

## Report of an EFNS Task Force

# EFNS guideline on diagnosis and management of post-polio syndrome

**European Federation of Neurological Societies (EFNS)** is an organisation that unites and supports neurologists across the whole of Europe. It was founded in December 1991 in Vienna, Austria. Currently, 40 European national neurological societies are registered members of the EFNS. Thus, the EFNS represents more than 12,000 European neurologists. ([www.efns.org](http://www.efns.org))

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**ABSTRACT:** Post-polio syndrome (PPS) is characterized by new or increased muscular weakness, atrophy, muscle pain and fatigue several years after acute polio. The aim of the article is to prepare diagnostic criteria for PPS, and to evaluate the existing evidence for therapeutic interventions. The Medline, EMBASE and ISI databases were searched. Consensus in the group was reached after discussion by email.

We recommend Halstead's definition of PPS from 1991 as diagnostic criteria.\*

Supervised, aerobic muscular training, both isokinetic and isometric, is a safe and effective way to prevent further decline for patients with moderate weakness (Level B). Muscular training can also improve muscular fatigue, muscle weakness and pain.

Training in a warm climate and non-swimming water exercises are particularly useful (Level B). Respiratory muscle training can improve pulmonary function. Recognition of respiratory impairment and early introduction of noninvasive ventilatory aids prevent or delay further respiratory decline and the need for invasive respiratory aid (Level C).

Group training, regular followup and patient education are useful for the patients' mental status and well-being. Weight loss, adjustment and introduction of properly fitted assistive devices should be considered (good practice points).

A small number of controlled studies of potential-specific treatments for PPS have been completed, but no definitive therapeutic effect has been reported for the agents evaluated (pyridostigmine, corticosteroids, amantadine).

Future randomized trials should particularly address the treatment of pain, which is commonly reported by PPS patients. There is also a need for studies evaluating the long-term effects of muscular training.

*European Journal of Neurology*, 2006, Volume 13, pp. 795-801 (August). ▲

### \*EFNS recommended definition of Post-Polio Syndrome

- Confirmed history of polio.
- Partial or fairly complete neurological and functional recovery after the acute episode.
- Period of at least 15 years with neurological and functional stability.
- Gradual or abrupt onset of new neurogenic weakness with or without extensive fatigue, muscle and/or joint pain, new muscle atrophy, functional loss, cold intolerance.
- No other medical explanation found.