

The Type A Personality

Polio Survivors tend to push themselves to the limits and neglect the need for rest thereby contributing further damage to an already weakened and ageing nervous system.

Survivors of polio were encouraged to push themselves physically and mentally to recover from polio and often to over exercise their weakened muscles to the point of exhaustion.

They can no longer afford to do this for, as Dr Bruno says: “going for the burn means that nerves are burning out”.

Other causes such as the effect of low blood sugar, medical treatments and ageing on weakened neurons play a part in the development of PPS.

Treatment Protocol

Medics need to encourage protection of the polio survivors’ nervous system:

Ensure that the following drugs are avoided or used with caution

- Beta Blockers, e.g. Propranolol
- Benzo diazepines, e.g. Diazepam
- Other central nervous system depressants, e.g. Oxazapan
- Muscles relaxants, e.g. Orphenadrine, Diazepam
- Local and general anaesthetics can also cause problems.

Advice

Conserve energy by slowing down, simplifying environment, using aids such as callipers and wheelchairs. Gentle stretching exercises and relaxation techniques are beneficial. Referrals to occupational therapists, physiotherapists and dieticians are important. Alternative therapies such as massage and acupuncture have proved to be helpful. Annual referral should be encouraged as muscles become weakened, often callipers splints etc. need to be adjusted or changed.

Make contact with a local PPS support group. These provide much needed information and advice on many matters relevant to the polio survivor.

The Scottish Post Polio Network

can be contacted on

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Please join SPPN (leaflet attached)

All donations gratefully received



Scottish Post Polio Network

PATRONS

**DR RICHARD BRUNO
MR MALCOLM MACNICOL**

Coping with Post-Polio Syndrome

Produced by SPPN Scottish Post-Polio Network

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Post-Polio Syndrome

“Anyone who has had serious involvement with a neuromuscular disease will experience a variety of problems”

These are the words of Dr Lauro Halstead, head of the Post-Polio Services at the National Rehabilitation Hospital in Washington D.C. He should know he had polio, recovered the use of his limbs and led an active life for many years until; more recently, he began to experience the symptoms that go to make up Post-Polio Syndrome.

What is Post - Polio Syndrome?

PPS refers to a range of symptoms experienced by the polio survivor including

- **Chronical Fatigue** which involves physical tiredness and brain fatigue. Dr Bruno of the Post-Polio Institute, Englewood Hospital (New Jersey) and Medical Centre, reports that “Fatigue is most commonly reported, debilitating symptom. 91% of polio survivors report new or increased fatigue, 41% reported fatigue significantly interfering with performing or completing work and 25% reported fatigue interfering with self-care activities”. Brain fatigue includes problems with concentration, attention and memory. MRI scans reveal the presence of “white spots” in

the brain of polio survivors which relate to such cognitive and neurological problems.

- **Muscle and joints problem:** muscles weakness, pain in muscles and joints, post exercise fatigue, changes in gait and increased tendency to fall, cramps and muscle twitching.
- **Respiratory problems:** breathlessness on exertion, spontaneous breathlessness, respiratory infection and sleep apnoea.
- **Swallowing and speech difficulties** of intermittent nature.

How can PPS be diagnosed?

Diagnosis is typically based on the following criteria:

- A history of paralytic/non paralytic poliomyelitis
- Partial recovery of motor function and functional stability for at least 15 years.
- Development of new symptoms such as pain, weakness, fatigue and cognitive problems.
- No other illness to account for the symptoms (diagnosis by exclusion).

What causes PPS?

Research shows that several causes favour the development of PPS. Working together these are:

- **The Polio Virus** – it damaged more motor neurons than was realised at the time of infection. For those who experiences paralysis, 90% of nerve cells in the spinal cord were damaged by the virus and half of those died. These damaged neurons sent out new sprouts to turn on muscle fibres. This sprouting enabled many polio survivors to walk again. Unfortunately the polio damaged and over sprouted neurons have been doing too much double and triple duty. As Dr Halstead says: “neurons that normally drive 20 muscle cells, in the polio survivor many have to supply up to 2,000 muscle cells. Basically this is a demand they are not designed to sustain”. The surviving neurones are less able to manufacture acetylcholine and this probably gives rise to the muscle fatigue of PPS.

Post-polio muscles certainly need longer to recover than normal muscles from any activity. Furthermore Dr Bruno has shown that the production of chemicals in the brain was also disrupted by the polio virus giving rise to cognitive problems particularly when stressed.

