Firefighters and Asbestos Exposure

Firefighters face uniquely extreme asbestos exposure risks, and as a result, they suffer an elevated rate of asbestos-related diseases such as mesothelioma. Many organizations support firefighters with occupational cancer and work to prevent toxic exposure in the future.

When people imagine the dangers of firefighting, they often don't realize cancer is now the #1 occupational cause of death for career firefighters. While a such consent set of overall services as a sign of a great service firefighter rescue workers should see that visible gift for what it is: a death sentence — potentially deadly asbestos exposure.

During America's 20th century building boom, asbestos-containing materials were ubiquitous in public buildings and residential structures — from basements to attics. Most firefighters encountered this toxic fiber in their normal work life in its terrible illnesses, such as lung cancer and mesothelioma, were publicly revealed, but asbestos still remains in millions of old buildings across the nation.

FIREFIGHTER QUICK FACTS

- Face extreme risks of asbestos exposure during rescue operations
- 75 percent of line-of-duty deaths are caused by cancer in general
- 2.28 times more likely to develop mesothelioma due to exposure
- Proper training and procedures can prevent occupational cancer

When buildings burn, weakened asbestos-containing materials can release internal concentrations of toxic mineral fibers into the air. Firefighters must use their safety equipment at all times at the site of a fire and their decontamination their gear properly. If not, they risk exposing themselves and their families to asbestos and other toxic substances found in ashes and debris.

Many trade organizations provide training and informative resources so firefighters can learn how to prevent occupational cancer. Other organizations specialize in supporting firefighters stricken with cancer. Firefighters who have suffered toxic exposure because of others' negligence have legal options for seeking compensation.

> "We observed about a twofold increase in malignant mesothelioma mortality and incidence compared with the US population."
>
> **– National Institute for Occupational Safety and Health study of cancer in firefighters**

Asbestos Diseases Firefighters Face

When asbestos is disturbed, it releases dust fibers more than 100 times thinner than a human hair.

These microscopic mineral fibers cannot be seen, smelled or tasted. Because they do not chemically react with anything in the body, they cause no immediate symptoms when someone inhales or swallows them.

However, because asbestos fibers never dissolve inside the body, they can become permanently lodged in organs and tissues, causing benign and malignant illnesses to develop many years later.

These are some of the conditions related to asbestos exposure:

Asbestosis
When asbestos crikets in the soft tissue of the lungs, it causes scarring that makes immune system tries to repair the fibers. The buildup of scar tissue gradually stiffens the lungs, making it harder to breathe as the asbestosis progresses.

Lung Cancer
Lung cancer is usually caused by smoking cigarettes, but it can also develop in thousands of cases also tied back to asbestos exposure. Asbestos-related lung cancer kills more Americans than any other asbestos-related illness.

Pleural Plaques and Thickening
Once inside the body, asbestos fibers can also migrate into the pleura, which is the membrane that lines the lungs and chest. Asbestos fibers may lead to development of hard plaques or scarring in the lungs or the pleural lining, which can make breathing painful.

Mesothelioma
Mesothelioma is a rare and aggressive form of cancer caused by asbestos exposure. It develops in the mesothelial lining surrounding the lungs, heart and chest wall, but a large fraction of cases develop in the peritoneal lining of the abdomen, potentially spreading into the organs of the gut.

In 2013, the Occupational Health and Safety Administration (OSHA) announced a novel finding from its research study into the medical history of almost 30,000 American firefighters. Compared to the average American, firefighters are more than twice as likely to develop mesothelioma, the signature cancer of asbestos.

According to the OSHA study, firefighters also face elevated rates of many other types of cancer because of toxic chemicals released when a building burns. However, the extremely high incidence of mesothelioma found by the study points to the risks type of occupational asbestos exposure firefighters face.

Firefighters at Greater Risk of Asbestos Exposure

From the 1950s to the 1970s, American manufacturers mixed asbestos into a range of building materials as a cheap way to make almost anything more durable.

Common asbestos-containing building materials included:

- Cement floors, sheets and siding
- Roof shingles and sealant
- Vinyl tiles, floors and adhesive
- Adhesives for flooring, wall panels and ceiling tiles
- Pipes and insulation for electrical panels
- Pipe, duct and attic insulation
- Insulation for boilers, furnaces and appliances
- Spray-on coating and fireproofing

The list of asbestos products goes on. In most circumstances, these materials fell into disuse decades ago. Frailer materials (such as old pipe insulation) that can release asbestos fibers easily and overtakes materials (such as vinyl tiles) that keep asbestos fibers fixed in place.

In a disaster situation, however, all materials are effectively frailer.

This is what sets firefighters apart from other tradesmen as risk of asbestos exposure. Most occupational asbestos exposure happens little by little on a regular basis. But for firefighters, exposure may come in the form of a single encounter with asbestos-contaminated smoke or debris.

> "Cancer is the most dangerous and unrecognized threat to the health and safety of our nation's firefighters."
>
> **– Firefighter Cancer Support Network**

Firefighters Exposed to Asbestos During 9/11

When the World Trade Center fell on 9/11, they released a massive dust cloud of heavy metals, burning plastics and hundreds of tons of pulverized asbestos. In the following months, thousands of firefighters from across the country joined the members of the New York Fire Department in digging through the contaminated rubble, often without respiratory protection.

As a result, first responders exposed to WTC dust suffer high rates of fatal lung diseases and dozens of different types of cancer.

The death toll is set to rise for decades to come because many types of cancer, including mesothelioma and asbestos-related lung cancer, typically do not develop for at least 20 years after exposure.

The toxic exposure tragedy caused by the 9/11 attacks illustrates the absolute necessity of wearing personal protective equipment (PPE) at all times around a disaster site.

How Can Firefighters Avoid Asbestos Exposure?

Cancer

In 2013, the Firefighter Cancer Support Network (FCSN) assembled a panel of experts to create a detailed list of ways firefighters can protect themselves from occupational cancer. By following these key recommendations, firefighters can guard against benign diseases such as asbestosis and pleural thickening as well.

Keep SCBA On During Overhaul

It is essential to wear respiratory protection at all times during a firefighting operation. Many firefighters smoke asbestos and other toxic substances because they only use their self-contained breathing apparatus (SCBA) when there is an immediate threat from fire and smoke.

Opening walls, pulling down ceilings and searching through debris in the aftermath of a fire are precisely the types of activities that can disturb asbestos-containing materials and stir up toxic dust. Keeping debris wet can minimize the amount of dust in the air.

Decontaminate Gear Thoroughly

Before leaving the site of a fire, firefighters should wash the bulk of the hazardous soot off their tools, personal protective equipment and any other gear that they wore.

After leaving the site, firefighters should decontaminate PPE according to the National Fire Protection Association standard (NFPA 1851) at the station or sending dirty PPE to an appropriate cleaning facility. Firefighters must decontaminate storage spaces for PPE as well.

Don't Bring Home Toxic Materials

Firefighters must keep contaminated PPE and clothes isolated from living and sleeping quarters. To avoid secondhand asbestos exposure, firefighters should shower at the station before returning home to their families.

In particular, volunteer firefighters must change and wash their clothes immediately after a fire, and they should avoid bringing contaminated gear and clothes into their cars and homes.

Get the Safety Training You Need

Proper training is crucial to avoiding asbestos exposure. If fire departments do not take the initiative in offering training, firefighters must be proactive in requesting it.

The Firefighter Cancer Support Network, International Association of Fire Fighters and other groups offer cancer awareness and prevention courses at fire training academies, fire service conferences and online. These organizations also offer training instructors can take back with them to their local fire departments.

Stay Safe During Routine Activities

Unfortunately, asbestos exposure is also a danger to firefighters in nonemergency situations. Firefighters should wear protective equipment and follow safety and breathing masks to ole forthrown and preventing secondhand buildings for training exercises.

The intentional burning of a building for fire training is considered a demolition as far as federal asbestos regulations are concerned. That means the building must be inspected and asbestos materials must be properly removed before the fire training.

Get Regular Screening for Occupational Diseases

Even the most thorough precautions will not remove all the environmental hazards firefighters face or reverse the effects of past toxic exposures.

For this reason, firefighters should receive annual medication examinations. They should keep their doctors informed of exposure to any toxic materials. Early detection is essential to the effective treatment of occupational cancers such as mesothelioma.

> "Our firefighters cannot help the public if they're not kept as safe as possible. In the end, all we want is for this department and this leadership to do their job and put firefighters and public safety first."
>
> **– Hawaii Fire Fighters Association President Bobby Lee to Hawaii News Now**

How Can Firefighters Be Compensated?

The link between cancer and firefighting has been well established in the scientific community. The government is starting to catch up by offering workers' compensation, medical benefits and death benefits. Although coverage and criteria vary by state.

At the federal level, the government passed the Zadroga Act in 2010 to create the World Trade Center Health Program. It was created in recognition of the long conditions caused by 9/11 and other long-term effects. In 2015, the health program's funding was extended for 75 years to ensure lifetime medical treatment and monitoring for people exposed to the toxic dust of the fallen towers.

Today, the program tracks the health of more than 70,000 rescue workers and survivors. All firefighters who participated in the 9/11 recovery operation are encouraged to enroll in the World Trade Center Health Registry.

Previously, New York City first responders were forced to seek compensation by filing a lawsuit in 2002. The lawsuit of the complaint: Government officials had not provided sufficient warning about the dangerous chemicals in the 9/11 dust and debris. In 2010, the city offered a $657 million settlement that would be distributed among about 10,000 claimants based on each person's severity of exposure and illness.

Firefighter lawsuits like this prompt because of asbestos, illustrating the risks firefighters face. In 2011, the city settled for $10 million with 343 firefighters who had filed lawsuits claiming exposure that occurred in July 2007. Though at least one fire official knew the city owned homes they were training in contained asbestos, officials did not warn the firefighters nor direct them to wear SCBA.

In 2011, the city settled the lawsuit by agreeing to pay for lifetime medical monitoring and medical costs up to $750,000 for the 343 firefighters.

Penalties for Negligence

Fire departments and government officials have an ethical responsibility to protect firefighters from asbestos. On a practical level, making the effort to prevent toxic exposure is much less costly than dealing with the terrible long-term consequences of occupational cancer.

There are also legal penalties for failing to prevent asbestos exposure, as these examples from 2017 illustrate:

- In September, the Hawaii Occupational Safety and Health Division fined the Honolulu Fire Department $7,000 for failing to follow proper decontamination procedures after a fire.
- In October, the Occupational Health and Safety Administration levied a $23,000 fine against the Fire Department of Oakland for failing to provide asbestos training exercises with airborne materials in private, enclosed spaces building. The city of Orlando narrowly avoided fines over a similar situation that occurred in February.
- In November, the city administrator and the fire chief of Marion, South Carolina, were indicted on several charges after it emerged they had allegedly ordered firefighters to remove asbestos materials from a fire department building without proper training or safety equipment.

Resources for Firefighters

Across the United States and around the world, fire service leaders are responding to the rising number of occupational cancer cases involving firefighters. The following are a few examples of trade organizations that can help:

- International Association of Fire Fighters
- Firefighter Cancer Support Network
- National Volunteer Fire Council
- Fire Fighter Cancer Foundation
- International Association of Fire Chiefs
- National Fallen Firefighters Foundation
- National Fire Protection Association