

# Researchers raise concerns over e-cig safety

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Thousands of electronic cigarette users are risking dangerous levels of lung inflammation, the first study of its kind has revealed.

Dr Andrew Higham from The University of Manchester says the vapour which e-smokers inhale contains formaldehyde and acrolein—similar to traditional cigarettes—which could be harmful if taken over the long term.

In research published in the open access journal *Respiratory Research*, Dr Higham examined the effect of e-cig exposure on human white blood cells taken from 10 non-smokers

The research was funded by the North West Lung Centre, which is based at the University Hospital of South Manchester NHS Foundation Trust (UHSM). The research was conducted at UHSM's Wythenshawe hospital, and the University's Manchester Institute of Biotechnology, where three brands of e-Cigarette were investigated.

The raised activity of neutrophils in response to e-Cigarette exposure is similar to that observed in the presence of traditional cigarettes and is a characteristic of the debilitating lung condition Chronic Obstructive Pulmonary Disease, an illness found in traditional smokers.

The research will fuel the debate on the safety of e-Cigarettes: this week, for example, the Welsh Government dropped a ban on the use of e-cigarettes in enclosed public spaces.

There are an estimated 3 million users of [electronic cigarettes](#) in the UK. E-Cigarettes are often used to avoid the unwanted effects of traditional cigarettes, such as causing pulmonary inflammation.

However the results raise concerns over the safety of e-cig use.

Dr Higham said: "Our research shows quite clearly that there are risks associated with long-term use of these devices in terms of pulmonary inflammation.

"There has been a lot of public discussion on e-Cigarettes. But we think that the public needs to be aware of the potential harm these devices may cause which will empower users to make informed decisions."

**More information:** Andrew Higham et al. Electronic cigarette exposure triggers neutrophil inflammatory responses, *Respiratory Research* (2016). [DOI: 10.1186/s12931-016-0368-x](https://doi.org/10.1186/s12931-016-0368-x)

Provided by University of Manchester

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