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WHO study has no clear answer on phones and cancer

Sun, May 16 2010

By Kate Kelland, Health and Science Correspondent

LONDON (Reuters) - Experts who studied almost 13,000 cell phone users over 10 years, hoping to find out whether the mobile devices cause brain tumors, said on Sunday their research gave no clear answer.

A study by the World Health Organisation's International Agency for Research on Cancer (IARC), the largest ever to look at possible links between mobile phones and brain cancer, threw up inconclusive results but researchers said suggestions of a possible link demanded deeper examination.

"The results really don't allow us to conclude that there is any risk associated with mobile phone use, but... it is also premature to say that there is no risk associated with it," the IARC's director Christopher Wild told Reuters.

The results of the study have been keenly awaited by mobile phone companies and by campaign groups who have raised concerns about whether mobile phones cause brain tumors.

Years of research have failed to establish a connection.

The British-based GSM Association, which represents international cell phone firms, said IARC's findings echoed "the large body of existing research and many expert reviews that consistently conclude that there is no established health risk."

The Australian-based Mobile Manufacturers Forum also welcomed the study and backed "the need for ongoing research."

Wild said part of the problem with this study, which was launched in 2000, was that rates of mobile phone usage in the period it covered were relatively low compared with today.

It was also based on people searching their memories to estimate how much time they spent on their cell phones, a method that can throw up inaccuracies.

European scientists last month launched what will now become the biggest ever study into the effects of mobile phone use on long-term health. It aims to track at least a quarter of a million of people in five European countries for up to 30 years.

This kind of study, called a prospective study, is considered more accurate because it does not require people to remember their cell phone use later but tracks it in real time.

SUGGESTION OF A RISK?

Data from the IARC study showed that overall, mobile telephone users in fact had a lower risk of brain cancer than people who had never used one, but the 21 scientists who conducted the study said this finding suggested problems with the method, or inaccurate information from those who took part.

Other results showed high cumulative call time may slightly raise the risk, but again the finding was not reliable.

"We can't just conclude that there is no effect," said Elisabeth Cardis of the Center for Research in Environmental Epidemiology in Barcelona, Spain, who led the study.

"There are indications of a possible increase. We're not sure that it is correct. It could be due to bias, but the indications are sufficiently strong... to be concerned."

Because of this, and because cell phone use is rising all the time, more research was needed, the scientists said.

The 21 scientists were part of a group known as the Interphone International Study Group which was funded in part by money from mobile phone companies. The study was published in the International Journal of Epidemiology.

Mobile phone use has increased dramatically since its introduction in the early-to-mid 1980s. About 5 billion mobile phones are currently in use worldwide.

The researchers said the majority of people covered in their study "were not heavy mobile phone users by today's standards."

The average lifetime cumulative call time for those who took part was around 100 hours, with an average of 2 to 2-1/2 hours of reported use a month. The heaviest 10 percent of users had clocked up an average of 1,640 hours of phone use spread over 10 years, which corresponds to about half an hour a day.

"Today, mobile phone use has become much more prevalent and it is not unusual for young people to use mobile phones for an hour or more a day," the researchers wrote.

But increasing use is tempered by generally lower radiation emissions from modern phones and greater use of texting and hands-free sets that keep the phone away from the head, they said.



The study received 19.2 million euros (\$24.4 million) in funding, around 5.5 million euros of which came from industry sources. It analyzed data from interviews with 2,708 people with a type of brain cancer called glioma and 2,409 with another type called meningioma, plus around 7,500 people with no cancer.

Participants were from Australia, Canada, Denmark, Finland, France, Germany, Israel, Italy, Japan, New Zealand, Norway, Sweden and Britain.

(\$1=.7872 Euro)

(Editing by Mark Trevelyan and Reed Stevenson)

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Cell phone cancer study shows problems with method

Sun, May 16 2010

By Kate Kelland, Health and Science Correspondent - Analysis

LONDON (Reuters) - The frustratingly inconclusive results from the world's biggest study so far into possible links between mobile phone use and cancer are symptomatic of problems that can dog scientific research like this.

Campaigners, cancer doctors and mobile phone manufacturers have been waiting for a decade to see if the findings of the study led by the respected International Agency for Research into Cancer (IARC) would finally provide an answer.

It didn't and experts say the biases and potential errors that rendered the study unreliable are difficult to avoid, yet very hard to adjust for.

"This was a very complex study, and results were very difficult to interpret because of a number of methodological issues," said Elisabeth Cardis at the Centre for Research in Environmental Epidemiology in Barcelona, who led the group of 21 international scientists conducting the study.

Jack Siemiatycki, an epidemiologist at the University of Montreal Hospital Research Centre in Canada, described the outcome as "ambiguous, surprising and puzzling."

CASE-CONTROL

The problem, say the researchers, is how the study was done.

The Interphone study was an epidemiological case-control study that began with cases -- people with brain tumours -- and controls -- people with no cancer -- and asked them to remember how much they had used mobile phones in previous years.

Experts say that case-control studies can be useful in establishing whether a disease is associated with a certain exposure or lifestyle, but they are also susceptible to a number of possible biases that mean results can be unreliable.

One, known as "selection bias" or "participation bias," comes about because of the voluntary nature of taking part in a study.

Almost 13,000 people were covered in the Interphone study and one potential problem may be that some of those who took part because they have a brain tumour did so because they already believed the disease was caused by using a mobile phone.

This could skew their estimations of how much they used a cell phone and how often they held it on one side of their head where their tumour appeared rather than the other.

The criteria for asking people to participate were also likely to vary from country to country, scientists said, and adjusting for this without knowing details is almost impossible.

And awareness of media coverage of campaigners voicing fears about links between cell phones and cancer may distort things even more.

"It is possible that the participants did not provide an accurate portrait of cell phone usage," said Siemiatycki, who was one of the scientists who worked on the study.

Another possible flaw is so-called "recall bias" which comes about when participants in a study may misremember the length of time they spent on the phone because the study is not being done in real time.

"All these things are estimates, and sometimes people don't estimate very well," said Cardis. "We also know that heavy users tend to overestimate, and light users tend to underestimate."

But the Interphone study is not alone in showing weaknesses.

MANY SUCH STUDIES HAVE BIASES AND FLAWS

Scientists analysing the accuracy of research into mobile phones and cancer -- which in many years has always failed establish a link -- reported last year that studies vary widely in quality.

In an assessment of 23 published studies involving more than 37,000 people, they found that results often depended on who conducted the study and how well they were able to adjust findings for bias and other errors.

According to Mireille Toledano, an epidemiologist at Imperial College London, case-control studies are particularly problematic when they are used for something like mobile phones.

If the study were looking at another exposure, say asbestos at work, she explained, scientists would have other documents such as employer records, clocking-in times and other pieces of data to help build up a more objective picture.

"The problem with mobile phones is that when you're trying to do a retrospective study like this, you're almost totally dependent on people recalling. You haven't got anything else on which to base your data," she said.

Toledano is helping lead a newly launched study on mobile phones and health by European scientists, which aims to track around a quarter of a million of people in five countries for up to 30 years.

She hopes this study, called a prospective study because it is forward-looking, will be more accurate because it tracks healthy people in real time to assess whether their mobile phone use is linked to health developments as years go by.

Until then, and despite Interphone's inconclusive results, scientists say people shouldn't panic about using mobile phones.

"If there are risks, they are probably pretty small," said Siemiatycki. "Should anyone be concerned about potential dangers of cell phones, they can remedy the issue by using hands-free devices and avoid exposure to radio frequencies around their head."

(Editing by Maggie Fox and Reed Stevenson)

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