

MODIFIABLE RISK FACTORS



This factsheet was developed by the International Association of Fire Fighters and the Firefighter Cancer Support Network.

A cancer risk factor is anything that increases a person's risk of developing cancer. Non-modifiable cancer risk factors include things that cannot be changed like certain exposures and biological components such as genetics, age, gender, race, etc.

Modifiable cancer risk factors are factors that can be changed, which include health behaviors and exposures such as healthy diet, getting adequate sleep, managing the stress of the job and reducing your exposure to toxic chemicals.

It is often not just one factor that increases a person's risk of developing cancer, but the result of a complex interaction of multiple factors.

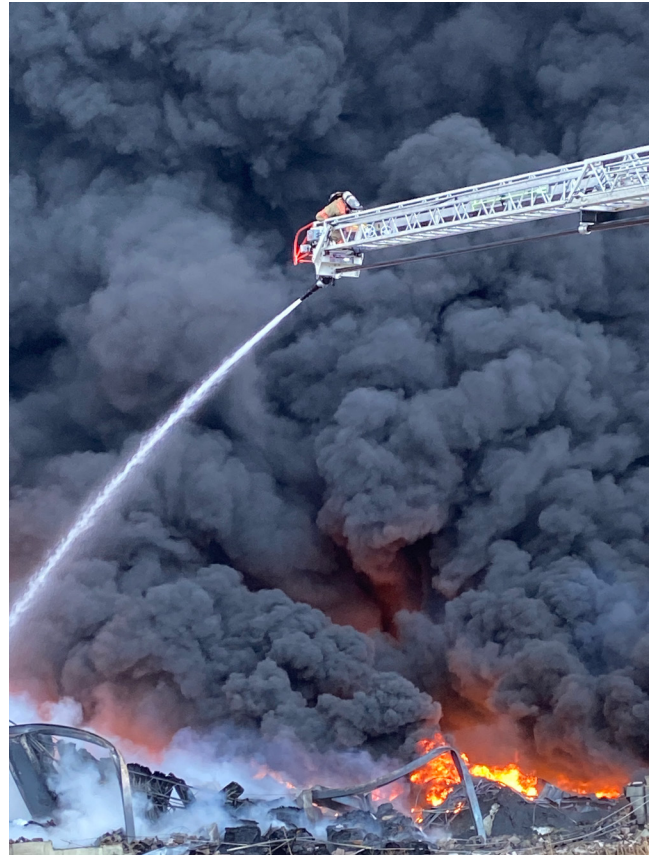
When it comes to risk factors, there are many you cannot change as a fire fighter. Therefore, greater emphasis is placed on the importance of **changing modifiable risk factors** to help counteract the risk factors you cannot change or prevent.

Individual risk factors are much easier to change, while operational factors may take work and patience.

INDIVIDUAL RISK FACTORS

ANNUAL MEDICAL EXAM

- **Problem:** Occupational exposures increase the risk of fire fighters developing occupational cancers and diseases.
- **Solution:** An annual medical exam is preventative medicine.
 - Early detection can sometimes be the key to survival.
 - Increase the chance of early detection of occupational cancers: see Chapter 2: Medical of the IAFF Wellness Fitness Initiative (WFI) Manual.
 - Make lifestyle changes (nutrition, exercise, etc.) to lower risk of developing occupational diseases or cancers.
 - The Firefighter Cancer Support Network developed a medical form to print and take to your doctor.



MODIFIABLE RISK FACTORS



This factsheet was developed by the International Association of Fire Fighters and the Firefighter Cancer Support Network.

OBESITY

- **Problem:** The leading causes of death for fire fighters are cancer and heart disease.
 - The connection between chronic and preventable diseases associated with poor nutrition and obesity are well-documented.
- **Solutions:** Nutrition and exercise
 - IAFF Nutrition Program: www.iaff.org/nutrition
 - A healthy and well-balanced diet and regular exercise routine will directly impact weight and promote a healthy lifestyle:
 - Eat a variety of vegetables, fruits and whole grains. Limit consumption of sugary drinks and high processed foods.
 - Exercise for at least 30 minutes a day.
 - IAFF Peer Fitness Trainer Program: www.iaff.org/peer-fitness

TOBACCO AND ALCOHOL USE

- **Problem:** Both tobacco products and alcohol consumption have been directly linked to cancer.
- **Solution:** Removing both behavioral habits will reduce the risk of cancer development.
 - Labor-management or other collaborative efforts to work towards a tobacco cessation program and a tobacco-free department.

OPERATIONAL RISK FACTORS

OCCUPATIONAL STRESS

- **Problem:** Firefighting is a physically dangerous and psychologically strenuous occupation with consistently changing conditions.
 - Emergency calls at all hours of the day and night
 - Traumatic experience exposure in fire and EMS
- **Solution:** Find ways to avoid internalizing stress.
 - Seek behavioral health services to discuss traumatic experiences or stress in a safe environment: www.iaff.org/behavioral-health
 - Faith-based practices
 - Exercise to relieve stress
 - Meditation

ADEQUATE SLEEP

- **Problem:** Sleep Fatigue
 - No matter what shift schedule the department follows, there is always an overnight shift.
 - Busy or short-staffed stations have less down time to recover, rehab or sleep.

MODIFIABLE RISK FACTORS



This factsheet was developed by the International Association of Fire Fighters and the Firefighter Cancer Support Network.

- **Solution:** Sleep Hygiene

- Departments should ensure a daily rest and recovery time dedicated to unplugging, napping or doing sleep recovery practices.
- Leadership needs to understand the positive benefits of sleep hygiene and rest, as well as how these functions will increase optimized performance.
- When off shift, it is recommended to sleep without distractions such as TV, cellphone, music, etc., and ensure the room is dark or has limited light.

PROTECTIVE LAWS AND REGULATIONS

- **Problem:** Weak state, provincial and federal regulations for exposure to chemicals.
 - Federal legislation, such as the Toxic Substances Control Act (TSCA; regulates chemicals in commerce), has neglected to fully evaluate carcinogen exposure to workers, specifically fire fighters.
 - State and provincial presumptive coverage legislation varies by state or province. Some states presume numerous cancers are a result of occupational exposures, while other states have no presumptive coverage or only presume one cancer is a result of occupational exposures experienced by fire fighters.
 - Rules vary by state. In many cases, presumption does not automatically guarantee coverage; it is rebuttable.
- **Solution:** Lobby elected officials for laws and regulations that benefit fire fighters.
 - Presumptive coverage legislation
 - Federal laws and programs
 - Exposure reporting is key to show exposures to toxicants. Having a record of known fire runs can help ease the process and demonstrate exposures over time:
 - Fire fighters can start tracking their exposures automatically using National Fire Operations Reporting System (NFORS) Exposure Tracker app. The NFORS Exposure Tracker is a private data gathering tool that creates a career diary for individual firefighters. It can be found anywhere you download apps.

TOXIC CHEMICAL EXPOSURES

- **Problem:** Cannot remove all toxic chemicals from the work environment.
 - Toxic chemicals are released in smoke and soot from all fires. Without proper PPE and effective decon efforts, chemical exposure can result in occupational cancer.
- **Solution:** Reduce exposure to chemicals.
 - On-scene gross decontamination of PPE and equipment
 - Clean cab program; do not bring contaminated gear and equipment in the cab.
 - Wash hands and use wet wipes to remove contaminants from skin.
 - Have a bag with change of clothes with you on the engine and, if possible, change your uniform on scene.
 - Shower within the hour of returning to the station.
 - Launder PPE according to NFPA and manufacturer guidance.
 - Launder station uniform.

MODIFIABLE RISK FACTORS



This factsheet was developed by the International Association of Fire Fighters and the Firefighter Cancer Support Network.

DEPARTMENT GUIDANCE/CULTURE CHANGE

- **Problem:** Organizational barriers make it difficult to effect change.
 - Understaffing
 - Weak department policies and procedures around cancer prevention
- **Solution:** Organizational resiliency
 - Strong leadership; labor/management/government leadership to develop proper SOGs/SOPs regarding cancer prevention.
 - Culture change to embrace cancer prevention efforts as outlined in NFPA 1500
 - Department supports comprehensive annual medical exam
 - Strong department policies and procedures that address cancer prevention:
 - Clean cab
 - On-scene gross decon (preliminary exposure reduction)
 - Wearing SCBA through all fire activities; from start of fire suppression through overhaul