

Antiepileptic drugs taken during pregnancy may increase risk of impaired development for children

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New research suggests that taking antiepileptic drugs during pregnancy increases the risk of the child having impaired brain development.

A team from the University of Birmingham and partners in Australia announced the findings after researching children born to mothers who took sodium valproate (VPA) during pregnancy.

VPA works by stabilising electrical activity in the brain, and so reduces fits. It is commonly used to treat a range of conditions including epilepsy, bipolar depression and migraines.

The evidence, published in *Annals of Clinical and Translational Neurology*, strongly supports the theory that prenatal exposure to VPA affects [brain development](#), adding to evidence for increased risk of [congenital malformations](#) and neurodevelopmental difficulties – particularly with language skills.

It is the first study to directly examine the neural effects in children of mothers with epilepsy who took VPA during pregnancy.

The results were acquired by comparing high-resolution structural brain scans of seven year old children whose mothers took VPA for during pregnancy, to a control group of children not exposed to the medication.

In those children exposed to VPA, the scans showed an increased cortical thickness in the left [inferior frontal gyrus](#) and left pericalcarine sulcus. The hemispheric asymmetry usually found in areas of the brain involved in aspects of language processing was also absent.

These regions of the brain are known to be critical in the development of [language skills](#), such as verbal communication.

Dr Amanda Wood, from the University of Birmingham, explained, "This is only a small group, but nonetheless it represents an important first step in understanding how taking VPA during pregnancy might effect a child's brain development."

"VPA remains an important medication for people with epilepsy. What this study really tells us is that further research is required so that all women with epilepsy can make informed decisions about their medication use during pregnancy."

Women taking medications during [pregnancy](#) should always consult their treating doctor before changing their medication.

Provided by University of Birmingham

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