



## Health & Lifestyle

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### Mobile phone radiation fries sperm - study

By Tamara McLean AAP October 20, 2008 04:39pm

**MEN** who talk for hours on their mobile phones could be jeopardising their chance of fathering a child, Australian research suggests.

An experiment on semen revealed evidence of DNA damage after 16 hours of exposure to radiation similar to the output of a mobile phone.

The preliminary study, presented at a fertility conference in Brisbane today, is the first of its kind, and supports US research showing heavy mobile phone users have up to 40 per cent lower sperm counts than lighter users.

Researchers at the University of Newcastle built a device to irradiate sperm at the same radio frequency as mobile telephone calls.

Professor John Aitken, director of the university's Centre of Excellence in Biotechnology and Development, said they were able to accurately identify high levels of DNA fragmentation in the sperm.

"After 16 hours exposure, there was clear evidence of DNA damage," Prof Aitken said.

"This is a very early finding from our analysis, but it does raise concerns."

DNA damage in spermatozoa has been associated with decreased fertility, increased risk of miscarriage and various kinds of disease in offspring, including childhood cancer, and a number of

neurological disorders such as autism, bipolar disorder and spontaneous schizophrenia.

In the study, damage was caused by oxidative stress - when the generation of free radicals exceeds the body's own anti-oxidant defence mechanisms.

Prof Aitken said it was well known that sperm DNA fragmentation was predominantly triggered by oxidative stress which may arise from infection, smoking or older age, but there had been little research about the link with mobile phones.

Unsaturated fatty acids in foods such as margarine were also known to trigger free radicals and potential oxidative stress, he said.

"We also suspect components of acne treatment may give rise to potential free radical effects, but we have yet to find a dermatologist willing to participate in such a study," he said.

The team said if oxidative stress caused DNA damage to sperm, anti-oxidant treatments might provide a cure.

A recent German study suggested that seat warmers fitted in many luxury model cars may also be damaging sperm by raising scrotum temperature above optimal semen production conditions.

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