On the topic of an EMG and PPS Diagnosis  (2/1/2016)
Original Post: I am going to PT, walking on boot, and omitting crutches and walker more and more now. Would it be best to see him while this heals, or to wait until I am back to "normal" for me? I’m going to a new doctor. What tests are involved? Are there EMG's? Ouch!
Dr. Bruno’s Response: NO EMG unless they are looking for other than PPS. EMGs CANNOT DIAGNOSE PPS, but can show an old polio.
Note: See On the topic of Polio Survivors having a “Normal” EMG below.

On the topic of Pulmonary Embolism  (2/4/2016)
Original Post: Is Pulmonary Embolism connected to PPS?
Dr. Bruno’s Response: Fortunately not. For more than 33 years of treating polio survivors we have never had one who had had a pulmonary embolus. Even though polio survivors feeder often purple and blood pools when it's cool or cold, the blood does indeed flow back to the heart and doesn't stay in the limb to clot, so there is no predisposition to having blood clots in the legs moving to the heart and lungs.
2nd Post: The lack of activity and especially legs that don't work anymore. Does that cause swelling?
Dr. Bruno’s Response: Lack of activity can cause swelling especially when the weather is warm. If you remember there was a huge outcry a few years ago about people on flights from the US to Australia developing blood clots in their legs and then pulmonary embolisms. Everyone was told to move their feet up and down and to walk as often as they could.
If just flying to Australia did cause blood clots, every polio survivor who has used a wheelchair since 1952 because both lower legs were paralyzed should be dead due to blood clots in their lungs and brain!

On the topic of Bladder Control  (2/6/2016)
Original Post: This is a little bit awkward but I wonder if anyone has "accidents" sometimes...this morning I woke up because I had peed. Could this be polio-related because of my bladder muscles becoming weaker?
Dr. Bruno’s Response: Polio could make bladders problems worse but typically it is not the main cause. See your doc and have a urinalysis. It could be a UTI.

On the topic of Constipation and PPS  (2/9/2016)
Dr. Bruno’s Original Post: As with all PPS symptoms you have to rule out everything else that may be causing the problem before you diagnose PPS. This includes belly problems. This is an excellent article by Jane Brody from the New York Times.
http://well.blogs.nytimes.com/2016/02/08/simple-remedies-for-constipation/?_r=0
On the topic of Fear of Surgery (2/13/2016)
Original Post: I am facing colon surgery soon. I came down with polio in 1954 (at 3 months old) live alone and have never walked. I’m in power chair all the time. Surgery has me scared out of my mind. Will I still be able to take care of myself?
Dr. Bruno’s Response: Figure out what you will need in terms of help before the surgery and please talk to your doctor about the potential of your going to a rehab facility afterward.
2nd Post: The doctor has said that it will be at least a 30 day stay in a rehab. I’m not looking forward to that. I was there for 3 months almost 3 years ago.
Dr. Bruno’s 2nd Response: Also make sure that the anesthesiologist and the surgeon have a copy of the PREVENTING ANESTHESIA AND SURGICAL COMPLICATIONS in POLIO SURVIVORS at www.postpolioinfo.com
Remember: Propofol is used at The Post-Polio Institute for anesthesia induction or brief procedures (e.g., cardioversion, colonoscopy). They should use just enough to put you out, not the dose for your weight or their "usual" dose.
Desflurane is used if gaseous anesthetic is needed. During surgery, the Desflurane dose should be titrated while brain waves are monitored.
DOCTOR MUST WRITE ORDERS to
MONITOR CARBON DIOXIDE RETENTION in the RECOVERY ROOM and to PROVIDE ANTI-NAUSEA and PAIN MEDICATIONS.
Set your browser to: http://www.postpolioinfo.com/lib_surgical.php
for the Post-Polio Library and information about the cause and treatment of PPS, including the surgical and dental precautions articles.

On the topic of Forearm Crutches (2/18/2016)
Original Post: I’m interested in your thoughts please. My doctor has ordered Lofstrand or modified crutches, but the physical therapist says the Lofstrand are heavy/awkward/old-school, and recommends the European forearm crutches because they are more ergonomically correct. Have any of you used both types for comparison? Is there a "better" type for polio survivors?
Dr. Bruno’s Response: The best forearm crutches I’ve found at a reasonable price are by Walkeasy. My patients get a 10% discount: http://walkeasy.com/shop/Category.asp?ProductType=Canes (Call to order for the discount).
Any crutch needs Tornado Tips invented by polio survivor Tom Fetterman, who also sells Walkeasy forearm crutches. Tom also makes THE BEST OF THE BEST forearm crutches, they are more expensive. See www.fetterman-crutches.com
In some patients with a history of polio, the electromyography is normal, not showing the typical neurogenic signs. The aim of this study was to explain the normal findings in electromyography, especially in paralytic polio.

Design: Retrospective study.
Subjects/methods: Concentric needle electromyography, macro electromyography (including single fibre electromyography) and neurography were performed in various combinations in 688 patients with an alleged history of polio.

Results: Thirty-five patients with paralytic polio had normal or minimally abnormal neurophysiology. In 6 patients the diagnosis of polio was rejected and was instead found to be other diagnoses. Three patients had a very atypical history. Of the 26 with possible paralytic polio, 17 showed a strong suspicion of previous paralytic polio without any neurophysiological signs of degeneration of the anterior horn cells.

Conclusion: If neurophysiological findings are normal in patients with a history of polio, the original diagnosis may be incorrect. However, the absence of electromyography changes does not entirely exclude a previous history of polio with transient functional loss WITHOUT degeneration of anterior horn cells that are vulnerable for later functional impairment.

J Rehabil Med 2004; 36: 169–176 Correspondence address: Arne Sandberg and Erik Stålberg

Additional Post: Does this explain why the EMG was negative on my arms and positive on my legs?
Dr. Bruno’s Response: That’s very likely.

On the topic of Muscle Disuse Atrophy (2/24/2016)
Dr. Bruno’s Post: Disuse muscle atrophy does not happen to everyone who is less mobile. Polio and PPS has absolutely nothing to do with the muscles. PPS muscle weakness has to do with damaged and dead anterior horn sales that can no longer run the muscles. As I’ve said in the past, polio survivors have been driving a four-cylinder car that used to have eight cylinders at 80 miles an hour for 40 years. Obviously the cylinders are going to give out. Exercise is like driving that car at 120 miles an hour!

Dealing with more than 6,000 polio survivors for over 30 years I can tell you that I have never seen disuse atrophy but have seen marked increases in strength with less use of overused muscles. Polio survivors are amazed that when they use the brace or crutches or even a power wheelchair their legs get stronger!
Actually it's the anterior horn cells that are being given a rest. Always remember:

**CONSERVE TO PRESERVE**

**On the topic of Swallowing Difficulties** (2/26/2016)
Original Post: I'm having difficulty swallowing lately I even choke on my own saliva. I'm afraid to eat by myself. Does this happen to anyone else?
Additional Post: I was okay until 2yrs ago I had surgery and ever since this is happening and my neck and back of my head fell weird. Just wonder if the anesthesia had something to do with it.
Additional Post: From European Polio Union [http://www.europeanpolio.eu](http://www.europeanpolio.eu)
It is a common complaint in polio Survivors and especially those with PPS. It is well documented in medical circles and support group publications, web sites and journals on management and treatment of PPS.
Dr. Bruno’s Response: Polio survivors have trouble with saliva (especially during sleep) or taking a sip of water often even if they don't have trouble with thicker liquids or even food. It's not a precursor of more swallowing problems.

**On the topic of Rib Cage Pain** (2/26/2016)
Original Post: Does anyone else get a pain in the bottom of rib cage? (It is similar to a stitch if you recall the over exertion from moving too fast for too long pain). It seems to go away if I do loads of deep breathing. Could it be poor posture or diaphragm issues?
Dr. Bruno’s Response: Rib cage pain, especially toward the bottom of your breast bone and on just one side, is common in polio survivors and can be related to a muscle spasm in your BACK at exactly the same level on the same side. Ask your rehabilitation doc to look for back spasm. Heat and PT could help. Good posture is vital to stop the pain. That being said, ANY NEW chest new pain calls for a trip to the ER!

**On the topic of Hand Tremors** (2/27/2016)
Original Post: Do any of you have thumb tremors? When I'm exhausted or stressed, my thumbs are so shaky, it affects my whole hands.
Dr. Bruno’s Response: Overuse of any muscles can certainly cause shaking. Stress can as well, but usually to a lesser extent.

**On the topic of Drug Ads** (2/28/2016)

Dr. Bruno’s Original Post:
ASK YOUR DOCTOR IF THIS AD IS RIGHT FOR YOU!

[http://www.nytimes.com/2016/02/28/sunday-review/ask-your-doctor-if-this-ad-is-right-for-you.html?_r=0](http://www.nytimes.com/2016/02/28/sunday-review/ask-your-doctor-if-this-ad-is-right-for-you.html?_r=0)

Additional Bruno “Bytes” are available for you to share by going to:
[http://www.papolionetwork.org/bruno-bytes.html](http://www.papolionetwork.org/bruno-bytes.html)
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