

Dangers of third-hand smoke highlighted

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Scientists have highlighted the dangers associated with third-hand tobacco smoke, particularly among children.

The dangers of smoking and second-hand (passive) smoking are already well established, however in recent years, fears about third-hand smoke have also been expressed. This refers to smoke particles and gases that are deposited on dust and surfaces, such as walls, carpets, furniture and bedding.

Until now, the risks associated with this have been unclear so UK and Spanish scientists decided to investigate further. They collected dust samples from homes occupied by smokers and non-smokers and used the most up-to-date toxicology information to estimate the risk of cancer.

The scientists found that among children aged between one and six, the cancer risks exceeded the limit recommended by the Environmental Protection Agency in the US in three out of four smokers' home and two out of three non-smokers' homes.

According to lead investigator, Dr Jacqueline Hamilton of the University of York, the risks associated with tobacco smoke 'do not end when a cigarette is extinguished'.

"Non-smokers, especially children, are also at risk through contact with surfaces and dust contaminated with residual smoke gases and particles, the so-called third-hand smoke. This risk should not be overlooked and its impact should be included in future educational programmes and tobacco-related public health policies," she commented.

The scientists pointed out that around 600,000 people worldwide die every year from passive smoking, but since many countries have introduced public smoking bans, the home is now the main source of exposure to this type of smoking.

"Over 40% of children have at least one smoking parent and whereas there is a general public awareness about the harms of second-hand smoke, there is little knowledge about the dangers of third-hand smoke.

"Carcinogenic materials can be passed from smokers to non-smokers during shared contact, for example between clothes and surfaces, and also enter homes via airborne transport of cigarette smoke," said Prof Alastair Lewis also of the University of York.

Details of these findings are published in the journal, *Environment International*.
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