



# Cancer in Firefighters and Presumptive Disability Coverage

## Executive Summary

Firefighters are at an elevated risk for developing several occupational diseases, including cancer, due to increased exposure to toxic contaminants while on duty. Estimates from long-term data suggest that U.S. firefighters have an approximate 1 in 8 incidence rate of cancer. Nearly all jurisdictions in America provide some form of benefits to firefighters who develop an occupational-related disease, but differ on which diseases qualify, payment mechanisms, and the funds used to provide these benefits. Missouri law (RSMo § [87.005](#) & [87.006](#)) and recently passed legislation ([SB 45](#)) require that both paid and volunteer firefighters qualify for presumptive disability coverage through retirement/pension funds and municipal benefits pools.

## Highlights

- Firefighters are frequently exposed to carcinogenic compounds, including smoke, burning chemicals, and other toxic materials used in construction or protective equipment. The level of exposure to these substances increases the likelihood of cancer development.
- More than half of states, not including Missouri, cover cancer under workers' compensation laws.
  - Workers' compensation laws in Missouri are not explicit in naming all types of cancers that may qualify firefighters for compensation. Presumptive disabilities are covered under retirement funds.

## Limitations

- While firefighters experience elevated cancer rates overall, the type of cancer can depend on geography and demographics. More data may be needed to understand specific disease associations.
- Delayed disease onset makes both the causes of cancer and the full costs presumptive coverage difficult to determine.
- Little data exists for presumption costs associated with publicly-employed first responders (compared to privately-employed first responders, for whom more data is available).

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## Research Background

### Causes of Cancer in Firefighters

Firefighters face multiple occupational exposures that place them at increased risk for various

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cancers depending on the setting in which they are employed. Wildland firefighters often experience prolonged exposure to intense heat and smoke, which can aggravate cardiovascular and respiratory conditions.<sup>1</sup> In addition to these exposures, urban firefighters are also regularly exposed to industrial chemicals and building materials such as asbestos, glass, metals, plastics, and fine particulates.<sup>2</sup> They may also be exposed to per-fluorinated alkyl substances (PFAS) through contact with firefighting foams and protective clothing.<sup>3</sup> Lastly, as first responders to medical emergencies, firefighters are also exposed to infectious diseases that can contribute to cancer risk.<sup>4</sup>

Decontamination procedures of these workplace contaminants may include air-based, dry-brush, or wet-soap sanitization of gear and person, and may be mitigated by reducing and distributing exposure times among fire brigades doing high risk search tasks.<sup>5</sup>

These occupational exposures have been hypothesized to cause elevated cancer rates in firefighters, but firm conclusions are difficult to draw given workplace exposures to carcinogens are often not documented or lack detail. However, research has found a direct association with the years employed as a firefighter and increased cancer incidence.<sup>6</sup> These include increased incidences of bladder, brain, colorectal, non-Hodgkin's lymphoma, skin melanoma, prostate, and testicular cancers.<sup>7</sup>

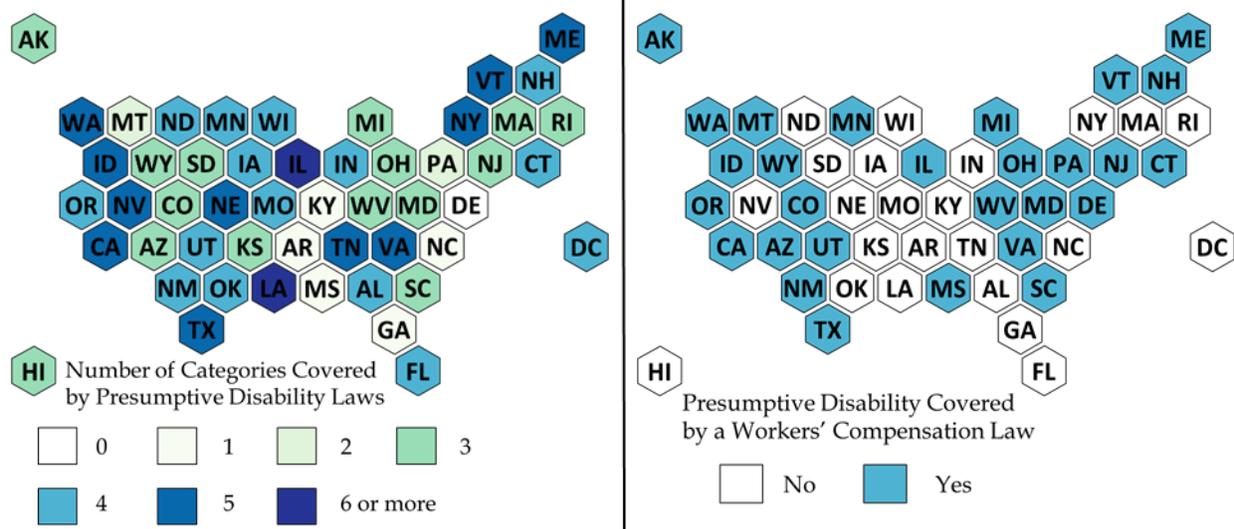
### Female and Minority Firefighters

While firefighters are traditionally male, expanded data on underrepresented members is lacking. One study notes that male firefighters are at increased risk for melanoma, prostate, testicular, thyroid, and colorectal cancer, while female firefighters are at increased risk for brain and thyroid cancers.<sup>8</sup> An additional study found that non-White firefighters were found to be at elevated risk for a wider variety of cancers (tongue, melanoma, prostate, testicular, bladder, kidney, brain, non-Hodgkin, multiple, myeloma, leukemia, chronic lymphocytic and myeloid leukemias) than their White counterparts.<sup>9</sup> While factors contributing to these disparities are not fully understood, further studies may inform guidelines for access to presumptive medical and disability claims.

### **Presumptive Disability Eligibility and Statutes**

Most U.S. jurisdictions have presumptive disability statutes that establish benefits programs for cancers and other occupational-related diseases. Since direct links between workplace exposures and cancer can be difficult to prove in individual cases, presumptive disability statutes establish mechanisms to determine benefit eligibility. Burden of proof often relies on precise documentation by the claimant and can be rebutted by the employer or insurer. Claimants may also be deemed ineligible due to factors such as age, lifestyle, or pre-existing conditions.<sup>10</sup> States differ in the types of evidence that can be used to rebut presumptive eligibility claims; some statutes require particular medical examinations/information to determine eligibility and others specify classes of exposures that provide eligibility.<sup>10</sup>

*Self-insurance* is a mechanism by which a business or entity (e.g., a local fire brigade) avoids the private insurance market to negotiate coverage plans directly with providers.<sup>11</sup> Many municipalities employ first responders and self-insure their workers' compensation claims. Due to this structure, data on fire department presumptive disability coverage are rarely publicly reported, and most studies rely on data from private sector fire response units. As a result of this data gap, private insurers may proactively drop coverage due to the uncertainty of future costs in certain cases.<sup>10</sup>



**Figure 1. Comparison of states that provide presumptive disability protections and workers' compensation for firefighters.** Left) Map of states (represented as hexagons) with colors related to number of healthcare categories covered for firefighter presumptive disability coverage; darker colors indicate more healthcare categories covered. Right) Map of states with at least one workers' compensation law protecting firefighters; color indicates a documented law. Map made with PresentationGo.com with data from the International Association of Fire Fighters.<sup>12</sup>

### State and Federal Policy Comparisons

Forty-nine out of 50 states cover cancer as a provided category under presumptive disability laws through workers' compensation, pension, or other general provision funds, but differ greatly in the number of medical categories covered by these funds (Figure 1, left). Currently, 28 states (Figure 1, right) cover any of these medical categories through a workers' compensation fund.<sup>12</sup> The funding source for paying out presumptive disability benefits can determine the timeline of the payout, as workers' compensation funds typically pay out more quickly than pension funds, which are not accessible until retirement. Other states have also moved to expand presumptive disability benefits as a result of a public health emergency. For example, Washington state passed [SB 5190](#) which expanded benefits due to the COVID-19 pandemic (effective 2021).

Federally, the [Federal Firefighters Fairness Act of 2021](#) has been introduced simultaneously in both chambers of Congress (HR 2499 and S 1116). It seeks to establish a uniform standard of workers' compensation for heart, lung, infectious disease, and various cancers to all federally-employed firefighters to cover diseases contracted during duty within ten-years of last employment.

## Missouri Firefighter Benefits

Missouri law (RSMo § [87.005](#) & [87.006](#)) requires that a firefighter must serve five years minimum and have had a physical examination within five years to claim eligibility for presumptive coverage of pension funds. Additionally, [SB45](#) (effective 2021) created a “Voluntary Firefighter Cancer Benefits Pool” that allows multiple municipalities to enter together into an employer contributions pool to cover costs associated with cancer benefits, and apply for public and private funds for these costs. These may include lump-sum payments, as well as costs for rehabilitative and employment re-education training. The bill further stipulates that workers’ compensation benefits received can reduce these pool payouts.

In Missouri, firefighters as well as their spouses and dependents are eligible for one-time and weekly death and survivor benefits from the state.<sup>13</sup> This is in addition to scholarships,<sup>14</sup> and tax credits<sup>15</sup> upon death or permanent disability, as well as individual funds from local municipalities. The Missouri Department of Labor also provides that occupational diseases due to toxic exposure qualify the beneficiary for benefits, but does not specify “cancer” under listed diseases.

In Missouri, attempts have been made to add a workers’ compensation law that explicitly covers cancer as an occupational-related disease covered for presumptive disability or death benefits ([HB 863](#)). Additionally, of the medical categories (heart, lung, cancer, and infectious diseases) covered under presumptive disability pension laws, behavioral/mental health is not covered in Missouri.<sup>12</sup>

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