

Preterm delivery, low birth weight and neonatal risk in pregnant women with high blood pressure

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Pregnant women with chronic hypertension (high blood pressure) are highly likely to suffer from adverse pregnancy outcomes such as preterm delivery, low birth weight and neonatal death, which highlights a need for heightened surveillance, suggests a paper published in *BMJ* today.

Chronic hypertension complicates between 1-5% of pregnancies, and the problem may be increasing because of changes in the antenatal population.

A recent study in the US suggests the prevalence of chronic hypertension increased from 1995-1996 to 2007-2008, after adjustment for maternal age. Obesity and metabolism are likely to contribute and therefore the number of women entering pregnancy with chronic hypertension is set to rise.

Researchers from King's College London carried out a study to assess the strength of evidence linking chronic hypertension with poor [pregnancy outcomes](#). They combined data from studies from 55 studies done in 25 countries.

The researchers looked at the following outcomes: [preterm delivery](#) (delivery before 37 weeks' gestation); [low birth weight](#) (below 2500g); perinatal death (fetal death after 20 weeks' gestation including stillbirth and [neonatal death](#) up to one month) and admission to neonatal intensive

care or special care baby units.

The relative risk of pre-eclampsia (a condition in pregnancy characterised by [high blood pressure](#)) in women with chronic hypertension was on average nearly eight times higher than pre-eclampsia in non-hypertensive women. All adverse neonatal outcomes were at least twice as likely to occur, compared with the general population.

The researchers conclude that "chronic hypertension is associated with a high incidence of adverse pregnancy outcomes compared with a general population". They stress the importance of increased antenatal surveillance for women with chronic hypertension and suggest they should receive pre-pregnancy counselling to optimise their health prior to pregnancy. They also say that strategies to predict those at greatest risk are needed.

In an accompanying editorial, Doctors Clausen and Bergholt from the University of Copenhagen say that pre-gestational hypertension has attracted little attention from researchers and when asked what clinicians can do about this growing problem, the "simple and depressing answer is 'not much'". They say Chappell et al's review adds important knowledge and the findings may "prove to be extremely useful". They conclude that "we still do not know the most effective, safe and cost effective way to manage it" and an "urgent need remains for research to establish best clinical practice".

More information: Paper: Chronic hypertension and pregnancy outcomes: systematic review and meta-analysis, *BMJ*, 2014.

Editorial: Chronic hypertension during pregnancy, *BMJ*, 2014.

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