

Further evidence of the dangers of smoking in pregnancy

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Smoking during pregnancy is understood to pose risks to both baby and mother. Now, new research led by the University of Glasgow has found further evidence that maternal smoking poses a risk to baby and child health.

The study, published today in *BMJ Open*, reveals more detailed evidence about the association between maternal smoking in pregnancy and childhood hospitalization, as well as birth conditions which can lead to lifelong ill health and devastating outcomes such as meningitis and sudden infant death syndrome.

The authors studied births in Scotland from 1997 to 2009, with child health records followed until 2012. From the data, the researchers have been able to provide robust estimates of the current impact of maternal smoking on infant and [child health](#).

Key findings of the study include estimates that 7 percent of deaths in the first month of life and 22 percent in the first year are related to maternal smoking during pregnancy. Researchers also

found that 28 percent of babies born small for gestational age, and 9 percent born before 37 weeks, were attributable to maternal smoking.

Analysing data relating to children under the age of 5 years, the study found that 12 percent of hospital admissions for [bacterial meningitis](#), 10 percent for bronchiolitis, 7 percent for asthma and 7 percent of admissions under 1 year for 'acute respiratory' illness were also attributable to maternal smoking.

The rare but life-threatening condition bacterial meningitis was 49 percent more likely to occur among children five and under born to mothers who smoked

Professor David Tappin, Professor of Clinical Trials for Children at the University of Glasgow, said: "Our research provides further evidence of the harmful effects of maternal smoking in pregnancy.

"This study provides evidence that could be used to estimate the current cost of maternal smoking, and to assess the cost-effectiveness of current smoking cessation strategies for pregnant women."

The study also found that, among babies whose mothers were current smokers during pregnancy, the odds of neonatal mortality in the first month after birth were a third higher than those whose mothers were non-smokers.

The odds of infant mortality between one month and one year-old were more than two times higher among babies whose mothers were current smokers. While the odds of being born small for gestational age was also two times higher.

The researchers concluded that more than 20 percent of post-neonatal deaths, many of which would be defined as Sudden Unexpected Deaths in Infancy (SUDI), may be related to smoking in [pregnancy](#). This result is consistent with the findings of a study of over 3 million births in the US

which reported a 40 percent higher infant mortality among the children of [mothers](#) who smoked, with a dose-dependent relationship with the number of cigarettes smoked.

Professor Tappin said: "We know that 25 percent of current smokers at maternity booking do not admit to their smoking habit. Therefore the figures we have calculated may be an underestimate of the real effects of maternal [smoking](#) on outcomes."

The study, "The impact of [maternal smoking](#) on early childhood health: a retrospective cohort linked dataset analysis of 697,003 children born in Scotland 1997-2009," is published in *BMJ Open*.

More information: Richard Lawder et al. Impact of maternal smoking on early childhood health: a retrospective cohort linked dataset analysis of 697 003 children born in Scotland 1997–2009, *BMJ Open* (2019). [DOI: 10.1136/bmjopen-2018-023213](https://doi.org/10.1136/bmjopen-2018-023213)

Provided by University of Glasgow

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