

CASE STUDY

CEREBRAL PALSY

Research leaders within ARCH have been conducting a number of linked and groundbreaking studies of ways to prevent cerebral palsy.

Cerebral palsy is a childhood disorder where the control of body movements is impaired. One in 500 children born in Australia has cerebral palsy and this rate has not changed in the past 50 years. One-third of children with cerebral palsy are born preterm.

The large Australian and New Zealand magnesium sulphate trial (ACTOMgSO₄), led by Professor Caroline Crowther, has provided vital evidence that when mothers are given magnesium sulphate immediately prior to very preterm birth, the risk of the baby dying or having cerebral palsy is significantly reduced. This evidence has subsequently been synthesised and consolidated by a Cochrane systematic review authored by ARCH personnel together with Australian and international colleagues. The Translational Health Division within ARCH has led a 30-member multidisciplinary panel, based on this evidence, to develop guidelines to be used in clinical practice around Australia and New Zealand to reduce cerebral palsy related to preterm birth.

Many human diseases are now thought to be linked to a genetic vulnerability and can be triggered by environmental factors. A research team, led by Professor Alastair MacLennan, is investigating more closely the role of genetics in the development of cerebral palsy. They are testing a new hypothesis that cerebral palsy may be associated with fetal or maternal genetic susceptibility to infection during pregnancy or other environmental hazards.

Our researchers are better understanding the underlying causes of cerebral palsy – the genes that are responsible and the environmental factors that trigger this debilitating disease.

Researchers within ARCH are taking significant steps to preventing or potentially curing cerebral palsy. Soon we may be able to identify pregnancies most at risk, avoid environmental risk factors and develop cures.



Top: Professor Alastair MacLennan
Above: Mr Jimmy Barnes

1/500



One in 500 children born in Australia has cerebral palsy - a rate unchanged for 50 years.

