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Mobile phones can cut a man's fertility by a third

Jonathan Leake, Science Editor

RESEARCH into the fertility of men who regularly carry and use mobile phones has suggested their sperm count can be cut by up to 30%, reducing chances of conception.

The study is the first to indicate male fertility may be damaged by the radiation emitted by mobiles. Men who carry the phone in a belt holster or trouser pocket are thought to be at the highest risk and could one day be advised to put the mobile in a bag or briefcase and away from vulnerable areas.

Details of the research will be released on Tuesday at an international scientific conference of fertility experts in Berlin. The researchers studied 221 men for 13 months comparing the sperm of those who used their phones heavily with others who did not.

They found that heavy users of mobile phones, those who carried their phone around with them most of the time, had their sperm counts reduced by nearly 30%. Many of the sperm that did survive showed abnormal movements further reducing fertility.

While the research suggests an effect on the sperm, the scientists say further work will need to be done to confirm the finding and establish the mechanism by which it might happen.

In the paper, Dr Imre Fejes of the obstetrics and gynaecology department at the University of Szeged in Hungary concludes: "The prolonged use of cell phones may have a negative effect on spermatogenesis (sperm production) and male fertility, that deteriorates both concentration and motility."

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Unlike previous studies, the researchers believe that phones may cause damage while in stand-by mode. Although not in use, they make regular transmissions to maintain contact with the nearest radio masts. It had been assumed such transmissions were too short to cause harm.

In the study, the researchers looked at men using mobile phones operating on a single frequency. In Britain the picture is more complex with a range of technologies and frequencies in use. Experts believe, however, that if biological or health effects were to emerge, they would probably be found across the spectrum.

The findings will be presented at the European Society of Human Reproduction and Embryology's annual conference.

Lawrence Challis, emeritus professor of physics at Nottingham University, who chairs the government's Mobile Telecommunications and Health Research Group, said that although there were many studies into the health effects of mobile phones, the results were too contradictory to draw firm conclusions.

"There is no conclusive evidence of damage to health, but mobile phones have only been around for about 15 years," he said. "Many serious diseases take much longer than that to produce symptoms and there is no way the research could show this up."

Later this year Challis will announce plans for the world's biggest study into the health impact of mobile phones. He wants to follow the lives of 250,000 people for at least 15 years — simultaneously tracking their phone usage from data supplied by mobile phone companies.

Challis also sits on the Advisory Group on Non-ionising Radiation. In a report last January it reviewed the evidence for damage to sperm by mobile phone radiation, but concluded that although there was a theoretical risk there was too little research to draw conclusions.

A spokesperson for the Mobile Operators Association, which represents the five main UK mobile phone network operators, said there was still no firm evidence of damage to health. "Successive studies have found no adverse health effects," she said. "New doubts are being raised over the safety of Viagra, the impotence drug, after experiments showed it may damage sperm and sharply reduce male fertility."

In the work at Queen's University Belfast, the researchers found female mice

impregnated by a male treated with Viagra produced only about half the normal number of viable embryos.

The researchers also found that Viagra altered the mice's sperm motility, a key measure of fertility, and that it caused premature changes in the acrosome, the part of the sperm that helps it enter and fertilise an egg cell.

The new study suggests the same problems will occur in human patients. More than 40% of clinics prescribe Viagra to male patients in the belief that it will increase sperm production.

Earlier, test-tube research into Viagra's effect on human sperm, by the same group, also suggested a risk. It found the drug made sperm swim too fast and caused other damaging physiological changes.



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