

Smoking during pregnancy can put mums and babies at risk

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A British report suggests smoking while pregnant may be less damaging to a fetus than many people have been led to believe.

Pregnant women who suffer from the high risk condition pre-eclampsia — which leads to the death of hundreds of babies every year — are putting the lives of their unborn children at significantly increased risk if they continue to smoke during pregnancy.

But experts at The University of Nottingham have also shown that if women give up smoking before or even during pregnancy they can significantly reduce these risks.

The study linking smoking and pre-eclampsia was carried out by the Genetics of Pre-Eclampsia Consortium (GOPEC) and was funded by the British Heart Foundation. The results have just been published in the journal *Hypertension*.

Fiona Broughton Pipkin, Professor of Perinatal Physiology at the Department of Obstetrics and Gynaecology in the School of Human Development, said: “Pre-eclampsia and eclampsia are the second most frequent cause of death in pregnancy in this country and cause an estimated 70,000 deaths worldwide among pregnant women each year. In 2005 742 babies died as a direct result of pregnancy hypertension in England and Wales. Ten times this number are delivered prematurely for the same reason. They risk short-term breathing problems, potential brain damage and long-term cardiovascular disease. The deaths are the

tip of an iceberg for hospital admissions and worry for mothers, babies and families.”

Professor Broughton Pipkin led a multicentre cohort study of 1001 white Western European women with moderate to severe pre-eclampsia and their babies. It found that smokers in this group are even more likely to deliver prematurely (before 34 weeks), produce much lower birth weight babies, or have babies with adverse outcomes than women who don't smoke. Smokers were also five times more likely to develop eclampsia.

Of the 1001 women in the study:

-- 34.8 per cent who smoked delivered before 34 weeks — compared with 26.8 per cent of former smokers and 21.3 per cent of non-smokers.

-- 46.1 per cent who smoked had low birth weight babies — compared with 37.5 per cent of former smokers and 27.9 per cent of non-smokers.

-- 65.6 per cent who smoked had babies who experienced adverse outcomes — compared with 60 per cent of former smokers and 50.4 per cent of non-smokers.

Ellen Mason, a cardiac nurse at the British Heart Foundation (BHF), said: "Research like this study from The University of Nottingham is vital to help us understand the full effects of lifestyle choices on our heart and circulatory health and that of our children. Smoking is clearly potentially very harmful to mother and baby, and we need to support women in quitting at every stage of pregnancy.”

Professor Broughton Pipkin said: “Although a recent article suggested that smoking in pregnancy is less damaging to the unborn baby than commonly supposed, GOPEC argues that smoking CAN make a bad situation worse for both mother and baby in pre-eclampsia. However,

stopping smoking limits the damage.

“I feel very strongly that pregnant women should be encouraged as actively as possible to stop smoking, and this paper provides yet more reasons why.”

Smoking during pregnancy is recognised as a major public health problem. Around 30 per cent of pregnant women smoke and researchers say it can cause significant health problems in the unborn child. It accounts for around 4000 fetal deaths (including miscarriages) every year and it can lead to premature births, low birth weight, cot death and asthma. It is also associated with attention deficit and learning problems in childhood.

In a separate study researchers at the University are currently recruiting 1050 pregnant women for the most extensive trial of its kind to establish the effect of using nicotine patches during pregnancy. The £1.3m clinical trial — Smoking, Nicotine and Pregnancy (SNAP) trial — will investigate whether nicotine replacement therapy (NRT) is safe, effective and cost-effective for mums-to-be who want to give up smoking. It will also study the effect on the behaviour and development of the child.

Source: University of Nottingham

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