

# High blood pressure in early pregnancy raises risk of birth defects, irrespective of medication

October 18 2011

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Women with high blood pressure (hypertension) in the early stages of pregnancy are more likely to have babies with birth defects, irrespective of commonly prescribed medicines for their condition, finds new research published in the British Medical Journal today.

The finding suggests that it is the underlying hypertension, rather than the use of [antihypertensive drugs](#) in [early pregnancy](#), that increases the risk of birth defects.

Angiotensin-converting enzyme (ACE) inhibitors are a type of antihypertensive medication commonly prescribed to tackle hypertension. It is already known that they have a [toxic effect](#) on fetuses in the second or third trimesters, but their effects on a fetus during the mother's first trimester is still unclear.

So researchers led by Dr De-Kun Li of the Kaiser Foundation Research Institute in California, set out to see if there was an association between using ACE inhibitors during a woman's first trimester and birth defects.

They studied data on 465,754 mother-infant pairs from the Kaiser Permanente Northern Californian region between 1995 and 2008. Data was also available on which medications had been prescribed and dispensed to these women.

Analysis showed that women who used ACE inhibitors in their first trimester were more likely to have a baby with some form of birth defect compared with women who did not have hypertension or who had not used any form of antihypertensive medication.

However, a similar elevated risk was found among women who used other antihypertensive drugs and those with hypertension who did not take any antihypertensive medication.

The researchers conclude: "Our finding suggests that it is likely the underlying hypertension rather than use of antihypertensive drugs in the first trimester that increases the risk of birth defects in offspring."

In an accompanying editorial, Professor Allen Mitchell from Boston University says that - based on the available studies - it would appear reasonable to conclude that [first-trimester](#) exposure to [ACE inhibitors](#) poses no greater risk of birth defects than other antihypertensives, and that it is the underlying hypertension that places the fetus at risk.

He believes that, while clinicians must certainly identify and control hypertension, particularly in pregnancy, "we have much to learn about how hypertension can cause birth defects."

Provided by British Medical Journal

Citation: High blood pressure in early pregnancy raises risk of birth defects, irrespective of medication (2011, October 18) retrieved 5 May 2024 from <https://medicalxpress.com/news/2011-10-high-blood-pressure-early-pregnancy.html>

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