

No link between early childhood cancers and living near mobile phone base station during pregnancy, says study

June 22 2010

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A new study looking at the patterns of early childhood cancers across Great Britain has found no association between a mother living near to a mobile phone base station during her [pregnancy](#) and the risk of that child developing cancer before reaching the age of five.

The study, published today on [bmj.com](#), is the first to look at the health effects of mobile phone base stations in Great Britain as a whole, and is the largest of its kind.

Use of mobile (cellular) phones has increased markedly in recent years and questions have been raised about possible health effects, including brain and other cancers, especially after prolonged use.

Opinion surveys also indicate high levels of public concern about the potential risks of living near mobile phone base stations.

Previous reports of apparent cancer clusters near mobile phone base stations are difficult to interpret, due to small numbers and possible biases that could have affected the results. There is also a lack of any radiobiological explanation for such cancer excesses.

For today's study, researchers from Imperial College London looked at almost 7,000 [children](#) and explored whether there was any correlation between a mother living near a mobile phone base station during her pregnancy and that child's risk of developing cancer.

The researchers identified 1,397 British children aged 0-4 years, who were registered with [leukaemia](#) or a [tumour](#) in the brain or [central nervous system](#) between 1999 and 2001.

The researchers compared data on how close the children's birth addresses were to a mobile phone base station, with the same data on children selected as controls. For each child with cancer, four healthy children who shared the same gender and birth date were chosen at random to act as controls.

They were unable to take account of the proportion of mothers who might have moved to the birth address from another address during their pregnancy, because these data were unavailable.

The researchers analysed the approximate distance (in metres) between the birth address and the nearest mobile phone base station, the total power output for base stations within 700m of the birth address, and the power density for base stations within 1400m of the birth address.

They used this information to compare estimates of the mothers' radio frequency exposures from mobile phone base stations over nine months of pregnancy.

The patterns that they identified revealed that the children with cancer are no more likely to have a birth address near a base station than those who do not have cancer. The estimated radio frequency exposures to mobile phone base stations were similar for the mothers of children with cancer and the children acting as controls.

Professor Paul Elliott, Director of the MRC-HPA Centre for Environment and Health at Imperial College London, who is the corresponding author of the study, said: "People are worried that living near a mobile phone mast might affect their children's health. We looked at this question with respect to risk of cancers in young children. We found no pattern to suggest that the children of mums living near a base station during pregnancy had a greater risk of developing cancer than those who lived elsewhere."

The researchers point out that there are a number of aspects of childhood cancer and exposure to mobile phone base stations that this study was not able to investigate. They would like to analyse whether there is any association between children's own exposure to [mobile phone](#) base stations and their risk of developing cancer - for today's study, complete data were only available on the children's birth addresses and not the addresses where they might subsequently have moved to. Also, the mothers' and children's details were identified from national registers and the researchers did not have individual contact with them.

More information: "Mobile phone base stations and early childhood cancers: case-control study" British Medical Journal, 22 June 2010

Provided by Imperial College London

Citation: No link between early childhood cancers and living near mobile phone base station during pregnancy, says study (2010, June 22) retrieved 2 May 2024 from <https://medicalxpress.com/news/2010-06-link-early-childhood-cancers-mobile.html>

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