

Key Points:

- ◆ Post-polio patients may not recover in the same manner as other patients. It may **take them twice as long to recover**.
- ◆ **Cold intolerance** is common, therefore warming options should be utilised.
- ◆ Prior to anaesthetic, surgeons should **position post-polio patients in consultation with the patient** to be certain not to compromise their affected limbs and maintain their baseline muscle function operatively.
- ◆ Dysphagia makes these patients **high risk for aspiration**.

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Late Effects of Polio:

Information for Theatre Nurses

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Developed in consultation with:

Polio Australia
Representing polio survivors throughout Australia

"This brochure is dedicated to my wonderful grandmother who lives with Post Polio."

Toralee Hay

Late Effects of Polio in the Operating Room

Polio may be considered a disappearing disease however this is a false premise: unvaccinated Australians are still at risk, two countries remain polio-endemic, and polio survivors (resident, immigrant or refugee) continue to require polio-aware care.

In the year 2000 Australia, like many other first-world countries, was declared "polio free" - however the last recorded "imported" case of wild polio virus was in 2007.⁽¹⁾

Late Effects of Polio (LEoP) may develop years after the initial acute infection of poliomyelitis. Acute polio directly affects the motor neurons; neurons worsen over time with LEoP. Dalakas et al. (1986) saw a pattern in polio survivors with late progressive muscle weakness and atrophy, thereby coining the term "Post-Polio Syndrome". These symptoms include generalised muscles weakness, fatigue, even dysphasia⁽²⁾ - which is quite prevalent in this patient group.

Polio can cause bulbar damage at the reticular formation and the nuclei of cranial nerves, resulting in dysphagia, dysphonia, facial and head posture weakness, regurgitation, and difficulty with chewing, swallowing and respiratory secretions.⁽³⁾

Post-Polio Syndrome symptom risk is up to 80% in those who experienced paralytic polio, and 20-40% in those who experienced non-paralytic polio.⁽⁴⁾

Why is this relevant to Theatre Nurses?

Late Effects of Polio have a quite significant effect on how our anaesthetists will administer a general anaesthetic. Looking at this disease logically - it leads to muscle and nerve degeneration - special care needs to be taken with what drugs are used to inhibit movement peri-operatively as patients in this group may not recover from anaesthetic as other patients would.⁽⁵⁾ Another key concern is maintaining body temperature - this patient group is more susceptible to cold due to the altered perfusion to their atrophied muscles. Special consideration also needs to be taken when positioning this patient group for long surgeries, paying particular attention to muscles and nerves being preserved.⁽⁶⁾

