

Firefighter Illness, Injury & Death in Canada, 2006–2015

Samantha Bruin, Rachel Ramsden, Alex Zheng, Jennifer Smith, Kate Turcotte, Len Garis, Ian Pike

Background

Canadian firefighters can experience many hazards on the job. Injuries can lead to prolonged periods of time off of work, long-term health effects, or even death.

A firefighter's duties include:

Emergency
Medical Aid

Safety
Education

Rescue

Fire
Suppression

Responding to
Motor Vehicle Crashes

Risk Factors

Contagious & infectious diseases
Extreme temperature
Unstable structures or falling objects
Strenuous physical labour
Repetitive or prolonged activity
Shift work & long hours
Traumatic events
Excessive noise
Falling from extreme heights

Risk for illness, injury and mental health challenges include

In Canada, there are more than
25,000 professional firefighters
80,000 volunteer firefighters

Each year,
1 IN EVERY 4,255
firefighters take time
off work due to **CANCER**

Each year,
1 IN EVERY 60
firefighters take time
off work due to **INJURY**

Injury

Due to the nature of the occupation, firefighters are at a high risk for injury while on the job. Work-related injury affects younger firefighters: 2/3 absent due to injury were 30-49 years old.

Causes: Hazardous conditions, heat, intense physical activity, motor vehicle crash, unstable structures, falling objects

Types: Muscle strains and sprains, back injury, arm and leg injuries, burns

Cancer

While firefighters have the same genetic and environmental predispositions for cancer as the general population, they are at increased risk for cancer. Work-related cancer affects older firefighters: 75% absent due to cancer were 40-64 years old.

Causes: Exposure to carcinogens and disease, shift work

Types: Testicular and prostate cancer and non-Hodgkin's lymphoma.

Mental Health

Mental health issues span all ages. Although it is under-reported, of all the firefighters on leave from work due to work-related mental health issues, approximately:

- 20% were under 30 years old
- 40% were 30-39 years old
- 40% were 40-59 years old

Causes: Traumatic events, death or rescue of a child, pre-existing health conditions

Types: Anxiety, depression, post-traumatic stress disorder (PTSD), substance use

Injuries & Illnesses

Respiratory Disease

100% of work-related deaths due to respiratory disease were among firefighters 65 years of age and older.

Causes: Exposure to chemicals, gases, and other substances

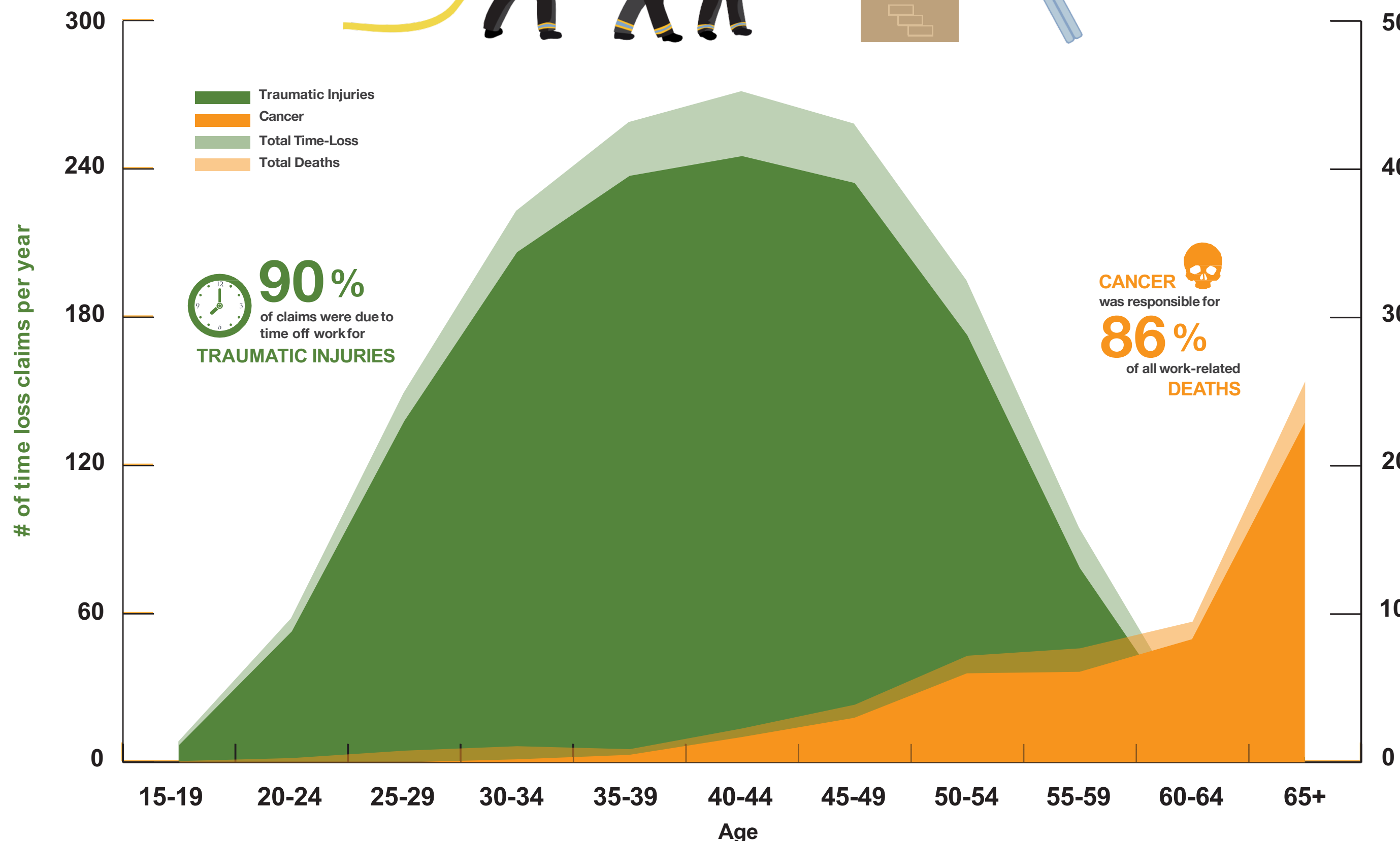
Types: Bronchitis, pneumonia, tuberculosis, asthma, chronic obstructive pulmonary disease (COPD).

Cardiovascular Disease

60% of work-related deaths due to cardiovascular disease were among firefighters between 50 and 64 years of age.

Causes: Physical demands, emotional stress, environmental hazards

Types: Heart disease, heart attack, congestive heart failure, cerebrovascular disease.



Policy Implications

1

Surveillance: A national firefighter injury surveillance system should be established in order to accurately determine the causes of work-related firefighter injury and death, and inform prevention efforts.

2

Early Detection: Encouragement of screening for illnesses and awareness of the warning signs for mental health disorders.

3

Health Promotion: Opportunities for personal mental and physical health should be implemented by fire departments. This can include installation of gym equipment and healthy food options.