

# Study: Firefighters face higher cancer rates

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REGION — One of the most dangerous occupations in the world is becoming even more hazardous for its workers — but a new study suggests that the people we expect to protect us are not being adequately protected against the risks of their profession.

A study released by the University of Cincinnati has determined that firefighters are at a greater risk of developing four different types of cancer than the general population — and also suggests the protective equipment firefighters are using is insufficient in protecting them against cancer-causing agents.

## What are you looking for?

In a report by the university's environmental health department, researchers found that firefighters are twice as likely to develop testicular cancer and have significantly higher rates of non-Hodgkin's lymphoma and prostate cancer than people in other professions — and overall found 10 cancers that were either possibly or probably related to firefighting.

The report also confirmed previous findings that firefighters are at greater risk for multiple myeloma, which is a cancer of the bone marrow for which there is currently no known cure.

The research is the largest comprehensive study to date investigating cancer risk associated with working as a firefighter and concludes that firefighters need better protection on the job.

The findings were published in the November issue of the Journal of Occupational and Environmental Medicine.

Dr. Andrea Ruskin, a hematologist and oncologist at the Whittingham Cancer Center at Norwalk Hospital, said while "it's nothing that has caught our eye, it's no surprise.

"They are exposed to so much," she said. Ruskin said firefighters' exposure to certain carcinogens can have a devastating effect on their health.

"They can get DNA damage," she said. However, Ruskin said not every firefighter on the job will get cancer, much the same as that not every smoker will develop lung cancer.

"It's a combination of exposure and genetic predisposition," she said.

Research shows that environment, including diet and lifestyle, causes up to 90 percent of all cancer.

The team of researchers at Cincinnati analyzed information on 110,000 firefighters from around the nation — most of them full-time, white male workers — from 32 previously published scientific studies.

Researchers believe there is a direct correlation between the chemical exposures firefighters experience on the job and their increased risk for cancer.

Fire Chief Denis McCarthy said there have been "dramatic changes" in the equipment that firefighters at the Norwalk Fire Department use for protection.

McCarthy said during the past 10 years, there have been significant upgrades in the breathing apparatus firefighters use, which went from "one-size-fits-all" to a custom fit. New regulations also have prevented recontamination by adopting standards to clean firefighters' "turn-out gear," which are the coats, pants and helmets firefighters wear; and all fire stations are equipped with diesel exhaust removal systems.

According to the study, firefighters are exposed to many compounds that the International Agency for Research on Cancer has designated carcinogens. These include benzene, diesel engine exhaust, chloroform, soot, styrene and formaldehyde.

The substances can be inhaled or absorbed through the skin and occur both at the scene of a fire and in the firehouse — where idling diesel fire trucks produce exhaust.

"Stations are not only living quarters, but it's a garage, too," McCarthy said. "We have the latest standard for protection against airborne agents."

Researchers at Cincinnati studied the risk for 20 different cancers.

The epidemiologists found that half the studied cancers — including testicular, prostate, skin, brain, rectum, stomach and colon cancer, non-Hodgkin's lymphoma, multiple myeloma and malignant melanoma — were associated at varying levels of increased risk with firefighting.

Researchers found firefighters have a 100-percent higher risk of developing testicular cancer, a 50-percent higher risk for multiple myeloma and non-Hodgkin's lymphoma, and for prostate cancer it's a 28-percent increased risk, compared with nonfirefighters.

"There's a critical and immediate need for additional protective equipment to help firefighters avoid inhalation and skin exposures to known and suspected occupational carcinogens," said Dr. James Lockey, a professor of environmental health and pulmonary medicine at Cincinnati, and the lead researcher of the study. "In addition, firefighters should meticulously wash their entire body to remove soot and other residues from fires to avoid skin exposure."

Lockey said that firefighters exposure to carcinogenic toxins "occur not when they are in the fire, but when they are in the vicinity of the fire."

According to information from the American Cancer Society, workplace exposure is often considerably higher than general environmental exposure. And while the society does not play a direct role in classifying or identifying carcinogens, it does provide information and guidance on environmental cancer risks.

The effect of environmental exposure was brought home in a recent report that found that nearly 70 percent of rescue personnel and workers who responded to the Sept. 11, 2001, terrorist attacks on the World Trade Center suffered from lung problems during and after the recovery efforts.

Mike Dubron, president and founder of the Los Angeles-based Firefighter Cancer Network, said his organization will establish regional directors throughout the nation this year.

Dubron said he established the network because firefighters are largely "alpha males that don't reach out to others" about private health issues.

"All (cancers) are alarmingly increasing for firefighters," he said.

Amanda Harper, a spokeswoman with the public relations department at the University of Cincinnati, said the situation with firefighters is very real.

"These people are public servants and need to be protected," she said.

For more information on the Firefighter Cancer Network, call 1-866-994-3276; or e-mail [mdubron@lacofd.org](mailto:mdubron@lacofd.org); or visit the Web site at [www.firefightercancernetwork.org](http://www.firefightercancernetwork.org).