

# Male painters exposed to fertility damaging chemicals

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Men working as painters and decorators who are exposed to glycol ethers are more likely to have poor semen quality, according to research carried out by scientists from the Universities of Sheffield and Manchester.

The findings from the research, which have been published in the BMJ journal *Occupational Environmental Medicine*, show that men who work with solvents such as glycol ether have a 2.5 fold increased risk of having a low motile sperm count compared to men with low exposure. Glycol ethers are widely used in many products including water-based paints – a product used by many painters and decorators.

Sperm motility is an important factor in the fertility of men and the concentration of motile sperm per ejaculate has shown to be linked with conception. However, the size and shape of sperm (morphology) and the quality of sperm DNA are also important factors that may be affected by chemical exposure.

The findings are a result of a major collaborative UK study to determine the occupational risks of male infertility through chemical exposure in the workplace. The study, undertaken in 14 fertility clinics in 11 cities across the UK, examined the working lives of 2,118 men.

The researchers however did conclude that, apart from glycol ether, there are currently few workplace chemical threats to male fertility.

In addition to chemical exposure, the study looked at other non-chemical factors in the men's lifestyle. The researchers discovered that men who had undergone previous surgery to the testicles or who undertook manual work were more likely to have low motile sperm counts, whereas men who drank alcohol regularly or wore boxer shorts were more likely to have better semen quality.

Dr. Andy Povey, senior lecturer in Molecular Epidemiology at the University of Manchester, said: "We know that certain glycol ethers can affect male fertility and the use of these has reduced over the past two decades. However our results suggest that they are still a workplace hazard and that further work is needed to reduce such exposure."

Dr Allan Pacey, senior lecturer in Andrology at the University of Sheffield, added: "Infertile men are often concerned about whether chemicals they are exposed to in the workplace are harming their fertility. Therefore it is reassuring to know that on the whole the risk seems to be quite low."

Source: University of Sheffield

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