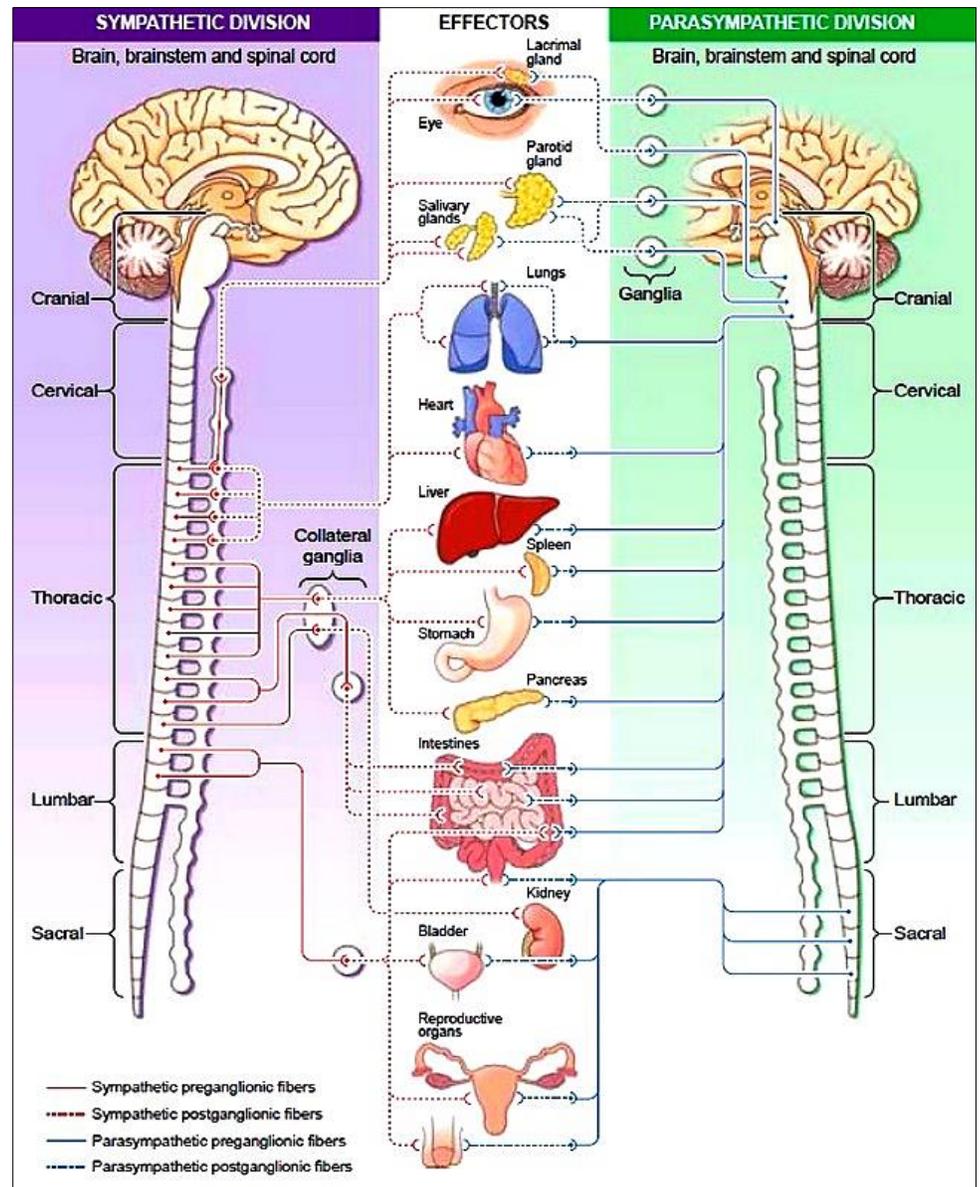
Dr. Bruno's Response: The process of producing an erection is a complex ballet between sympathetic, parasympathetic and motor neurons in the spinal cord as well as autonomic nervous system centers in the brain. It has been known since the 1940s that the poliovirus damages all of these areas, so the question is a good one.

Since my specialty is the autonomic nervous system I have paid close attention to autonomic abnormalities in blood flow and the activity of the intestines and bladder in polio survivors. Over the past nearly 40 years studying polio survivors, we have seen slowing of stomach emptying and of the intestines that would be the result of poliovirus damage to the vagus/parasympathetic nerve (see constipation, above).

During the acute phase of polio the most common "genital" symptom was urinary retention in both males and females. However, in recovered polio survivors, a percentage of women report lack of retention - usually "dribbling" - but not in excess of what one would expect in 60-plus year-old polio survivors. When patients ask me about urinary problems possibly being caused by polio, my answer always is that having had polio may make symptoms worse, but that polio/PPS is not the primary cause.

Assessing, evaluating and studying more than 7,000 polio survivors, I cannot identify even a handful of males who had erectile dysfunction.

But my answer would be the same I give to women: polio may make erectile dysfunction worse but it is not the primary cause.



[The Encyclopedia of Polio and Post-Polio Sequelae](#)

contains all of [Dr. Richard Bruno's](#) articles, monographs, commentaries, "Bruno Bytes" (Questions & Answer articles) and his Video Library.

The Encyclopedia of Polio and PPS is also available by a direct link from: www.postpolioinfo.com

Are you looking for a specific topic?

The Encyclopedia Index (By Subject) is available by clicking [HERE](#)