

Post Polio Syndrome

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FACT SHEET



What is post polio syndrome (PPS)?

Polio is a virus that attacks the nervous system. Some people exposed to the polio virus merely had flu like symptoms, while others experienced muscle paralysis, and problems with breathing and/or swallowing. In the 1950's, the development of the Salk and Sabin vaccines nearly eliminated polio in the United States.

Fifteen or more years after being affected by the polio virus, up to 80% of polio survivors develop new symptoms of weakness, pain in joints and muscles and fatigue.

What causes post polio syndrome?

The cause of post polio syndrome is not known. With the initial polio infection, many motor neurons died. A motor neuron is made up of a cell in the spinal cord, a nerve and the connecting muscle. The remaining healthy motor neurons sprout to the orphaned muscles creating much larger motor units. A widely accepted theory on the cause of post polio syndrome is that these larger motor units deteriorate over time due to added stress causing new weakness.

How is Post polio syndrome diagnosed?

Post polio syndrome is diagnosed by a neurologist or physiatrist when there is:

- A history of polio with lasting muscle weakness and atrophy
- Signs of damaged nerve function with an electromyography (EMG) test
- A period of partial or full recovery and no change in symptoms for > 15 years
- New muscle weakness and fatigue over time
- New symptoms persisting for a least one year

Elimination of all other possible causes of the new symptoms

Additional symptoms may include poor tolerance to the cold, muscle twitching or cramps, breathing difficulties, voice changes, and falls.

What treatments are available for someone with post polio syndrome?



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What treatments are available for someone with post polio syndrome?

Rehabilitation aims to help individuals reach balance between activity demands and ability. Team members conduct a thorough examination keeping the person's needs, roles, and lifestyle in mind. An individualized program is developed which should include:

- Education about ways to manage symptoms from PPS
- Energy conservation for fatigue, pain management, and fall prevention
- Introduction to equipment and technology that help to improve symptoms
- Problem solving about ways to safely perform activities

For example, raising a toilet seat higher or using a cane may decrease the amount of effort it takes to move around. Wearing a lower leg brace if needed may help leg muscles to move easier, which can decrease pain and help to reduce falls. Power mobility such as a scooter enables people to be active in the community without experiencing the fatigue often associated with excessive walking.

What about exercise?

Exercise when appropriate and in moderation is also important. Cardiovascular fitness, stretching for flexibility, and strengthening selected muscles must be carefully prescribed to avoid too much stress on the muscles, pain and fatigue. Warm water pools can be ideal for exercise. Water has both resistive and assistive properties and thus caution must be used to avoid overworking muscles in the pool. Exercise should not cause new muscle weakness, pain or fatigue.

What type of health care providers treat post polio syndrome?

A team approach is most effective starting with a physician familiar with post polio syndrome or a post-polio clinic. Team members may include the following:

- physiatrist, also called a physical medicine and rehabilitation doctor
- neurologist, orthopedist, and/or pulmonologist
- behavioral health specialist such as a psychologist or social worker (MSW)
- occupational therapist (OT)
- physical therapist (PT)
- certified orthotist (CO)
- speech and language pathologist (CCC-SLP)

Management of post polio symptoms requires clinicians familiar with post polio syndrome along with a willingness to listen to the unique needs of the individual.



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What tests are done for post polio syndrome?

Common medical tests done to help manage symptoms of PPS include:

- Sleep study may help identify sleep apnea which can also be a cause of fatigue
- MRI, CT or X-ray's may be ordered to determine the cause of pain
- Bone density may be ordered but should test the weaker hip

It is the collective changes made by polio survivors combined with the proper medical care that can lead to a more comfortable, less fatigued, and ultimately better quality of life.

For further information and resources, visit <http://post-polio.org>.

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