



Frederick M. Maynard, MD

**Question:** *I had polio in 1940. With treatment and exercise I was able to live a “normal” life and taught school for many years. At age 50, I started having new weakness. I am now 79 and my legs have shown greater weakness. I wear a full brace on my left leg and a short brace on my right leg. Lately I have been falling, even with my walker. My left leg is very swollen but medical tests do not show anything. Could the late effects of polio be causing the swelling?*

**A:** There are many reasons why leg swelling can occur. They all involve fluid retention, and usually the mechanistic cause is inadequate “return flow” of blood carrying fluid out of the leg and back to the heart. If you have had slowly worsening weakness now for many years and at age 79 require a left long leg brace, most likely you have swelling in that leg from inadequate muscle contraction pumping blood back out of the leg when you are upright. This is especially likely to be the explanation if the problem has developed gradually along with slowly increasing post-polio leg weakness and if it is worse later in the day than in the morning (after the leg has been elevated overnight in bed which drains out fluid).

Other common causes for leg swelling are open sores on the foot/leg which can result in lymphedema (excessive fluid production in soft tissues around the sore) and kidney or heart problems that lead to excessive salt and water retention throughout the body, especially in the legs when you are up. In the latter case, there should be swelling in

both legs, even if there is more in the weaker left leg where there is less muscle action to pump blood out. Often in older people there is more than one contributing factor to leg swelling.

If swelling appears rather suddenly in one leg only, especially if that leg also becomes painful and red, then you should see a doctor as soon as possible to test for a blood clot in a leg vein. Venous blood clots block the vein from draining blood out of the leg which results in swelling.

The mainstays of management for the symptom of leg swelling, especially when other direct causes are not found, include restricting salt intake, leg elevation as much as possible, and wearing support stockings or using leg wraps. It is important to control leg swelling because it will otherwise gradually worsen and sooner or later lead to additional problems (like open sores/ulcers, heaviness of the leg that makes it harder to get around, poor fitting of shoes and braces and blood clots, among others).

SEND YOUR QUESTIONS  
FOR DR. MAYNARD TO  
[INFO@POST-POLIO.ORG](mailto:INFO@POST-POLIO.ORG).

## MESSAGE TO PHI MEMBERS

As reported in the recent electronic *PHI Membership Memo*, our organizational report for 2009-2010 is available at [www.post-polio.org/about/AnnRep2009-2010.pdf](http://www.post-polio.org/about/AnnRep2009-2010.pdf).

Members without Internet access who would like a printed copy may call 314-534-0475 to request a copy. The Board of Directors and staff gratefully acknowledge the financial support of our Members, which makes our many activities possible.

**Question:** *Do you know of any polio survivors who are experiencing numbness in their affected areas? I did some physical therapy recently for about six weeks using both sides of my body to improve the strength in my unaffected leg, and noticed that my left arm (the affected side) was becoming numb and then later in the day, my left leg would also become numb (just the top part of my arm and leg). My family doctor is sending me to a neurologist to see if I have a pinched nerve but he and I both think it is polio related. Since I have stopped physical therapy it has quieted down, especially if I use Aleve®, a heating pad or warm water at the pool. I'd appreciate your advice.*

**A:** There are many causes of numbness, but post-polio syndrome is never the DIRECT cause. Polio affected motor nerves only and, therefore, does not lead to numbness or true loss of feeling. Numbness and tingling are, however, common complaints among polio survivors because of the many musculoskeletal problems that they develop as they become older and because of other medical and neurologic conditions they may concurrently develop. A burning feeling in post-polio muscles fatigued by exercise/activity is also a common report.

Based on your description of symptoms (coming and going; located on the top of the arm and/or leg; relieved by Aleve and local heat), it is very likely your symptoms are a referred pain

from a more central spinal problem, but they could be due to a “pinched or irritated nerve,” nerve entrapments, circulatory diseases or other causes. A neurologist’s consultation is a good idea in order to rule out serious conditions. If nothing specific is found and symptoms do relate to activity/movement/exercise, then a referred pain from a musculoskeletal problem remains most likely as the cause. Working with your PT to alter your exercise program may also be successful in eliminating/controlling the symptoms.

**Question:** *I had all three types of polio. I was paralyzed from my throat down and was unconscious. Now I am 69 years old and have been diagnosed with Postural Orthostatic Tachycardia Syndrome (POTS). Could polio, post-polio and POTS Syndrome have any connection and/or relationship?*

**A:** POTS syndrome causes the heart to race to compensate for an excessive drop of blood pressure when a person stands upright, especially suddenly from lying down position. It is considered an abnormality of the autonomic nervous system’s function to control automatic reflexes that change heart rate and the opening and closing of blood vessel size, which then affects the blood pressure. While polio may affect some

of the sympathetic nervous system cells (part of the autonomic nervous system) that control opening/closing of blood vessels, I am unaware of orthostasis (low blood pressure and faintness when standing up suddenly) being a common problem among the many post-polio patients that I have seen and know.

The name POTS is usually used to describe an unusual autonomic nervous system dysfunction in relatively young people that has no known cause. You more likely have developed “orthostatic hypotension” related to aging issues, including drug effects and fluid balance.

While polio weakness could be playing a role in making this problem worse, it is unlikely to be the primary cause. Treatment would also be the same as in people who never had polio. I would expect support hose, possibly all the way up to the waist in a “panty hose garment,” would be particularly helpful if polio leg weakness with blood pooling there when you stand up is a major factor in your POTS. ▲