



# Polio Survivors Network

Information and Inspiration  
for All Polio Survivors and Their Families

*Serving the Keystone State and Beyond*

[www.polionetwork.org](http://www.polionetwork.org)

January 2020

## **Our Mission:**

*To Be in Service Providing Information to Polio Survivors, Post Polio Support Groups, Survivor's Families and their Caregivers.*

**For five years, we have had the amazing opportunity to be able to publish the work of the International Center for Polio Education, Post-Polio Health International, Rotary International and many other Polio and Post-Polio knowledgeable sources.**

We are starting off the new year by addressing the two most frequent topics that you ask us to address. Whether in the US or Abroad, these concerns are the same for Polio survivors.

1. The positive impact of polio survivors seeing a Rehabilitative Physician (physiatrist) for care. What is a Rehabilitative Physician (physiatrist) ? Is that the same as a neurologist? Some are DO's and some are MD's - are they the same?
2. Fatigue: whether it be "Brain" or "Muscular".



## **What is a Rehabilitative Physician?**

A rehabilitation doc (a phys-EYE-a-trist) does a medical residency learning to help people thrive with their disabilities: Physiatrists, or rehabilitation physicians, are nerve, muscle, and bone experts who treat injuries or illnesses that affect how you move. Rehabilitation physicians are medical doctors who have completed training in the medical specialty of physical medicine and rehabilitation (PM&R).

## **What is the difference between an MD and a DO ?**

A doctor of osteopathic medicine (DO) is a fully trained and licensed doctor who has attended and graduated from a U.S. osteopathic medical school. A doctor of medicine (MD) has attended and graduated from a conventional medical school.

The major difference between [osteopathic](#) and [allopathic](#) doctors is that some osteopathic doctors provide manual medicine therapies, such as spinal manipulation or massage therapy, as part of their treatment.

After medical school, *both* MD's and DO's must complete residency training in their chosen specialties. They must also pass the same licensing examination before they can treat people and prescribe medications. (from the [Mayo Clinic](#))

## **What is a Neurologist?**

A neurologist is a doctor of medicine (MD) *or* a doctor of osteopathy (DO) who specializes in diseases of the nervous system. Some neurologists subspecialize in neuromuscular diseases, which is a subspecialty of diseases of the peripheral nerves (nerves in the arms and legs), the neuromuscular junctions (the nerve muscle junction), and the muscles, which includes the problems of the post-polio patient. Through their specialized knowledge of neuromuscular diseases, electromyography (EMG), and neuro-rehabilitation, these neurologists are able to diagnose and treat conditions causing pain, weakness, numbness, and tingling. (From [PHI](#))





### What is Physical Medicine and Rehabilitation?

Physical medicine and rehabilitation (PM&R), also known as physiatry or rehabilitation medicine, aims to enhance and restore functional ability and quality of life to those with physical impairments or disabilities affecting the brain, spinal cord, nerves, bones, joints, ligaments, muscles, and tendons. A physician having completed training in this field is referred to as a physiatrist. Unlike other medical specialties that focus on a medical “cure,” the goals of the physiatrist are to maximize patients’ independence in activities of daily living and improve quality of life.

Physiatrists are experts in designing comprehensive, patient-centered treatment plans, and are integral members of the care team. They utilize cutting-edge as well as time-tested treatments to maximize function and quality of life for their patients, who can range in age from infants to octogenarians.

### Practice Settings

PM&R physicians practice in a variety of clinical settings, including inpatient and outpatient facilities. They have a broad range of knowledge including musculoskeletal, neurological, rheumatological and cardiovascular systems.

Some of the common diagnoses and populations seen by inpatient physiatrists include spinal cord injury, brain injury (traumatic and non-traumatic), stroke, multiple sclerosis, polio, burn care, and musculoskeletal and pediatric rehabilitation. Inpatient physiatrists are often trained using collaborative team skills and work with social workers and other allied health therapists (e.g., physical, occupational and speech) to manage these issues.

Outpatient physiatrists manage nonsurgical conditions including orthopaedic injuries, spine-related pain and dysfunction, occupational injuries and overuse syndromes, neurogenic bowel/bladder, pressure sore management, spasticity management, and chronic pain. Outpatient physiatrists are typically found in multidisciplinary groups consisting of other physiatrists, orthopaedic surgeons and/or neurosurgeons.

### What is a Physiatrist?

**Physical Medicine and Rehabilitation (PM&R) physicians, also known as physiatrists, treat a wide variety of medical conditions affecting the brain, spinal cord, nerves, bones, joints, ligaments, muscles, and tendons.**

PM&R physicians are medical doctors who have completed training in the specialty of Physical Medicine and Rehabilitation (PM&R), and may be subspecialty certified in Brain Injury Medicine, Hospice and Palliative Medicine, Neuromuscular Medicine, Pain Medicine, Pediatric Rehabilitation Medicine, Spinal Cord Injury Medicine, and/or Sports Medicine.

Specifically, PM&R physicians:

- Treat patients of all ages and Treat the whole person, not just the problem area
- Focus treatment on function
- Have a broad medical expertise that allows them to treat disabling conditions throughout a person’s lifetime
- Diagnose and treat pain as a result of an injury, illness, or disabling condition
- Determine and lead a treatment/prevention plan
- Lead a team of medical professionals, which may include physical therapists, occupational therapists, and physician extenders to optimize patient care
- Work with other physicians, which may include primary care physicians, neurologists, orthopedic surgeons, and many others.

**Depending on the injury, illness, or disabling condition, some PM&R physicians may treat their patients using the following procedures/services:**

(Continued . . .)

- EMG/Nerve Conduction Studies
- Ultrasound guided procedures
- Fluoroscopy guided procedures
- Injections of spine
- Discography, Disc Decompression and Vertebroplasty/Kyphoplasty
- Nerve Stimulators, Blocks and Ablation procedures—Peripheral and Spinal
- Injections of joints
- Prolotherapy
- Spasticity Treatment (Phenol and Botulinum toxin injections, intrathecal baclofen pump trial and implants)
- Nerve and Muscle Biopsy
- Manual Medicine/Osteopathic Treatment
- Prosthetics and Orthotics
- Complementary-alternative medicine (i.e. acupuncture, etc.)
- Disability/impairment assessment
- Medical/legal consulting

### Why Visit a PM&R Physician

Physical Medicine and Rehabilitation (PM&R) physicians, also known as physiatrists, treat a wide variety of medical conditions affecting the brain, spinal cord, nerves, bones, joints, ligaments, muscles, and tendons. By taking the whole body into account, they are able to accurately pinpoint problems and enhance performance without surgery. Consider seeing a PM&R physician if:

- You had an accident or you have an injury or chronic condition that has left you with pain or limited function
- You're contemplating or recovering from surgery
- You have an illness or treatment for an illness that has diminished your energy or ability to move easily
- You're recovering from the effects of a stroke or other problems related to nerve damage
- You have chronic pain from arthritis, a repetitive stress injury, or back problems
- Excess weight makes it difficult to exercise or has caused health problems
- You think you're too old to exercise
- Life changes such as childbirth or menopause have created new challenges to your physical function

#### Getting Started

A PM&R physician will thoroughly assess your condition, needs, and expectations and rule out any serious medical illnesses to develop a treatment plan. A clear understanding of your condition and limitations will help you and your PM&R physician to develop a treatment plan suited to your unique needs.

#### Tailoring Your Plan

You need the right type of exercise to effectively overcome fitness obstacles. A runner may have gained weight after being sidelined by a knee injury. A PM&R physician can prescribe tailored, low-impact activities that burn calories without aggravating the injury, simultaneously prescribing physical therapy and use of a brace to strengthen and support the knee. Another patient may be suffering from chronic neck pain. The PM&R physician might prescribe medication, stretching, and massage for short-term pain relief, as well as strengthening exercises to prevent future pain. If surgery is a necessity, PM&R physicians work with patients and their surgeons before and after surgery. By directing your treatment team and collaborating with other health care professionals, a PM&R physician is able to specially design a treatment program tailored to you.

#### Understanding And Identifying Your Goals

Do you want to strengthen an injured muscle, find relief from chronic pain, or walk up the stairs without being winded? A PM&R physician can work with you to determine realistic short- and long-term goals. Along the way, he or she will help you to find relief from pain, achieve successes in rehabilitation or exercise programs, overcome your setbacks, and reassess your goals if necessary.

(Continued . . .)

How can I locate a rehabilitation physician?

The American Academy of Physical Medicine and Rehabilitation (AAPM&R) represents more than 9,000 rehabilitation physicians. As a public service, AAPM&R provides listings of its member rehabilitation physicians by state.

[Click here for our online "Find a PM&R Physician" searchable database.](#)

## Conditions & Treatments Evaluated by Physical Medicine and Rehabilitative Physicians

PM&R physicians (or physiatrists) evaluate and treat patients with short- or long-term physical and/or cognitive impairments and disabilities that result from musculoskeletal conditions (neck or back pain, or sports or work injuries), neurological conditions (stroke, brain injury or spinal cord injury) or medical other conditions. Their goal is to decrease pain and enhance performance without surgery.

Below are some of the most common PM&R-related conditions; all are grouped by clinical area.

### Essentials of Rehabilitation

- [Cervical, Thoracic, and Lumbosacral Orthoses](#)
- [Conceptual Models of Disability](#)
- [Natural Recovery and Regeneration of the Central Nervous System](#)

### Medical Rehabilitation

- [Back and Neck Pain](#)
- [Age-Associated Changes and Biology of Aging](#)
- [Breast Cancer](#)
- [Cardiac Rehabilitation](#)
- [Exercise in the Elderly](#)
- [Fall Prevention in the Elderly](#)
- [Functional Outcomes After Cancer Rehabilitation](#)
- [Geriatric Frailty](#)
- [Hip Fracture](#)
- [Lower Limb Prosthetics](#)
- [Lymphedema](#)
- [Obesity](#)
- [Orthostasis](#)
- [Pressure Ulcers and Wounds](#)
- [Pulmonary Rehabilitation in Chronic Obstructive Pulmonary Diseases](#)
- [Venous Insufficiency](#)

### Pain-Neuromuscular Medicine Rehabilitation

- [Adult Geriatric Muscle Disease](#)
- [Central Poststroke Pain](#)
- [Complex Regional Pain Syndrome](#)
- [Degenerative Joint Disease](#)
- [Fibromyalgia](#)
- [Myofascial Pain](#)
- [Opioid Management for Chronic Pain](#)
- [Peripheral Neuropathy Pain](#)
- [Phantom Pain](#)
- \*\*[Poliomyelitis/Post-Polio Syndrome](#)\*\***
- [Shoulder Pain in the Throwing Athlete](#)
- [Side Effects of Cancer Treatment](#)
- [Trigeminal Neuralgia](#)
- [Ulnar Nerve Mononeuropathy at the Elbow](#)
- [Upper Limb Amputations](#)

### Musculoskeletal Medicine

- [ACL Injury and Rehabilitation](#)
- [Adhesive Capsulitis](#)
- [Adult-Onset Torticollis](#)
- [Ankle Sprain](#)
- [Carpal Tunnel Syndrome](#)
- [Cervical Radiculopathy](#)
- [Cervical Stenosis](#)
- [Cervical Whiplash](#)
- [Vertebral Compression Fractures](#)
- [Core Strengthening](#)
- [De Quervain Tenosynovitis](#)
- [Downed Runner](#)
- [Elbow Pain in Little League Pitchers](#)
- [Epicondylitis With and Without Nerve Entrapment](#)
- [Functional Rehabilitation](#)
- [Iliotibial Band Syndrome](#)
- [Impingement Syndromes of the Shoulder](#)
- [Inflammatory Arthritides](#)
- [Knee Osteoarthritis](#)
- [Lumbar Disk Disorders](#)
- [Lumbar Radiculopathy](#)
- [Lumbar Spondylolisthesis](#)
- [Lumbar Stenosis](#)
- [Medial and Lateral Collateral Ligament Injuries](#)
- [Osteoporosis in Rehabilitation](#)
- [Patellofemoral Syndrome](#)
- [Plantar Fasciitis](#)
- [Pregnant Athlete](#)
- [Proximal and Mid-Hamstring Strain/Tendon Tear](#)
- [Pulmonary Issues in the Athlete/Exercise-Induced Asthma](#)
- [Shoulder Tendon and Muscle Injuries](#)
- [Sports Concussion](#)
- [Tendinopathy](#)

Additional Conditions and Treatments are available here - <https://www.aapmr.org/about-physiatry/conditions-treatments>

<https://www.aapmr.org/about-physiatry/about-physical-medicine-rehabilitation>

# Physiatrist vs. Neurologist

What's the Difference?

By Fred Decker

The human body is comprised of several complex systems, some well-understood and others still mysterious. All of them have to work, and interact properly, to achieve optimal health. That's why physicians in various disciplines, from family doctors to the most unusual specialists, interact in surprising ways. Physiatrists and neurologists provide a striking example of that interaction. Despite the differences in their areas of practice, the two specialties have several things in common.

## Neurologists:

Neurologists treat most diseases or conditions related to your nervous system. That includes your brain, your central nervous system and the nerves in your hands, feet or other areas. Neurologists also treat the blood vessels in your brain, where a swollen or burst vein can be debilitating or fatal. Strokes, chronic headaches, epilepsy, and problems with perception and reasoning are all part of a neurologist's practice. Neurologists refer patients to a neurological surgeon to correct some conditions, such as weakened blood vessels, that don't lend themselves to medical treatment. Some neurologists -- called interventional neurologists -- perform similar procedures by inserting miniature instruments through a tube in the patient's vein.

## Physiatrists

Physiatrists are also trained physicians, but their focus is very different from a neurologist's. Physiatrists are doctors of physical medicine, and their focus is on proper physical mobility and agility. They work with patients whose physical health has been affected by disease, injury or chronic medical conditions, and help them restore or maintain their strength and range of motion as much as possible. Physiatrists often collaborate with other physicians, helping their patients recover from treatments or illnesses. Once the physiatrist has created a plan of treatment, a physical therapist often takes over the day-to-day program of therapy.

## Compare and Contrast

On the surface, it would seem that neurology and physiatry couldn't be more different. One focuses on the brain and nerves, the other on muscles and joints. Yet there are some key areas of overlap. Both neurologists and physiatrists may specialize in pain management, which can have physical or neurological causes. Some physiatrists specialize in treating victims of spinal cord injuries, which is also part of a neurologist's scope of practice. Neurologists also treat many neuromuscular conditions, such as multiple sclerosis or Parkinson's disease, that are caused by the nervous system but cause physical disabilities. A physiatrist might coordinate the same patient's physical therapy.

## Training

Up to a point, neurologists and physiatrists are trained similarly. Like other doctors, they begin their careers with a premedical undergraduate degree, then move on to medical school. Medical school takes another four years, usually divided into two years of classroom and laboratory instruction, then two years in clinical rotations. Students who've already decided on a specialty can take suitable electives, or additional clinical time in their chosen field. After graduation, future physiatrists or neurologists spend one year in a general internship and then three in an approved residency program. Additional training fellowships are available for doctors in either field, if they want to specialize further.

Source: <https://woman.thenest.com/physiatrist-vs-neurologist-14055.html>

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**For more information about PPS Health Care Providers –**  
Please check out [PPS Health Care Providers – A Guide](#) on our website.

Note: PPSN Regular contributing physician [William M. DeMayo, MD](#)  
is a PPS experienced Rehabilitative physician.





**Bruno “Bytes”**

**Richard L. Bruno, HD, PhD.**

Director, International Center for Polio Education

[www.postpolioinfo.com](http://www.postpolioinfo.com)

### How Many Muscles were Affected by the Poliovirus ?

Answer: If the poliovirus got into your spinal cord, *some* motor neurons going to every muscle in your body, were damaged or killed. This was known in the 1940s and comes from Dr. David Bodian's research on monkeys and humans infected with polio. He found that 96% of motor neurons were damaged by the poliovirus but that at least 60% had to be killed before muscles show any weakness.

So "unaffected limbs" and "non-paralytic" polio survivors could have lost 59% of their motor neurons and not have known since they had no muscle weakness! This is why you can't "pump up" your "good" leg or arm through exercise to compensate for muscle weakness on the other side of your body. It's also why polio survivors so often come in confused when they experience that their "good leg" is getting weaker even though they "didn't have polio" in that leg.

**BOTTOM LINE:** The poliovirus went everywhere!

### Overuse of my “Good” Leg and significant Sleep Issues

Question: For the last 17 years my left leg and hip area have become much weaker. In 2000, I was fitted with a hip to toe brace. From the overuse of my right leg, I now have pain in my right knee and right thigh. To make matters worse, my sleep patterns are horrible. It seems like I never get more than 3 solid hours of sleep and I must be taking 10-12 mini-naps per day. Is this normal?

Answer: You sound normal for a polio survivor. You are overusing your “good” right leg, just as you yourself have diagnosed! I hope you're using 2 Loftstrand (forearm) crutches with the long leg brace! If not, please speak to your rehabilitative physician (or) physical therapist about crutches or a rolling walker.

You may need right leg bracing or better yet a power wheelchair. See your rehabilitation physician (physiatrist) and get a new evaluation from him/her.

Your 10-12 mini-naps per day are not normal nor a good way to live. What if you're driving and a “mininap” comes on? Please talk to your physician about a sleep study as soon as possible.

For more information about these issues, check out both the Articles, Video and Bruno Byte sections of the comprehensive [Encyclopedia of Polio and PPS](http://polionetwork.org/home) at [polionetwork.org/home](http://polionetwork.org/home)

### Garfield / Jim Davis



# How to Manage Brain Fog Caused by Chronic Pain

BY [PETER ABACI, MD](#) (Board-certified anesthesiologist and pain specialist)

Do you find that you're more forgetful or fuzzy-headed when you are in pain? Is it harder to concentrate? Like many with chronic pain, you may be experiencing signs of brain fog, also known as cognitive dysfunction. If this is happening to you, rest assured you are not alone.

When we say "cognitive function" we're talking about a variety of mental activities including memory, learning, problem solving, decision making, and attention. Over the past decade, we have come to learn that the experience of pain can play a big role in how well we perform these mental activities, and the more intense the pain and the more body parts that are affected, the more disruptive it seems to get.

Perhaps the best-known example of this is "fibro fog," which is a term commonly used by those with fibromyalgia to describe the cognitive difficulties they experience on a daily basis. Common complaints of fibro fog include forgetfulness, poor concentration, difficulty finding words, and trouble carrying on a conversation. But this feeling of mental cloudiness can occur with other chronic pain syndromes as well, including migraines, back pain, and painful nerve disorders like diabetic neuropathy and complex regional pain syndrome (CRPS). Research has shown that chronic pain can interfere with a variety of cognitive functions, with the most recognizable being memory. Chronic pain is associated with greater recall problems for words and information, as well as for objects and places, also known as spatial memory. The more widespread the pain is in the body, the bigger the memory deficits. Pain has also been shown to interfere with how well we concentrate and stay on task, as well as our ability to organize our thoughts (known as executive function). For example, pain seems to interfere with the brain's ability to adapt to change when performing tasks.

Other factors related to pain can also contribute to brain fog, including depression and anxiety. Insomnia, also highly associated with chronic pain, can reduce mental sharpness and cognitive performance.

We're still trying to better understand the causes of this brain fog, but one possible explanation may be found in research suggesting that a brain in pain is over-activated and over-stressed. Parts of the brain that would normally get time to rest don't get a break with chronic pain, resulting in changes to how well the brain can store information and perform executive functions. It is much harder to have a conversation with someone when there are a bunch of other people in the room talking to you at the same time. Experiencing pain may create a lot of extra brain noise, making it that much harder to focus.

So, if experiencing pain seems to leave you with brain fog, what can you do? One way you may be able to decrease brain fog is by clearing out some of this extra unwanted background noise. One proven way to do this is through meditation. Mindfulness meditation training boosts focus while calming the nervous system, which can lead to improved cognitive performance and less brain fog. Distraction can also help dampen some of this background interference. Simple distraction tricks can include listening to music, journaling, drawing, or coloring. And a lot has been published on the powerful effects that exercise can have on brain performance, even in old-age. Research has found that exercise stimulates the production of a protein called *brain derived neurotrophic factor* which has been shown to boost mental function and improve both depression and anxiety.

Along with trying out some of these tools, consider taking notes and making lists to help be prepared for moments of cloudiness or forgetfulness. Carrying a notepad with critical information (like your medication list) to places like doctor appointments or when running errands can help remind you of what is most important. Improving brain function is still an active area of research, so hopefully we'll see more helpful treatments on the horizon soon.

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DEAR READERS: Welcome to 2020!

The New Year has arrived, and with it our chance for a new beginning.

Today we have an opportunity to discard destructive old habits for healthy new ones, and with that in mind, I will share Dear Abby's often-requested list of New Year's Resolutions, which were adapted by my late mother, Pauline Phillips, from the original credo of Al-Anon:

JUST FOR TODAY: I will live through THIS DAY ONLY. I will not brood about yesterday or obsess about tomorrow. I will not set far-reaching goals or try to overcome all of my problems at once.

I know that I can do something for 24 hours that would overwhelm me if I had to keep it up for a lifetime.

JUST FOR TODAY: I will be happy. I will not dwell on thoughts that depress me. If my mind fills with clouds, I will chase them away and fill it with sunshine.

JUST FOR TODAY: I will accept what is. I will face reality. I will correct those things that I can correct and accept those I cannot.

JUST FOR TODAY: I will improve my mind. I will read something that requires effort, thought and concentration. I will not be a mental loafer.

JUST FOR TODAY: I will make a conscious effort to be agreeable. I will be kind and courteous to those who cross my path, and I'll not speak ill of others. I will improve my appearance, speak softly and not interrupt when someone else is talking. Just for today, I will refrain from improving anybody but myself.

JUST FOR TODAY: I will do something positive to improve my health. If I'm a smoker, I'll quit. And I will get off the couch and take a brisk walk, even if it's only around the block.

JUST FOR TODAY: I will gather the courage to do what is right and take responsibility for my own actions.

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We understand that most of us cannot take a "brisk walk" around the block. If you can? Do it! If you cannot? Try to get outside, breathe in the fresh air and feel the healing warmth of the sun, even on the coldest of days.

Our Warmest of New Year's wishes –

From the volunteer team at the [Polio Survivor's Network](#)



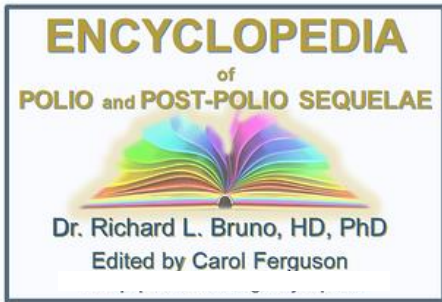
**Thank you for your kind words and thoughtful [donations](#).**



**Together, we can and ARE making a difference.**

With gratitude, we have published the list of 2019 contributors along with our "In Memoriam" update.





## Using the Index of the comprehensive Encyclopedia of Polio and PPS

We get a lot of questions on just HOW to use this valuable tool.  
It's easy.

The Index is on the Home Page of the [Encyclopedia](#).  
The many, many topics are identified. Just choose what you want.  
(or) Enter your topic of choice in the "search" bar.

The Encyclopedia of Polio and PPS Index contains all of the updated Articles (Research, Informational and all Bruno Bytes) published by [Richard L. Bruno, HD, PhD](#).  
Our PA Polio Network Team updates the Index/Tags on a regular basis with any new information published by Dr. Bruno.

Are you unfamiliar with Dr. Bruno's history? His [Biography](#) (as well as all of our regular contributors) is clearly visible in the "Professionals" section of our [website](#).

A new year is like a blank book. The pen is in your hands. It is your chance to write a beautiful story for yourself.

**HAPPY NEW YEAR**

Always feel free to contact us.



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