

# Folic acid during pregnancy could help to prevent autism caused by antiepileptic drugs

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If pregnant women take antiepileptic drugs, the child can develop autistic traits. The administration of folic acid preparations appears to be a suitable means of preventing this serious side-effect. This finding is suggested by a Norwegian study presented at the Congress of the European Academy of Neurology in Copenhagen.

Having a sufficiently high level of folic acid is especially important for [pregnant women](#) who have to take antiepileptic drugs. Dr Marte Helene Bjørk from the University of Bergen in Norway had this to say on the subject at the Second Congress of the European Academy of Neurology (EAN) in Copenhagen: "Suitable nutritional supplements could substantially contribute to protecting the child from a possible side-effect of antiepileptic drugs, namely from autism."

## Possible side-effect of antiepileptic drugs (AEDs): 12 out of 100 children with autistic traits

With her current study, Dr Bjørk was able to show that women with [epilepsy](#) with a lower concentration of folic acid during [pregnancy](#) have a higher risk of giving birth to a child with [autistic traits](#) if they take antiepileptic drugs. Possible autistic traits were examined in about 58,000 three-year-old children whose mothers are healthy or have epilepsy. Among the women with epilepsy, a distinction was also made between those who took antiepileptic drugs during their pregnancy and those who did not. In addition, the research team recorded possible folic

acid intake during pregnancy and the level of folate concentration in blood plasma for women with epilepsy who continued taking their antiepileptic drugs during pregnancy.

Dr Bjørk: "The results clearly show how risky antiepileptic drugs can be for unborn children. Twelve percent of the children who were exposed to the effects of these drugs during pregnancy ended up exhibiting autistic traits – a rate substantially higher than in the two other groups." In women with epilepsy who did not use medication, only about three percent of the children showed autistic traits whereas the rate for healthy mothers was about four percent. The expert went on to say this: "The good news is that the risk can be mitigated if the woman takes [folic acid supplements](#)." The data shows that women with epilepsy who took AEDs were affected more intensely than all others if they dispensed with taking folic acid supplements during early pregnancy: Their children developed autistic traits six times more often compared to women using antiepileptic drugs and taking folic acid supplements. This finding was arrived at after statistically factoring out of the comparison other risk factors such as [epileptic seizures](#), depression, socioeconomic status or the concentration of antiepileptic drugs or cotinine in the blood of pregnant women. Dr Bjørk concluded by saying: "The lower the folate concentration in the plasma during pregnancy, the worse the [children](#) fared later at age three in the test to determine the degree of autistic traits (Social Communication Questionnaire, SCQ). For pregnant women with epilepsy, the early administration of [folic acid](#) preparations is therefore an absolute must."

Women with epilepsy should plan their pregnancy under the control of the treating neurologist. Although continuing antiepileptic drugs during pregnancy poses risks to the child, stopping [antiepileptic drugs](#) represents in most cases a higher health risk - both for mother and child. Intense epileptic seizures can lead to oxygen deficiency, which can damage or kill the foetus. The mother is also at risk: Five per cent of

fatalities during pregnancy are attributed to epilepsy.

**More information:** EAN 2016 Abstract Bjørk M H et al, Low maternal folic acid in women with epilepsy during pregnancy is linked to autistic traits in the child at 3 years of age

Bjørk M H et al, Using the Norwegian Mother and Child Cohort Study to determine risk factors for delayed development and neuro-psychiatric symptoms in the offspring of parents with epilepsy, *Norsk Epidemiologi* 2014; 24 (1-2): 79-89

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