

Up to 45% of cerebral palsy cases can have genetic cause

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The discovery of a stronger genetic cause for cerebral palsy than previously thought has led researchers to call for an end to unnecessary caesareans and arbitrary litigation against obstetric staff.

In an authoritative review published in the *American Journal of Obstetrics & Gynecology*, members of the Australian Cerebral Palsy Research Group, based at the University of Adelaide's Robinson Research Institute, argue that up to 45% of [cerebral palsy](#) cases can have genetic causes.

This builds on research published in February this year by the group which found at least 14% of cerebral palsy cases are likely to be caused by a genetic mutation. And the group expects the percentage of genetically caused cerebral palsy cases will continue to increase as genetic sequencing techniques evolve.

The University of Adelaide's Emeritus Professor Alastair MacLennan, leader of the research group, says the realisation by courts that many cases of cerebral palsy cannot be prevented by differences in labour management should reduce the adverse influence of obstetric litigation.

"For many years it was assumed, without good evidence, cerebral palsy was caused by brain damage at birth through lack of oxygen. This belief along with the temptation to blame the insured, and the high cost of caring for children with cerebral palsy, has fuelled litigation against obstetric staff," says Emeritus Professor MacLennan.

"Numerous recent studies have shown that despite an increase in caesarean deliveries over 50 years, which have risen from 5% to 34% in Australia, there has been no overall change in cerebral palsy rates.

"Some of the increase in caesareans appears to be due to defensive [obstetrics](#) and fear of litigation – there are lower rates of caesareans in countries with a "no-fault insurance scheme" like New Zealand, where rates are 23%.

"It's estimated that \$300 million is paid on cerebral palsy settlements in Australia each year. I hope that our research will help end unfounded cerebral palsy related litigation," he says.

Several more years of research are needed but the research group believes that eventually cerebral palsy genetic testing before, during and after pregnancy will be introduced.

"It is now becoming apparent that cerebral palsy is an umbrella diagnosis for children with non-progressive disorders of movement control and posture, and that there are many types and antenatal influences including genetic causes," says the University of Adelaide's Professor Jozef Gecz, Head of Neurogenetic Research, Robinson Research Institute.

"Cerebral is akin to many other neurodevelopmental disorders such as intellectual disability, autism and epilepsy, co-morbidities that are often seen with cerebral palsy, and they too have many genetic causes," he says.

"Many children who have received a diagnosis of cerebral palsy may have an inherited or spontaneous genetic cause and this is exciting because we can now focus research on the beginning of pregnancy and not so unfruitfully on the circumstances of birth," says Dr Suzanna Thompson, co-author on the paper and paediatric neurologist at the Women's and Children's Hospital, Adelaide.

More information: "Cerebral Palsy – Causes, pathways, and the role of genetic variants," *American Journal of Obstetrics and Gynecology*,

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