

Hoosier firefighters face higher risk of dying from cancer than non-firefighters

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Hoosier firefighters face a significantly higher risk of dying from cancer than non-firefighters in Indiana, according to a study that shows death from malignant cancers was the leading cause of death for Indiana

firefighters between 1985 and 2013.

Of 2,818 Indiana firefighters who died between 1985 and 2013, 30.4 percent died from [malignant cancers](#). The study found the firefighters experienced an estimated 20 percent increase in the odds of dying due to malignant cancers compared to non-firefighters.

This study is unique in that it is one of the first to match an exposed firefighter population to an independent comparison group of non-firefighters from a general population.

The [research findings](#) are in the paper "Excess mortality among Indiana firefighters, 1985-2013," which was published in the *American Journal of Industrial Medicine*.

"The purpose of this study was to examine patterns of chronic disease deaths among Indiana firefighters from 1985 to 2013 compared to non-firefighters," said Carolyn Muegge, a [doctoral candidate](#) in the Richard M. Fairbanks School of Public Health at IUPUI, who is also a research scientist at the National Institute for Public Safety Health in Indianapolis and first author on the paper.

"Firefighters are exposed to toxic agents, increasing their risk for cancer and [cardiovascular disease](#)," Muegge said. "We examined the odds of cancer and cardiovascular mortality of firefighters relative to a matched group of non-firefighters from the general population."

To compare firefighters and non-firefighters, each firefighter death record was matched to four non-firefighter death records by age at time of death, sex, race, ethnicity and year of death.

Heart disease was the second leading cause of firefighters' deaths, accounting for 824, or 29.2 percent, of the deaths. There was no

difference in the odds of death due to cardiovascular diseases between firefighters and non-firefighters.

When the causes of deaths of firefighters between 1983 and 2013 are looked at in five-year increments, research shows heart disease had been the leading cause of Indiana firefighters' deaths until 1995, when "the burden of cancer significantly surpassed heart disease," the paper stated.

Heart disease was the leading cause of [death](#) in the non-firefighter comparison group, at 29.6 percent, followed by malignant cancers at 27.1 percent.

According to the researchers, the leading cause of firefighter deaths—cancer and heart disease—underscore the need for implementing and expanding cancer and [heart disease](#) risk factor reduction programs and policies for firefighters.

More information: Carolyn M. Muegge et al. Excess mortality among Indiana firefighters, 1985-2013, *American Journal of Industrial Medicine* (2018). [DOI: 10.1002/ajim.22918](https://doi.org/10.1002/ajim.22918)

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