

# DI 24580.010 Evaluation of Postpolio Sequelae

## A. BACKGROUND

On 7/2/03, SSA published SSR 03-1p, “Titles II and XVI: Development and Evaluation of Disability Claims Involving Postpolio Sequelae.” This Ruling is published in its entirety in [DI 24580.010](#) and replaces the previous text, “Evaluation of Late Effects of Poliomyelitis.”

## B. POLICY

SSR 03-1p

### POLICY INTERPRETATION RULING

#### TITLES II AND XVI: DEVELOPMENT AND EVALUATION OF DISABILITY CLAIMS INVOLVING POSTPOLIO SEQUELAE

**PURPOSE:** To provide guidance on SSA policy concerning the development and evaluation of postpolio sequelae in disability claims filed under titles II and XVI of the Social Security Act (the Act).

**CITATIONS (AUTHORITY):** Sections 216(i), 223(d), 223(f), 1614(a)(3) and 1614(a)(4) of the Social Security Act, as amended; Regulations No. 4, subpart P, sections 404.1502, 404.1505, 404.1508, 404.1509, 404.1511 - 404.1513, 404.1520, 404.1520a, 404.1521, 404.1523, 404.1525, 404.1526, 404.1528, 404.1529, 404.1530, 404.1545, 404.1546, 404.1560 - 404.1569a; and 404.1593 - 404.1594 and Regulations No. 16, subpart I, sections 416.902, 416.905, 416.906, 416.908, 416.909, 416.911, 416.913, 416.920, 416.920a, 416.921, 416.923, 416.924, 416.924a - 416.924c, 416.925, 416.926, 416.926a, 416.928, 416.929, 416.930, 416.945, 416.946, 416.960 - 416.969a, 416.987, and 416.993 - 416.994a.

**INTRODUCTION:** “Postpolio sequelae” refers to the documented residuals of acute polioencephalomyelitis (polio)<sup>1</sup> infection as well as other disorders that have an etiological link to either the acute polio infection or to chronic deficits resulting from the acute infection. Disorders that may manifest late in the lives of polio survivors include postpolio syndrome (also known as the late effects of poliomyelitis), early advanced degenerative arthritis, sleep disorders, respiratory insufficiency, and a variety of mental disorders. Any one or a combination of these disorders, appropriately documented, will constitute the presence of “postpolio sequelae” for purposes of developing and evaluating claims for disability on the basis of postpolio sequelae under

Social Security disability. Even though some polio survivors may have had previously undetected motor residuals following the acute polio infection, they may still report progressive muscle weakness later in life and manifest any of the disorders listed above.

The Act and our implementing regulations require that an individual establish disability based on the existence of a medically determinable impairment; i.e., one that can be shown by medical evidence, consisting of symptoms, signs, and laboratory findings. Disability may not be established on the basis of an individual's statement of symptoms alone.

This Ruling explains that postpolio sequelae, when accompanied by appropriate symptoms, signs, and laboratory findings, is a medically determinable impairment that can be the basis for a finding of "disability." It also provides guidance for the evaluation of claims involving postpolio sequelae.

**POLICY INTERPRETATION:** Postpolio sequelae constitute a medically determinable impairment when documented by appropriate medical signs, symptoms, and laboratory findings. Postpolio sequelae may be the basis for a finding of "disability," as discussed below. When making a determination of disability in cases of postpolio sequelae, the adjudicator or decisionmaker must be sure that all of the individual's functional limitations have been considered. To do this, the adjudicator must make a comprehensive assessment of the cumulative and interactive effects of all of the individual's impairments and related symptoms, including the effects of postpolio sequelae.

What is the definition of "disability" and "medically determinable impairment"?

Sections 216(i) and 1614(a)(3) of the Social Security Act (the Act) define "disability"<sup>2</sup> as the inability to engage in any substantial gainful activity (SGA) by reason of any medically determinable physical or mental impairment (or combination of impairments) which can be expected to result in death or which has lasted or can be expected to last a continuous period of not less than 12 months. Sections 223(d)(3) and 1614(a)(3)(D) of the Act, and 20 CFR 404.1508 and 416.908, require that an impairment result from anatomical, physiological, or psychological abnormalities that can be shown by medically acceptable clinical and laboratory diagnostic techniques. The Act and regulations further require that an impairment be established by medical evidence that consists of signs, symptoms, and laboratory findings, and not only by an individual's statement of symptoms.

For purposes of disability claims adjudication, what constitutes postpolio sequelae?

For purposes of disability claims adjudication, postpolio sequelae refer to multiple physical and mental disorders that may be manifested by polio survivors many years following acute polio infection. Any one or a combination of these disorders appropriately documented by signs, symptoms, and laboratory findings will constitute the presence of postpolio sequelae. The term "postpolio sequelae" includes the documented residuals of acute infection as well as all other documented clinical conditions that have an etiological link to either the acute infection or to its residual deficits.

Motor weakness is the most common residual of acute polio infection and is usually manifested by observable weakness, muscle atrophy, and reduced peripheral reflexes. These obvious clinical findings are used to document the history of poliomyelitis. Electromyographic studies may be used by clinicians in clarifying the cause and extent of neuromuscular impairment, but should not be needed for purposes of disability decisionmaking. Nonetheless, when electromyography (EMG) results are available for review, these data should be considered in decisionmaking. Typically, we will not order or purchase EMG studies.

In the absence of evidence to the contrary, and as long as the medical findings support a reasonable medical link between the prior polio infection and the present manifestation of any one or combination of the disorders discussed in the ruling, we will find that the individual has postpolio sequelae. For example, an individual with a history of polio affecting the left lower extremity who, on examination, has weakness and atrophy of the left thigh musculature with an observable limp now complains of chronic left lower extremity pain and is found to have lumbar stenosis documented by medically

acceptable imaging. As discussed below, due to the chronic postural imbalance related to the effects of polio, a reasonable medical link exists between this individual's current medical condition (degenerative lumbar spine disease) and his/her prior polio residuals. Accordingly, we would make a finding of postpolio sequelae. Currently, chronic pain, fatigue, problems with disrupted sleep, and difficulties with memory, demonstrates a reasonable medical link. On the other hand, an individual with a history of polio (for example, stating "I was in an iron lung") who, on examination, has normal motor findings, including normal posture and gait, now complains of pain clinically consistent with chronic radiculopathy, and has medically acceptable imaging demonstrating degenerative arthritis in the lumbar spine. This individual's current medical condition does not demonstrate a reasonable medical connection with the prior polio; instead, the degenerative arthritis should be adjudicated as a musculoskeletal disorder unrelated to the prior polio infection. Postpolio sequelae include such disorders as postpolio syndrome (also known as the late effects of poliomyelitis), early advanced degenerative arthritis, sleep disorders, respiratory insufficiency, and various mental disorders. These disorders and documentation issues concerning them are discussed in detail below.

#### What is meant by the term "postpolio syndrome"?

According to the National Institute of Neurological Disorders and Stroke (NINDS), postpolio syndrome is a condition that affects polio survivors anywhere from 10 to 40 years after recovery from an initial paralytic attack of the poliomyelitis virus. The NINDS states that postpolio syndrome is characterized by a further weakening of muscles that were previously affected by the polio infection. The signs and symptoms include fatigue, slowly progressive muscle weakness, and, at times, muscular atrophy. The NINDS states that joint pain and increasing skeletal deformities such as scoliosis are common. Not all polio survivors experience these clinical problems, and the extent to which polio survivors are affected by postpolio syndrome varies. The onset of new or worsening signs and symptoms is associated with a further reduction of the individual's capacity to independently carry out activities of daily living.

#### How does the presence of early advanced degenerative arthritis constitute an element of postpolio sequelae?

Polio survivors often manifest motor residuals in a single extremity and thus function day-to-day with chronic postural imbalance. Clinicians have described degenerative musculoskeletal disorders etiologically linked to long-standing postural imbalance. Abnormal weight-bearing in polio survivors produces exaggerated wear and tear on the bones and joints of the spine or limbs that are overused to compensate for limbs weakened by polio. Early onset of advanced degenerative arthritis can be found in a compensatory extremity or spine. Where such an etiological relationship is clear, clinically documented early advanced degenerative arthritis in a compensating limb or spine is considered one of the postpolio sequelae.

Documentation of early advanced degenerative arthritis may include medically appropriate imaging or abnormal physical findings of advanced arthritis on clinical examination.

Chronic pain disorders related to early degenerative osteoarthritis should be evaluated based on the impact of the pain and its treatment on the individual's physical and mental functioning.

#### Why are sleep disorders and respiratory insufficiency possible manifestations of postpolio sequelae?

Some polio survivors report the occurrence of sleep disorders that are determined by clinical evaluation to be related to respiratory insufficiency during sleep. The poliovirus has demonstrated a propensity to attack the motor neurons responsible for respiratory function, and, during the acute infection, some individuals require ventilatory assistance. For example, years ago patients with acute polio infection were placed in an "iron lung" for ventilatory assistance. Some patients who required such assistance recovered and may have returned to normal lives without obvious signs of respiratory

insufficiency. Some polio survivors, however, have reported the onset of sleep disorders years following the acute polio infection, and physicians have linked these sleep disorders to weakening of the respiratory musculature. During sleep, even slight weakness of the respiratory musculature may become clinically significant and interfere with breathing capacity. Chronic sleep deprivation resulting from repeated episodes of sleep apnea may result in the development of excessive daytime drowsiness or cognitive and behavioral changes.

Respiratory insufficiency should be documented by abnormal pulmonary function studies. The presence of a sleep disorder related to respiratory insufficiency requires documentation by longitudinal treatment records, including such things as abnormal polysomnography or other appropriate evidence. Note, however, that we<sup>3</sup> generally will not purchase a polysomnogram (also called a PSG, sleep study, or sleep test). See also 3.00H of the Respiratory System medical listings for additional information concerning sleep-related breathing disorders (see 20 CFR Appendix 1 to Subpart P of Part 404--Listing of Impairments).

#### What types of mental disorders may be seen in individuals with postpolio sequelae?

Some polio survivors report the onset of problems with attention, concentration, cognition, or behavior. Some researchers have suggested that certain cognitive and behavioral deficits are the result of the prior polio infection that involved the brain, although others do not agree with that concept. Other researchers have suggested that the traumatic psychological experiences associated with acute polio infection are revived when polio survivors recognize the onset of further weakness and functional loss.

Many polio survivors endured a life-threatening infection as young children. They may have spent extended periods away from their homes and families while hospitalized with paralysis or respiratory dysfunction, or while undergoing multiple orthopedic surgeries. Often they endured many months, or sometimes years, of hospitalization and rehabilitation. The psychological effect of perceiving the onset of further weakness, fatigue, respiratory dysfunction or joint pain, many years following the acute infection, can be significant. Signs and symptoms of anxiety and depression may produce further deterioration in function.

Any mental impairment that could have an etiological link to the acute polio infection or its chronic residuals may be considered a manifestation of postpolio sequelae. Deficits in attention, cognition, or behavior may be demonstrated by reduced concentration capacity, inability to persist in tasks, or memory problems. Also, behavioral abnormalities may be demonstrated by mood changes, social withdrawal, or other behaviors inappropriate for the individual. Mood disorders characterized by anxiety and depression may also be seen and clinically documented in these individuals.

#### How do postpolio sequelae affect an individual's functional capacities?

Individuals experiencing postpolio sequelae may complain of the new onset of reduced physical and mental functional ability. Complaints of fatigue, weakness, intolerance to cold, joint and muscle pain, shortness of breath and sleep problems, mood changes, or decreased attention and concentration capacity may hallmark the onset of postpolio sequelae. Weakness, fatigue, or muscle and joint pain may cause increasing problems in activities such as lifting, bending, prolonged standing, walking, climbing stairs, using a wheelchair, transferring from a wheelchair (e.g., from wheelchair to toilet), sleeping, dressing, and any activity that requires repetition or endurance. Changes in attention, cognition, or behavior may be manifested by reduced capacity to concentrate on tasks, memory deficits, mood changes, social withdrawal, or inappropriate behavior.

Many polio survivors who had been in a stable condition may begin to require new or additional assistive devices, such as braces, canes, crutches, walkers, wheelchairs, or pulmonary support. The reduced ability to sustain customary activities, including work, may result. A previously stable functional capacity may be further diminished.

Many individuals with medically severe polio residuals have worked despite their limitations. The new onset of further physical or mental impairments (even though they may appear to be relatively minor) in polio survivors may result in further functional problems that can limit or prevent their ability to continue work activity. Postpolio sequelae may effectively alter the ability of these individuals to continue functioning at the same level they maintained for years following their initial polio infection.

#### How will we document claims involving postpolio sequelae?

We generally will rely on documentation provided by the individual's treating physicians and psychologists (including a report of the medical history, physical examination, and available laboratory findings) to establish the presence of postpolio sequelae as a medically determinable impairment. In the absence of evidence to the contrary, we will make a finding that a medically determinable impairment is established if any of the disorders discussed above have been documented by acceptable clinical signs, symptoms, and laboratory findings.

However, if evidence indicates that the diagnosis is questionable, we will contact the treating source for clarification, in accordance with 20 CFR 404.1512(e) and 416.912(e). Of course, if a favorable disability determination or decision can be made based on the available evidence of record, whether or not a link to the prior polio infection is evident, no further development need be undertaken.

The careful development of postpolio sequelae should include descriptions of the past acute illness (old records are not required), as well as a report of the current findings on physical examination. The examination report should also include the severity of any residual weakness, as well as the onset, pattern, and severity of any new physical or mental deficits. A description of current functional limitations and restrictions on physical and mental activity should be obtained from the examiner.

When possible, detailed longitudinal treatment records from the treating source should be obtained. In cases where severity of the impairment is unclear, an examination by a physician or psychologist who is knowledgeable about polio and postpolio sequelae is appropriate, if such a specialist is available.

#### How will we use evidence from third parties in cases of postpolio sequelae?

Evidence from employers and other third party sources may be valuable in documenting a loss of a previous level of functioning and should be sought when there is a discrepancy or a question of credibility in the evidence of record and a fully favorable determination or decision cannot be made based on the available evidence. For detailed discussions regarding these factors, please refer to SSR 96-7p, "Titles II and XVI: Evaluation of Symptoms in Disability Claims: Assessing the Credibility of an Individual's Statements," and SSR 96-8p, "Titles II and XVI: Assessing the Residual Functional Capacity (RFC) in Initial Claims."

#### How are symptoms assessed in cases of postpolio sequelae?

Once postpolio sequelae has been documented as a medically determinable impairment, the impact of any of the symptoms of postpolio sequelae, including fatigue, weakness, pain, intolerance to cold, etc., must be considered both in determining the severity of the impairment and in assessing the individual's RFC. The adjudicator must make a comprehensive assessment of the cumulative and interactive effects of all of the individual's impairments and related symptoms, including the effects of postpolio sequelae. Evaluate all symptoms and their effects in accordance with 20 CFR 404.1529 and 416.929, and SSR 96-7p, "Titles II and XVI: Evaluation of Symptoms in Disability Claims: Assessing the Credibility of an Individual's Statements."

#### What is the expected duration of postpolio sequelae?

Most postpolio sequelae are stable or very slowly progressive disorders. The medical evidence should readily support an expected duration of at least 12 or more months.

### Can the impairment of postpolio sequelae meet or equal listing 11.11?

The listing criteria under our current listing 11.11, Anterior poliomyelitis, may be applied both to cases of static polio (where there has been no reported worsening after initial recovery) and to cases presenting with postpolio sequelae. All documented postpolio sequelae must be considered either alone or in combination to determine whether the medical criteria of listing 11.11, or any other listing, have been met or equaled. If the impairment is not found to meet or equal a listed impairment, we consider the impact of the impairment and any related symptoms in determining an individual's RFC and we proceed to evaluate the individual's impairment under our sequential evaluation procedures in accordance with 20 CFR 404.1545 and 416.945.

It is essential that the cumulative and interactive effects of all of the individual's impairments, including symptoms, be carefully assessed in determining the individual's RFC in these cases.

### How is a disability onset date determined in case of postpolio sequelae?

A disability onset date in cases involving postpolio sequelae is set based on the individual's allegations, his or her work history, and the medical and other evidence concerning impairment severity. Generally, the new problems associated with postpolio sequelae are gradual and non-traumatic, but acute injuries or events, such as herniated discs, or broken bones from falls, may be markers for establishing a disability onset date. For additional discussion concerning the determination of onset date, refer to SSR 83-20, "Titles II and XVI: Onset of Disability."

**EFFECTIVE DATE:** This ruling is effective upon publication in the Federal Register.

**CROSS REFERENCES:** SSR 83-20, "Titles II and XVI: Onset of Disability," SSR 96-3p, "Titles II and XVI: Considering Allegations of Pain and Other Symptoms in Determining Whether a Medically Determinable Impairment is Severe," SSR 96-4p, "Titles II and XVI: Symptoms, Medically Determinable Physical and Mental Impairments, and Exertional and Nonexertional Limitations," SSR 96-7p, "Titles II and XVI: Evaluation of Symptoms in Disability Claims: Assessing the Credibility of an Individual's Statements," SSR 96-8p, "Titles II and XVI: Assessing Residual Functional Capacity in Initial Claims," and SSR 96-9p, "Titles II and XVI: Determining Capability to Do Other Work--Implications of a Residual Functional Capacity for Less Than a Full Range of Sedentary Work."

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### **Footnotes:**

[1]

Polio is caused by one of three types of polioviruses affecting the brain and spinal cord. No matter which neurons are attacked by the virus, the severity of any residual deficit depends upon how many cells within a specific area are destroyed. Fortunately, the polio infection was eradicated in the United States during the late 1950s following the development of oral polio vaccine and successful mass immunization. Most polio survivors in this country are now in their forties or older, but polio continues to be a common infection in underdeveloped countries. The World Health Organization is sponsoring immunization programs in hopes of completely eradicating the disease. Most individuals who contract polio only have mild symptoms at the time of the initial infection and then fully recover. Only 2 percent of infected persons experience paralysis from polio. Deaths from acute polio infection usually occur within the first few days following the onset of paralysis. About one-third of those individuals who do develop paralysis are left with some degree of permanent weakness, commonly involving a single extremity. Postpolio muscle paralysis is of the lower motor neuron variety and is characterized by weakness, muscle atrophy, and reflex loss.

[\[2\]](#)

Except for statutory blindness.

[\[3\]](#)

The terms we and us in this Social Security Ruling have the same meaning as in 20 CFR 404.1502 and 416.902. We or us refers to either the Social Security Administration or the State agency making the disability or blindness determination; that is, our adjudicators at all levels of the administrative review process and our quality reviewers.

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