

Mothers-to-be should be aware of unintentional chemical exposures

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Pregnant women should be made aware of the sources and routes of chemical exposure in order to minimise harm to their unborn child, despite current uncertainty surrounding their effects, say experts from the Royal College of Obstetricians and Gynaecologists (RCOG) in a new Scientific Impact Paper.

The study was co-authored by Dr Michelle Belligham from the University of Glasgow's Institute of Biodiversity Animal Health and [Comparative Medicine](#).

While there is much guidance on healthy [lifestyle choices](#) that women can incorporate during pregnancy, there is currently no official antenatal advice that informs women who are pregnant or breastfeeding of the potential risks that some chemical exposures could pose to their babies.

Exposure to considerable amounts of environmental chemicals has been linked to [adverse health effects](#) in women and children, including pre-term birth, low birthweight, [congenital defects](#), [pregnancy loss](#), impaired immune development, as well as impairment of fertility and reproduction in both the mother and child in later life.

This new paper, "Chemical exposures during pregnancy: Dealing with potential, but unproven, risks to [child health](#)," raises awareness of the current issues surrounding [chemical exposure](#) during pregnancy and offers advice for women to make informed decisions that will predispose their baby to have the best possible health.

The authors explain that under normal lifestyle and dietary conditions, pregnant women are exposed to a complex mixture of hundreds of chemicals at low levels and exposure to such chemicals can occur through many avenues, including consumption of food, use of [household products](#), over-the-counter medicines, as well as personal care products and cosmetics.

While the consumption of [herbal remedies](#) or medicines, such as [paracetamol](#), and use of household cleaning products, such as pesticides, are well-documented sources of chemical exposure, this paper points out the lesser recognised sources that could accumulate with the mixture effect posing potential harm.

The authors, for example, point out that it is not just the type of food that pregnant women consume posing a risk, but the handling equipment and packaging materials used to contain it. The same caution is suggested for personal care products such as moisturisers, sunscreens and shower gels, as current legislation does not require manufacturers to name all potentially harmful chemicals, when used in low dose, on the product label.

The paper recommends that the best approach for pregnant women is a 'safety first' approach, which is to assume there is risk present even when it may be minimal or eventually unfounded.

Recommendations made in the paper include: using fresh food whenever possible by reducing foods in cans/plastic containers, minimising the use of [personal care products](#), avoiding paint fumes and use of all pesticides, and only taking over-the-counter medicines when necessary.

Dr Michelle Bellingham, Institute of Biodiversity, Animal Health and Comparative Medicine, University of Glasgow, and co-author of the paper, said:

"While there is no official advice on this topic available to pregnant women, there is much conflicting anecdotal evidence about environmental chemicals and their potentially adverse effects on developing babies.

"The information in this report is aimed at addressing this problem and should be conveyed routinely in infertility and antenatal clinics so women are made aware of key facts that will allow them to make informed choices regarding lifestyle changes."

Professor Richard Sharpe, Medical Research Council (MRC) Centre for Reproductive Health, the University of Edinburgh and co-author of the paper, said:

"For most [environmental chemicals](#) we do not know whether or not they really affect a baby's development, and obtaining definitive guidance will take many years.

"This paper outlines a practical approach that pregnant women can take, if they are concerned about this issue and wish 'play safe' in order to minimise their baby's exposure. However, we emphasise that most women are exposed to low doses of chemicals over their lifetime, which in pregnancy may pose minimal risk to the developing baby.

Professor Scott Nelson, Chair of the Scientific Advisory Committee, added:

"There are growing concerns over everyday chemical exposure effects because many chemicals have the potential to interfere with the hormone systems in the body, which play key roles in normal fetal development.

"Realistically, pregnant women are exposed to a complex mixture of hundreds of chemicals at low levels, but methods for assessing the full

risk of exposure are not yet developed.

"While pregnant women should be aware of potential risks, there is still considerable uncertainty about the extent of the exposure effects and any women with concerns about certain chemical exposures should consult their obstetrician or midwife."

Provided by University of Glasgow

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