

Firefighters at increased risk of cancer diagnosis

Research commissioned by the UK Fire Brigades Union is currently underway at the University of Central Lancashire (UCLan, Preston, UK) into the impact of firefighting on firefighters' health as a result of their involvement in the emergency response to the Grenfell Tower disaster in London, in June, 2017. Media reports have suggested that several of the firefighters who fought the fire at Grenfell have since been diagnosed with terminal cancer.

This research follows the publication on Jan 10, 2023, of five separate studies—all commissioned by the Fire Brigades Union and carried out by researchers at UCLan—on the occupational health risks faced by firefighters in the UK.

Four of these studies revealed, among other findings, the presence of carcinogens across firefighting settings, and that more than 4% of surveyed serving firefighters have already been diagnosed with a cancer. Evidence also showed that individuals were at least twice as likely to be diagnosed with cancer if they had noticed soot in their nose or throat, or if they remained in their personal protective equipment for longer than 4 h after attending fire incidents.

The fifth study examined cancer mortality in Scottish firefighters, producing findings that are equally relevant to firefighters in the UK where the same conditions and operational procedures are in place. Among other morbidities, the study revealed a significant excess of mortality due to prostate and oesophageal cancers and myeloid leukaemia, as well as neoplasms of unknown behaviour. The firefighters' mortality rate from all cancers was 1.6 times higher than that in the general population. "These findings warrant urgent recognition of cancer as an occupational disease in UK

firefighters, regular preventative health monitoring and greater legal support for those who are currently suffering," explained study lead, Anna Stec (UCLan).

Frustratingly, the link between fire contaminants and cancer has long been understood, begging the question of why more has not been done previously to protect firefighters. "No firefighter should suffer unnecessarily and there is much more that fire services can be doing to reduce exposure to fire contaminants," commented Riccardo la Torre, National Officer of the Fire Brigades Union. "We demand to see more action on prevention, health monitoring, and facilities and contracts for proper personal protective equipment and workwear cleaning. Ministers and Fire Bosses can no longer bury their heads in the sand on this life and death matter: it is of absolute urgency that they act and this [new] research only reinforces that point."

This occupational risk of exposure to carcinogens is not unique to firefighting in the UK, as data from other high-profile international incidents attest. According to results from a 2011 study, US firefighters who worked at the World Trade Center following the 9/11 terrorist attacks in 2001 were 13% more likely to develop cancer—especially prostate and thyroid cancers—than their colleagues who were not involved.

Yet while the issue is clearly global, it seems the UK is lagging behind other countries with regard to its response. Alex Forrest (International Association of Fire Fighters, Ottawa, ON, Canada), a health and safety advocate for firefighters for more than 25 years, commented on the Scottish firefighters study: "This study does not surprise me in the least when it comes to the occupational cancer risks [for] today's firefighters. These

tragic findings are what we are finding all around the world. It is because today's fires are more toxic due to the increased use of plastics that create dangerous levels of carcinogens, and our modern firefighting gear cannot fully protect us from this danger."

"What is surprising is that the UK fire services and Government do not properly recognise these deaths due to cancer as line of duty deaths by providing proper health support and compensation for the families, as Governments do in Canada, the USA, and Australia. A death from occupational cancer is no less traumatic than an on-scene fire death."

Forrest highlights that in a 2022 monograph, the International Agency for Research on Cancer reclassified workplace exposure as a firefighter as being Group 1 carcinogenic, designating it as a known carcinogen to humans and making firefighting likely one of the most dangerous professions globally for occupational cancer.

"What scares me the most is firefighter cancer rates will continue to rise and these numbers are likely conservative in nature due to the healthy worker effect," Forrest adds. "Urgent action must be taken to protect those who protect our communities."

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Published Online
January 19, 2023
[https://doi.org/10.1016/S1470-2045\(23\)00021-9](https://doi.org/10.1016/S1470-2045(23)00021-9)

For more on reports of cancer in Grenfell Tower firefighters see <https://www.independent.co.uk/news/uk/home-news/grenfell-firefighters-terminal-cancer-tower-fire-b2262185.html>

For the four UCLan studies on the occupational health risks of firefighting see *Sci Rep* 2023; [13: 65](#), *Sci Rep* 2023; [13: 97](#), *Sci Rep* 2022; [12: 22072](#), and *Sci Rep* 2023; [13: 62](#)

For the study on occupational cancer in Scottish firefighters see <https://doi.org/10.1093/occmed/kqac138>

For the study on US firefighters who attended the World Trade Center terrorist attacks see *Occup Environ Med* 2021; [78: 707-14](#)

For more on the International Agency for Research on Cancer monograph see *News Lancet Oncol* 2022; [23: 985-86](#)