

Dear Physician,

This is a letter to explain why the Firefighter under your care may need a more comprehensive health care examination.

A Firefighter is often the first person on the scene of some of the most disturbing and devastating events in people's lives. This may include the death of a child, homicide, suicide, rape, child abuse, family violence, drowning, fatal car accidents and acts of terrorism. They also wear heavy and restrictive clothing, carry awkward equipment and work in dangerous work environments. Firefighters enter buildings under demolition in smoky and hot conditions and they may hang from buildings and perform water rescues. They also handle situations involving hazardous materials that include biological, chemical and nuclear agents.

These high levels of stress, physical demands and long-term exposure to chemicals and infectious disease take their toll on the health of Firefighters especially to their cardiovascular system. This intense work in extraordinary environments of high heat, low O₂, high carbon monoxide and other combustible products produce a maximum heart response. These and other risks account for the "...nearly 50% of fire ground deaths being heart-related," (*New England Journal of Medicine*, March 07). Cardiovascular, respiratory and thermoregulatory strain in Firefighters is profound, increasing the odds of heart attack from 12-126 times while fire fighting.

Cancer is also another hazard of the job. A meta-analysis of 32 studies published in the *Journal of Emergency Medicine* in 2006 showed that many cancers were significantly associated with fire fighting. These included testicular (highest risk), multiple myeloma, malignant melanoma, non-Hodgkin's lymphoma, prostate, skin, brain, rectum, buccal/pharynx, stomach, colon and leukemia. Due to the physical nature of their work, Fire Fighters are also at a significant risk for musculoskeletal injury with back injury being the highest reported followed by the upper and lower extremities.

In a given year, the IAFF Death and Injury Survey indicates that one out of every five Firefighters will die or be injured in the line of duty, so prevention and proper rehab is essential. That is why the *International Associations of Fire Chiefs and Fire Fighters* recommend that a "Fire Service Occupational Physician" monitor their patient's long term effects of the working environment, including exposure to chemical and biological agents and disease patterns that might indicate work-related health concerns.

If you are presented with a letter such as this, it is likely that your patient is not under this type of physician's care. Therefore, it would be ideal for your patient to have a comprehensive yearly medical exam that includes the following: head to toe exam, blood analysis, liver profile, glucose, kidney check, electrolytes, lipid tests, cholesterol, urinalysis, heavy metal screening (arsenic, mercury etc), vision tests, hearing evaluation, lung function tests, cancer screening tests (earlier than normal due to elevated risk), cardiopulmonary function (spirometry, EKG), a chest x-ray every 5 years, immunization levels as well as infectious disease screening. A specific list for Fire Fighter medical screening is available upon request.

Thank you for taking the time to read this letter and for your efforts in optimizing the health of Firefighters.

Best regards,
Dr. Scott Miller, D.C.
Training Officer, Ottawa Fire Services