

Unhealthy lifestyles have little impact on sperm quality: study

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Lifestyle advice given by doctors to men diagnosed with infertility should be radically overhauled according to research published today (Wednesday).

Current guidelines from the National Institute for Clinical Excellence advise doctors to warn [infertile men](#) about the dangers of smoking, alcohol consumption and recreational drug use, as well as the risks of being overweight and wearing tight underwear.

However, a team of scientists from the Universities of Manchester and Sheffield have found that many common lifestyle choices make little difference to [male fertility](#), based on how many swimming sperm men produce.

The study, published in the medical journal [Human Reproduction](#), recruited 2,249 men from 14 fertility clinics around the UK and asked them to fill out detailed questionnaires about their lifestyle. The information was then compared between 939 men who ejaculated low numbers of swimming sperm and a control group of 1,310 men who produced higher numbers.

The research found that men who ejaculated low numbers of swimming sperm were 2.5 times more likely to have had testicular surgery, twice as likely to be of black ethnicity, and 1.3 times more likely to be in manual work, not wear boxer shorts, or not had a previous conception. Surprisingly, men's use of [recreational drugs](#), tobacco and alcohol, as well as their weight measured by their [body mass index](#) (BMI), had little effect.

Dr Andrew Povey, from the University of Manchester's School of Community Based Medicine, said: "Despite lifestyle choices being important for other aspects of our health, our results suggest that many [lifestyle choices](#) probably have little influence on how many swimming sperm they ejaculate. For example,

whether the man was a current smoker or not was of little importance. The proportion of men who had low numbers of swimming sperm was similar whether they had never been a smoker or a smoker who was currently smoking more than 20 cigarettes a day. Similarly, there was little evidence of any risk associated with [alcohol consumption](#).

"This potentially overturns much of the current advice given to men about how they might improve their fertility and suggests that many common lifestyle risks may not be as important as we previously thought. Delaying fertility treatment then for these couples so that they can make changes to their lifestyles, for which there is little evidence of effectiveness, is unlikely to improve their chances of a conception and, indeed, might be prejudicial for couples with little time left to lose."

In assessing male fertility, the team chose to use the number of swimming sperm men ejaculated because this broadly correlates with how fertile a man is likely to be and also often determines the type of fertility treatment that may be used if required.

Dr Allan Pacey, Senior Lecturer in Andrology at the University of Sheffield and part of the study team, said: "Although we failed to find any association between common lifestyle factors and the number of swimming sperm men ejaculate, it remains possible that they could correlate with other aspects of sperm that we have not measured. These include the size and shape of sperm (sperm morphology) or the quality of the DNA contained in the sperm head. We need to do further work to look into these aspects.

"In spite of our results, it's important that men continue to follow sensible health advice and watch their weight, stop smoking and drink alcohol within sensible limits. But there is no need for them to become monks just because they want to be a dad. Although if they are a fan of tight Y-fronts, then

switching underpants to something a bit looser for a few months might be a good idea!"

Professor Nicola Cherry, originally from The University of Manchester but now at the University of Alberta, added: "The higher risk we found in manual workers is consistent with earlier findings that chemicals at work could affect sperm and that [men](#) should continue to keep work exposures as low as possible."

More information: The paper, 'Modified and non-modifiable risk factors for poor semen quality: a case-referent study,' by AC Povey et al, will be published in the journal *Human Reproduction*, on Wednesday, June 13.

For further information see Cherry et al., (2008) Occupation and male infertility: glycol ethers and other exposures. *Occup Environ Med.* 65: 708-714.

Provided by University of Manchester

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