

Excessive use of mobiles may be causing dramatic drop in sperm count

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Men who use mobile phones a lot have lower sperm counts and produce sperm of poorer quality than those who use them infrequently or not at all, according to new research.

Researchers found men who did not use mobiles had much more, fitter and healthier sperm than those who used them for four hours or more per day.

However other experts questioned the findings, suggesting that people who use mobiles excessively could have other significant lifestyle differences, such as worse diets, higher stress levels and smoking more.

Dr Ashok Agarwal, of the Glikman Urological Institute at the Cleveland Clinic, presented his findings at the American Society for Reproductive Medicine conference in New Orleans yesterday.

Dr Agarwal said: "There was a significant decrease in the most important measures of sperm health and that should definitely be reflected in a decrease in fertility. People use mobile phones without thinking twice what the consequences may be. It is just like using a toothbrush but mobiles could be having a devastating effect on fertility."

To be able to fertilise an egg, sperm must have adequate motility, the ability to swim actively through the reproductive tract, and good morphology – an oval, enzyme-coated head, a middle piece and whip-like tail.

Dr Agarwal classified a group of 361 men undergoing evaluation for infertility according to their mobile phone use, and their sperm count and quality.

Those who did not use mobiles at all averaged a sperm count of 86 million per millilitre (m/ml), 68 per cent adequate motility, and 40 per cent normal forms. The men who said they used their handsets for less than two hours per day averaged sperm counts of 69 m/ml, 65 per cent motility and 31 per cent good morphology.

Participants who used their phones for between two and four hours had averages for sperm count, motility and morphology of 59 m/ml, 55 per cent and 21 per cent respectively.



Mobile phone use may produce poor quality sperm

Men using their mobiles for four hours or more daily averaged sperm counts of 50m/ml, 45 per cent adequate motility and 18 per cent well-shaped sperm.

Dr Agarwal said: "We still have a long way to go to prove this, but Leydig cells [which produce testosterone] in the testis have been shown to be susceptible to electromagnetic waves in previous research in animals.

"Somehow electro-magnetic waves may be causing direct damage to these cells and that perhaps causes a decrease in sperm production. It could decrease melatonin production which could result in loss of sperm motility."

A 2004 study by researchers at the University of Szeged in Hungary that found heavy mobile users had sperm counts 30 per cent lower than those who did not use them at all as well as having lower sperm motility was widely criticised.

Allan Pacey, senior lecturer in andrology at the University of Sheffield, said: "Maybe people who use a phone for four hours a day spend more time in cars, which could mean there's a heat issue.

"It could be they are more stressed, or more sedentary and sit about eating junk food getting fat. Those seem to be better explanations than a phone causing the damage at such a great distance."

Last year John Aitken of the University of Newcastle in New South Wales published research suggesting radio wave radiation similar to that from mobiles caused DNA damage in the sperm of mice.