House move during early pregnancy linked to heightened premature birth risk

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Moving house during the first three months of pregnancy is linked to a heightened risk of premature birth and low birthweight as well as a slightly higher risk of a smaller than expected size baby, finds US research published online in the *Journal of Epidemiology & Community Health*.

Moving house during childhood is associated with poorer health in children, but despite being a frequent occurrence, little is known about the potential health impact of a house move during pregnancy.

To try and rectify this, the researchers analysed birth certificate data for babies born in Washington state, USA, between 2007 and 2014 to mothers aged at least 18.

They randomly selected 30,000 women who had moved during the first three months of pregnancy—known as the first trimester—and matched them with 120,000 randomly selected women of the same birth year, but who hadn't moved house during early pregnancy.

The first trimester was chosen because previous research has suggested that major stressors during early pregnancy have a greater impact on the health of the baby than those experienced later on in the pregnancy.

The final analysis included 28,011 women who had moved early in pregnancy and 112,451 who hadn't.

Women who moved early in pregnancy were likely to be younger, to be less well educated, to live in areas with lower average levels of household income and to have had other children than women who hadn't moved. They were also more likely to be unmarried and to have smoked during their pregnancy.

These are all potential risk factors for the outcomes the researchers were looking at: low birthweight; premature birth; and smaller than expected size babies.

But after taking account of these potentially influential factors, a house move during the first three months of pregnancy was associated with a 37% heightened risk of low birthweight (6.4% vs 4.5%) and a 42%

heightened risk of premature birth (9.1% vs 6.4%) compared with those who didn't move during this period.

A house move in the first trimester was also associated with a slightly increased (9%) risk of giving birth to a smaller than expected size baby (9.8% vs 8.7%).

These differences were seen across women in all social and economic strata.

The researchers weren't able to explore the potential reasons behind their findings, but interruptions to healthcare, the physical strain of moving, disruptions to social support, and a biological stress reaction may all be possible triggers, the researchers suggest.

This is an observational study, and as such, can't establish cause. Although the study included a large number of women, the researchers weren't able to establish the reasons for the move or whether the women moved into more or less desirable areas, all of which may have influenced the results.

"Despite these limitations, our results yield important insights regarding moving during pregnancy," write the researchers.

"Regardless of whether the negative impact of moving is driven by the stress from the move itself, stressful situations leading to a move, or disruption of care because of the move, asking patients about plans to move and using that as an opportunity to counsel patients on stress mitigating techniques and care continuity may be beneficial," they conclude.

More information: Residence change during the first trimester of pregnancy and adverse birth outcomes, *Journal of Epidemiology &*

Community Health, DOI: 10.1136/jech-2018-211937