

## **Sir Norman McAllister Gregg**

Born in 1892, Norman Mac Allister Gregg, a brilliant man and a sportsman (Davis Tennis Cup), was a Pediatric Ophthalmologist Senior Surgeon in Sydney, Australia, when WWII broke out. While most young doctors were in the army, Gregg was one of few eye surgeons left in town, and he saw therefore most of the children with eye problems needing surgery.

He became alarmed at the number of babies who came to his office with congenital cataract, at least 2 or 3 times more than what would be expected by heredity alone. He heard two mothers speak in the hall outside his office, who both had affected babies. They were discussing how both had had “German measles” (rubella) in pregnancy. Out of the 78 children born in the early months of 1941 who came to see a doctor in a around Sydney for cataract (13 in his own office), 68 had been exposed to Rubella *in utero* .

In the army camps just outside of Sydney, there had been epidemics of meningitis and rubella. The soldiers had taken the diseases home to the community. Gregg became convinced that the “outbreak” of cataract he was witnessing in newborn children was due to rubella infection during their mothers’ pregnancy.

While, in adults, rubella infection gives no more than flu-like symptom, we now know that children exposed to the rubella virus *in utero* during the first trimester of pregnancy are at risk for not just cataract, but also deafness and other severe problems such as heart disease. There was no laboratory test for rubella, Gregg just had a clinical association. He presented his data at a meeting of eye surgeons. While in Australia his results were met with praise and belief, “overseas” people did not trust his data. The Lancet in 1944 wrote “Gregg did not prove his case”. When Sir Lorimer Dods, an Australian pediatrician, travelled to the US in 1947 to speak about Gregg’s work, he wrote of the assembly of physicians who listened to his talk “You could see them all doubting”. Only when Gregg’s data were analyzed by a mathematician, Prof. Oliver Lancaster, a former physician, then statistician and epidemiologist at the University of Sydney, who proved the association between the virus and the congenital syndrome highly significant, only then did the “outside world” listened and believed Gregg’s data.

In 1961, the rubella virus was first isolated.

In 1964-1965, there was a worldwide outbreak of rubella, which resulted in 20,000 cases of congenital cataract in the United States alone! Soon afterwards, in 1969, a vaccine was developed and licensed. Never before or since had a viral vaccine been developed and licensed in such a short period of time after the organism’s first identification.

Rubella used to cause 40% of all congenital deafness. Schools for hearing-impaired children have noted that the number of pupils with bilateral severe and profound deafness have greatly decreased and so have the number with blindness as well as deafness.

Sir Norman McAllister Gregg died in 1968.