



POLIO: A VIRULENT AND INCURABLE DISEASE

The National Museum of Australia has recently acquired a collection of calipers worn by Roger Smith, who contracted polio in Canberra in 1950. The calipers were collected by Dr Kris Klugman, curator, for display in the Rotary exhibition, *A World Without Polio: Truly Remarkable*. The exhibition was on display in the *Nation Focus Gallery*, at the National Museum of Australia, from December 2004 to February 2005.

Polio, a frightening and sometimes fatal disease, is a gastrointestinal virus which causes fever, vomiting and muscle stiffness, and can affect the nerves and cause permanent weakness. Polio can paralyse the breathing and swallowing muscles, leading to death. About five per cent of people hospitalised with polio die from the disease, and about half of those who survive suffer permanent paralysis.

Roger Smith was born in 1932 and worked as a roustabout at several properties around Canberra, gaining experience for his chosen career on the land. In 1950, Roger was working at *Parkwood*, a property in the Belconnen area of Canberra. Roger often spent weekends at his family's home in Pialligo and would then ride his bicycle to *Parkwood* on Sunday night. Roger was a fit eighteen-year-old when he returned to *Parkwood* after a weekend at home in November 1950. He was ill on the Monday with nausea, no energy and (he thinks) aching joints. He was kept at the homestead for a few days before being taken to hospital. As Ginninderra Creek was flooded, he was taken by truck through

the paddocks. His father met the truck and took him the rest of the way to hospital.

Roger remembers being carried into the Canberra Community Hospital by Dr Jim McCracken, who was a Resident Medical Officer at the hospital in November 1950. Roger was immediately diagnosed with poliomyelitis (polio) and was put in isolation. A lumbar puncture confirmed the diagnosis. He was paralysed from the waist down.

His plans for a career on the land were curtailed, though he did later gain a wool-classing certificate and ran sheep when he took over his father's 260-acre property.

At first Roger was bandaged to a MacNamara frame. He was completely immobilised. When the frame was removed he had physiotherapy twice a day and a regime of exercises, which included 'slings and gadgets'. Roger was in hospital in Canberra for nearly ten months. He was then allowed home for a few days at a time in a wheelchair for two months before going to a rehabilitation home at Jervis Bay for another ten months. There he met other boys with polio and still keeps in touch with those living in Goulburn, Orange and Bathurst.

At the rehabilitation home, Roger was fitted with calipers. He returned to Canberra able to walk with calipers and sticks rather than being in a wheelchair. Over the years his legs required more support and the calipers were changed and lengthened. He used the calipers to walk until the late 1990s, when he gradually lost the movement in his legs. Now confined to a wheelchair, he hopes to regain some walking ability after surgery later this year.

The three young children living at the *Parkwood* homestead did not contract polio. However, five or six children living in the same street as the Smith family in Pialligo did contract polio.

It is fifty years since Dr Jonas Salk developed the first polio vaccine in 1955, a killed-virus vaccine. This was followed by Dr Albert Sabin's oral live virus polio vaccine, tested worldwide in 1957, which was then used extensively as it could be given orally. Despite some early problems with vaccination it has been spectacularly successful in eliminating polio from many countries. It is estimated that the Sabin and Salk vaccines together save an estimated 600,000 lives each year worldwide. Today, polio is close to being eradicated worldwide. However, vigilance is still



Photos: courtesy Roger Smith

If you, or a friend, or a member of your family, contracted polio in Australia, Pip McNaught would like to document the story.

Please send details to p.mcnaught@nma.gov.au or by post c/o The Friends of the National Museum of Australia, GPO Box 1901, Canberra ACT 2601.

required to maintain high immunisation levels even in countries where polio has already been eliminated, including America and Australia, so that there is no infection from nations where it is still active.

Polio was known in Australia by the late 1800s, and in the 1930s nearly 7000 cases were notified. From 1944 to 1954 nearly 17,000 cases were notified, with more than 1000 deaths. In America in the early 1950s, polio killed or paralysed tens of thousands of people.

Outbreaks of polio usually occurred in summer, terrifying communities and causing public hysteria. It is almost impossible to exaggerate the fear that polio caused at the time. Swimming pools, theatres and cinemas were closed during epidemics and large gatherings were shunned. Polio seemed to attack the healthiest and fittest of children and young adults. Many very young children contracted the disease but it was not only children: one nurse at the Canberra Hospital, Judith Shakespeare, died a few weeks after contracting polio. Sometimes adults did not realise they were at risk because the disease was also called infantile paralysis.

Polio, or poliomyelitis, is an acute illness brought on when one of three types of polio virus (1, 2 and 3) invades the gastrointestinal tract. The virus has an affinity for nervous tissue, and can cause paralysis if it reaches the central nervous system. Its incubation period is 3–21 days.

Some sufferers with upper body paralysis could not use muscles to inflate their lungs and were placed in 'iron lungs' or artificial respirators. Once the body was enclosed a perfect seal was created, with the head outside the box. A pump extracted air from the box and the chest would expand, creating space in the lungs that would automatically be filled by air flowing through the mouth and nose. When the air flowed back into the box the lungs would empty. Many patients were respirator-dependent for months or years – a few remained dependent their whole lives. The noise of the pump was reassuring; patients knew they were in grave danger if the pump failed. During mechanical failure or electricity cuts it was necessary to keep the pump operating manually with large bellows. Many patients recovered to a certain extent, but remained crippled, wearing calipers and using crutches to walk.

Roger Smith remembers two iron lungs across the corridor from his room in the isolation unit at Canberra Hospital. A number of patients were treated in the iron lung during his stay at the hospital.

The standard medical treatment for polio was to immobilise affected limbs and isolate patients. Even small children were sent to isolation hospitals. Often parents were only allowed to visit once a week for a few hours. In some hospitals visiting was for one hour on Sundays and visitors and patients were separated by glass, such was the fear of infection. After a period of immobilisation there were exercises and physiotherapy sessions to treat wasted muscles. Elizabeth Kenny was a bush nurse who, with very little formal training, had some success with treatment for polio that included exercises and heat rather than immobilisation. She travelled to England to enlist as an army nurse in 1915. As the head of a unit, her title was 'Sister'. Returning to Australia she established her first clinic in Townsville for seventeen patients suffering from polio. Her methods gained great recognition in America but were not looked upon favourably by doctors in Australia. She died in 1952.

Polio remains a virulent and incurable disease. Roger Smith's calipers are a testament to the impact on one person. Though no longer in Australia, polio is still a threat in many parts of the world, with many children suffering the devastating effects of the disease. Worldwide eradication is the goal. Roger Smith is very keen for people to understand about polio and continue with immunisation so that there is some protection against this disease and no more people have their limbs affected or their lives cut short. 🗨️

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Jean MacNamara

Australian Women's Archives Project Web Site
http://www.asap.unimelb.edu.au/bspars/exhib/journal/as_macna.htm

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