

Bigger birth weight babies at greater risk of autism

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(Medical Xpress)—The biggest study of fetal growth without intellectual disability and autism to date has reported that babies whose growth is at either extreme in the womb are at greater risk of developing autism.

It is the first time that a clear link has been made between babies who grow to above average size at birth and risk of [Autism Spectrum Disorder](#) and follows from a study of more than 40,000 child [health records](#) in Sweden.

The research, led by The University of Manchester, also confirms earlier research which reported that premature and poorly grown, low weight babies appear more susceptible to the condition.

Autism affects how individuals interact with the world and with other people and there is no known cure. One child in 100 has the condition in the UK according to NHS figures. Researchers believe it has origins in both genetic and environmental causes.

Professor Kathryn Abel, from the University's Centre for Women's Mental Health and Institute of Brain, Behaviour and [Mental Health](#), led the research published in *The American Journal of Psychiatry* this month.

Professor Abel said: "The processes that leads to ASD probably begin during fetal life; signs of the disorder can occur as early as three years of age. Fetal growth is influenced by genetic and non-[genetic factors](#). A detailed understanding of how fetal growth is controlled and the ways in which it is associated with ASD are therefore important if we are to advance the search for cures.

"To our knowledge, this is the first large prospective population-based study to describe the association between the degree of deviance in fetal growth from the normal average in a population of [children](#) and risk of ASD with and

"We have shown for the first time categorically that abnormal fetal growth in both directions increases risk of autism spectrum disorder."

Researchers looked at data from the Stockholm Youth Cohort in Sweden, where early ultrasound dating provides detailed weights of the baby's progression in pregnancy. Infants and children then also take part in structured clinical assessments of their social, motor, language and cognitive abilities.

The cohort contained records of 589,114 children aged 0-17 in Sweden between 2001 and 2007. Certain child data was removed, including children too young to have a diagnosis for ASD, adopted children and non Swedish or Stockholm County residents, children not born in Sweden and twins.

From the remaining available data, researchers found 4,283 young people with autism and 36,588 who did not have the condition and who acted as the control.

The study found that bigger babies who were born weighing over 4.5kg (or 9lb 14) showed a higher incidence of autism, as did smaller infants who were born weighing less than 2.5kg (5.5lb).

A baby who had poor fetal growth would therefore have a 63% greater risk of developing [autism](#) compared to normally grown babies.

A baby who was large at birth would have a 60% greater risk. This effect was independent of whether or not the baby was born pre or post term.

Professor Abel added: "We think that this increase in risk associated with extreme abnormal growth of the fetus shows that something is going wrong during development, possibly with the function of the placenta.

"Anything which encourages abnormalities of development and growth is likely to also affect development of the baby's brain. Risk appeared particularly high in those babies where they were growing poorly and continued in utero until after 40 weeks. This may be because these infants were exposed the longest to unhealthy conditions within the mother's [womb](#).

"We now need more research into [fetal growth](#), how it is controlled by the placenta and how this affects how the brain develops. One of the key areas to research is maternal condition and healthy growth."

The study was also unique as it was big enough to be able to look at the differences between children who developed [ASD](#) with and those without [intellectual disability](#) as well as differences between children born pre and post-term (after 40 weeks).

More information: ajp.psychiatryonline.org/colle..._2&page=1&isJournal=1

Provided by University of Manchester

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