

Polio Particles 12

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Nana needs a nap

One afternoon Canadian polio survivor, Beryl Baker, *was out with our seven year old granddaughter. When she asked me why both of her parents and her grandfather worked out at the local gym and I didn't. I explained as best I could about me having Polio as a child and now I had Post-Polio Syndrome. It was at that moment I decided that I needed a book to explain the symptoms of Post-Polio Syndrome.* The book is written from the perspective of a grandchild and has amusing colorful illustrations. Five pages tell how Nana contracted polio. She was cared for at home, gradually recovered, was teased when she returned to school, got married and had a career and two sons. When the grandchildren arrived Nana loved playing with them but things started to go wrong. *Nana's muscles had stopped working properly. She would get very tired. Nana had a problem called fatigue. That's even worse than being tired.* Nana has a wide range of possible symptoms of PPS such as aching muscles, muscle twitching, falls, cramps, cold intolerance, breathing and swallowing difficulties and problems finding words when she is tired. Nana has had to find ways of dealing with these problems. *When I go to visit Nana and she's in bed, I just get a video and crawl in beside her, because she'll watch whatever video I put in the machine...she'll let me use some of her blankets to make a fort.* Her granddaughter has learnt when to say 'Nana, you need a nap.' The book costs \$US9.95 (plus postage). You can order it by mail from Computer Elite, 3105 Hwy 11 East, RR2, Oro Station, Ontario, Canada, L0L 2E0 charging it to VISA or MasterCard (give name on card, card number and expiry date). It can also be ordered by phone (1 705 487 6595). Computer Elite is open Monday to Friday from 1am to 2pm (Australian eastern summer time).

Synthetic polio virus manufactured

Dr Eckard Wimmer, head of a biomedical research team at the State University of New York made a polio virus in a project funded by the Pentagon to combat biological warfare. Reporting on US Tech Live TV, Jessica Rappaport said that what is disturbing is that the team re-created the virus by using the Internet to obtain the virus's genome sequence. It took three years to create the virus. Wimmer says he choose polio because *it's a relatively simple virus. Re-creating a virus like smallpox would be much more complicated.* Wimmer says the ability to manufacture polio means that even if polio becomes extinct people will still need to be vaccinated and vaccines will need to be stockpiled because of the threat of terrorism.

Polio in Madagascar

In March-April, 2002, four cases of paralytic polio were reported in Madagascar. None of the children affected had been fully vaccinated. The strain of the virus was a type-2 vaccine derived virus which had mutated and recombined with non-polio enteroviruses. The danger of Sabin vaccine virus mutating and affecting non-vaccinated people was discussed in this column in Newsletter 48.

West Nile virus mimics the effects of polio

There were numerous recent news releases about the US outbreak of the mosquito-borne West Nile virus and the surprising symptoms it is causing in some of those infected. The Boston Globe (24/9/02) described *stunned neurologists* in Mississippi and Georgia reporting patients *suffering from the hobbled limbs, impaired breathing, and fevers that are the hallmark*

*of polio. Patients are also enduring prolonged muscle weakness and respiratory ailments that will require months of treatment and probably will disable some of the patients permanently. As with polio the symptoms tend to be asymmetrical eg one leg affected. The West Nile virus which is common in Africa and the Middle East was first detected in the US in 1999. Mosquitoes acquire the virus from birds and pass it on to other species. The description of the infection will sound familiar to polio survivors. Most people who are infected develop no symptoms, or flu-like symptoms. About one percent becomes severely ill with encephalitis or meningitis and about 10% of these people die. The West Nile virus comes from a different group of viruses than poliovirus. In the polio-like cases of West Nile the virus attacks the grey matter of the spinal cord which contains the neurons that cause muscle movement. Only a small number of polio-like cases have been reported but it is now believed that many patients with West Nile virus may have been misdiagnosed eg as having Guillain-Barre Syndrome, and prescribed potentially life-threatening treatments. In the past severe West Nile was characterized by meningitis and encephalitis but the muscle weakness and other symptoms similar to polio were not evident. Nature (23/10/02) says that *the West Nile virus and its infection pattern may be changing over time—attacking other parts of the nervous system beside the brain...The US population might be particularly susceptible to attack by the virus. Unlike populations in regions where West Nile is endemic, they may lack natural immunity. Alternatively, the virus itself could be different. 'There does seem to be an evolutionary change in the virus,' says neurologist, Richard Johnson of Johns Hopkins University. The US strain, seems to attack the nervous system more.* There is no vaccine or any specific treatment for West Nile virus apart from supportive care. There is no effective treatment for West Nile's polio-like symptoms and doctors are unsure what will happen to these patients in the long term.*

Did older people have polio more severely?

For many years it has been accepted wisdom that the severity of polio increased with age at infection; older patients being more likely to develop paralysis or die from the disease. To find out whether this is so, a group of Danish researchers, headed by Nete Nielson, examined the patient records of 5590 people who contracted polio between 1940 and 1953 and were admitted to the main infectious disease hospital in Copenhagen. They found that severity of polio (measured by rates of paralysis and death) did not show a steady increase with age, but rather a U-shaped graph with severity being greatest for youngest and oldest patients. Fifty-three percent of children under 2 had a discharge diagnosis of paralytic polio. The rate decreased to 20% among those aged 8-9 years and increased to 43% among those over 35 years. The steep increase in severity of polio among young adults was associated with a change in type of paralysis, with respiratory paralysis being much more frequent. The researchers speculate that this was caused by differences in the commonest mode of transmission of the polio virus for children and adults. *The faecal-oral route of transmission is usually considered the main mode of virus spread, but as the virus is present in the pharynx, droplet spread from person to person is possible.* As adults have better sanitary practices than children they may more often be infected via droplet spread. *Furthermore it has been suggested that bulbar symptoms might result from infection with the virus through the tonsillo-pharyngeal route, whereas gastro-intestinal infection might initially result in paralysis of the legs.* (International Journal of Epidemiology, 2002, p.181)

Survivors of vaccine associated polio

VAPS (The Vaccine Associated Polio Society) is an American organization dedicated to solving the problems faced by people with VAPP (vaccine associated paralytic polio). Its website, which is still partly under construction, can be found at www.vaps.us. VAPS estimates that there are at least 8-10 cases of VAPP in the US each year. It believes that some cases are misdiagnosed and that in reality the figures are higher than this. As its mission statement proclaims while VAPS is *pro immunization* it is *pro safe polio vaccine*. The society has influenced current US polio vaccination policies which now favor the Salk over the Sabin, or live, vaccine.

Mice may provide answers about cause of PPS

Neurologist, Dr Burk Jubelt and his colleagues are using mice in research to test the truth of the three principal theories that attempt to explain post-polio syndrome. Jubelt and his colleagues infected a group of mice with polio and are comparing their muscle function and nerve damage with a group of non-infected mice. Later the mice were sacrificed and their tissue analysed. Findings of the research will be published soon. A group of mature mice, analogous to older polio survivors, is currently being studied. The theories being evaluated are: 1) The most popular, degenerative theory, which *postulates that the new sprouts which grew to substitute for the sprouts killed by the original infection are dying back due to exhaustion from increased metabolic demand over years of use.* 2) The viral theory that argues that the polio virus has either *lain dormant in the central nervous system or mutated into a form that is slowly destroying nerve tissue.* 3) The immune mediated theory that argues that *inflammation or an autoimmune mechanism has led to the symptoms.* Jubelt believes that once the cause of PPS is established mice can be used to test the efficacy of different treatments for symptoms. (This story is from *Polio Network News*, Fall, 2002).

PPS costs minister his job

Tom Zingale, an American polio survivor, is a Lutheran minister. Last year PPS resulted in him being prescribed a wheelchair. His congregation and bishop found it more difficult to adjust than Tom did and against his wishes Zingale was forced to retire. *New Mobilty* (December, 2002) reports that in his farewell sermon Zingale said: *I am tired of those who play games with my faith by accusing me that because God's glory has not been manifested in some visible way, in total healing, that I am any less a Christian, or have a weak faith, or have a hidden sin, which an anonymous tape accused me since I remain in the brokenness of chronic illness.* Zingale says much of the suffering of people with disabilities is caused by Christians who subscribe to the view that *if you're right with God, everything's right in your life, that you have health, wealth and prosperity. I believe in the theology of the cross, because Jesus died on a cross and through the brokenness of the world we have strength from God to go on.* In his 'retirement' Zingale has become a locum pastor for ministers on vacation and has established a website (www.dodgenet.com/~tzingale/SermonIIIst.html) which averages 350 hits a week. He says: *When I was in the parish, the most people who would come to church on Sunday was about 150, so more people are reading my stuff now.* To audit the barriers (attitudinal, architectural and communication) to people with disabilities being part of the congregation in your church go to the questionnaire on the website of the American National Organization on Disability at

www.nod.org/cont/dsp_cont_item_view.cfm?viewType=itemView&contentId=547

Some items query whether the church has: *Seating space with extra leg room for people using crutches, walkers braces or casts; scattered spaces or 'pew cuts' for users of wheelchairs; large print hymnals, and marked accessible parking spaces close to accessible entrances.*

This issue of Polio Particles was first published in Post-Polio Network (NSW) Inc Network News Issue 57, February 2003. Reprint requests should be forwarded to Mary by email at AskMary@post-polionetwork.org.au