

Congenital virus in children with cerebral palsy more common than thought

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Credit: University of Sydney

Cytomegalovirus is a common herpesvirus that can cross the placenta, infect the fetus and cause damage to the developing brain.

The retrospective observational study of 323 children with cerebral palsy reveals that 9.6 per cent had cytomegalovirus (CMV) DNA in blood taken from their newborn screening card.

This proportion is much higher than the proportion of children with CMV detected in the newborn period in the general community, which is less than one per cent.

Further, it is six times greater than the proportion of children with cerebral palsy who have had [congenital](#) CMV reported as an attributable cause of their condition to the Australian Cerebral Palsy Register (1.5 per cent), and higher than a recent retrospective study of Caucasian children with cerebral palsy (1.5 per cent).

Congenital CMV [infection](#) has been estimated to occur in approximately

0.7 per cent of newborn infants of whom ten to 15 per cent exhibit signs of infection at birth. These infants carry a higher risk of permanent neurodevelopmental disabilities, including cerebral palsy.

It's estimated that a further ten to 15 per cent of [children](#) with congenital CMV infection who are asymptomatic at birth will go on to develop neurologic signs and symptoms beyond the neonatal period, predominantly late-onset hearing loss.

Cerebral palsy is the most common physical disability of childhood, and has been associated with a number of risk factors, including intrauterine infections such as congenital CMV.

"Despite this known association, and estimates of neurologic disability from congenital CMV, few reports describe the prevalence and epidemiology of cerebral palsy associated with congenital CMV, said the study's senior author, Professor Cheryl Jones of the University of Sydney's Marie Bashir Institute of Infectious Diseases and Biosecurity.

"Defining the role of congenital CMV as a risk factor for cerebral palsy is important because it is the most common intrauterine infection in developed countries, is potentially preventable, and antiviral therapy post-natally can reduce the severity of adverse neurologic outcomes."

Study leader, Dr Hayley Smithers-Sheedy of the University of Sydney's Cerebral Palsy Alliance said: "This study serves as a timely reminder of the importance of CMV as a common intrauterine viral infection in developed countries and the potential for long-term consequences beyond the newborn period.

"More research is needed to investigate the mechanisms and contribution of congenital CMV to the causal pathways to [cerebral palsy](#)."

More information: Hayley Smithers-Sheedy et al. Congenital Cytomegalovirus among Children with Cerebral Palsy, *The Journal of Pediatrics* (2016). [DOI: 10.1016/j.jpeds.2016.10.024](https://doi.org/10.1016/j.jpeds.2016.10.024)

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