



FIRE CHIEFS' ASSOCIATION OF BC
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Dear Doctor,

The purpose of this letter is to provide information on *cancer screening and surveillance* for firefighters and emergency responders that may wish to establish a health maintenance program under your care. WorkSafeBC has recognized the growing body of scientific literature linking firefighting to a variety of job-related cancers and has passed the *Cancer Presumption Relief Act* of 2005. This legislation currently provides for ten different cancers as being connected with the occupation of firefighting: leukemia, lymphoma, brain, lung, esophageal, colorectal, kidney, bladder, ureter, and testicular cancer. However, numerous reports indicate that these are not the only line-of-duty cancers that firefighters are at risk for¹. Despite the correct use of personal protective gear, firefighters sustain intense and repeated exposures to highly variable mixtures of concentrated carcinogens. After inhalation, absorption through the skin, or inadvertent ingestion, these substances are widely distributed throughout the body. As a consequence, the tumours associated with firefighting are not limited to any specific organ system. Moreover, studies have indicated that the relative risk for these cancers can vary anywhere from 1.3 for prostate cancer, through 5.2 for cancer of the cervix in female firefighters², to as high as 36 times the risk for kidney cancer in firefighters with 40 or more years of service³. New statistics generated from the World Trade Center disaster show that these cancers are often of an aggressive variety and present at an age earlier than expected⁴.

For persons at standard risk for cancer, it is generally recommended that screening strategies such as colonoscopy and mammography begin at age fifty. However, because of the carcinogenicity associated with firefighting, some experts have recommended that firefighters assume cancer screening programs in the same manner as someone with a first degree relative with the disease. Firefighters have been encouraged to begin cancer screening programs at age forty, or ten years before an affected first degree relative. An initial screening program might involve a comprehensive physical examination, laboratory tests including complete blood count, serum chemistries, urinalysis and a bowel investigation such as endoscopy, CT colonography or fecal blood analysis. The screening of female firefighters could additionally include mammography, bimanual examination and Pap test. Certainly any symptoms in a firefighter such as cough, unexplained weight loss, irritative voiding symptoms or blood in the stools should be taken seriously and followed through to either resolution or definitive diagnosis.

I hope that this information will be helpful in guiding your decisions regarding requests by firefighters to establish cancer screening and surveillance programs. Firefighters as a group are highly motivated individuals and it is a pleasure to assist them in strategies that will decrease the burden of cancer in our society.

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December 9, 2014

Date

¹ *J Occup Environ Med* 2006; 48: 1189-202,

² *J Occup Environ Med* 2006; 48: 883-8

³ *Arch Environ Occup Health* 2006; 61: 223-31

⁴ *Lancet* 2011; 378: 898-905



BRITISH COLUMBIA PROFESSIONAL FIRE FIGHTERS' ASSOCIATION

Affiliated with the International Association of Fire Fighters, A.F.L. – C.I.O.

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January 29, 2016

All British Columbia Physicians

Dear Sir/Madam:

RE: FIRE FIGHTER CANCERS

This letter is to assist you as the attending physician of a fire fighter in British Columbia, to possess knowledge of the particular aspects of the occupational connection associated with fire fighting and certain cancers and heart injury.

The British Columbia Government adopted the Worker's Compensation Amendment Act 2005 and amended in 2008 and again in 2011, dealing with occupational cancers and fire fighters in British Columbia. In this act, the government recognized the researched scientific evidence and the connection between the occupation of fire fighting and certain cancers. These cancers that are recognized in this act are:

- Primary leukemia
- Primary non-Hodgkins lymphoma
- Primary bladder
- Primary brain
- Primary colorectal
- Primary kidney
- Primary ureter
- Primary testicular
- Primary Lung
- Primary Esophageal

These cancers are listed in the Workers Compensation Act, Fire Fighters' Occupational Disease Regulation along with the corresponding minimum cumulative periods for each cancer. These cancers are now "Presumed" to be linked to the occupation of fire fighting and so have a special legal and scientific standing in British Columbia recognized in the legislation mentioned.

On May 29th, 2014, Bill 17 received Royal Assent and this is the effective date of heart disease presumption for fire fighters.

This legal recognition of the connection of fire fighting and certain cancers and heart disease also has effect in the aspect of medical coverage. Tests dealing with fire fighters that help identify these cancers and heart disease are part of the areas of special consideration.

Worksafe BC (WCB) is the organization that is responsible for the administration of these recognized presumptive cancers.

If you require any further help with this topic please go to our website of www.bcpffa.org or contact our office at 604 436-2053.

Yours Sincerely,

Michael Hurley
President
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BRITISH COLUMBIA PROFESSIONAL FIRE FIGHTERS' ASSOCIATION

Gord Ditchburn
Secretary-Treasurer

Michael Hurley
President

Gord Ditchburn
Secretary-Treasurer

Annual Cancer screening and medical evaluations for firefighters

Posted On: Oct 13, 2007 (13:32:27)

Due to our occupation as firefighters, we are more than twice as likely as the general public to acquire certain types of cancers. Amendments to the Workers Compensation Act have been introduced to recognize the following cancers as diseases that can arise where a worker is employed full-time as a firefighter and has been regularly exposed to the hazards of a fire scene, over certain periods of time.

The cancers recognized by WorkSafe BC as being linked to firefighting are:

Primary site brain cancer	Employed for at least 10 years.
Primary site bladder cancer	Employed for at least 15 years.
Primary site kidney cancer	Employed for at least 20 years.
Primary non-Hodgkin's lymphoma	Employed for at least 20 years.
Primary leukemia	Employed for at least five years.
Primary site colorectal cancer	Employed for at least 20 years.
Primary site ureter cancer	Employed for at least 15 years.

The following are recommendations for firefighter medicals.

It is recommended that firefighters have a medical evaluation based on years of service:

1 to 10 years of service	once every 5 years
11 to 15 years of service	once every 3 years
16 plus years of service	once every year
* All firefighters over 40 years of age*	once every year

Colorectal cancer screening:

It is recommended that all firefighters be given a colonoscopy at the age of 40, and once every 5 years thereafter. If there are any symptoms of bleeding or a change in bowel habits, it is recommended that a colonoscopy be performed at any age. In addition, firefighters should be screened for colorectal cancer once every 3 years under the age of 44 and once a year after the age of 45.

(See letter by Dr. Hartley S. Stern)

Colorectal cancer screening update:

Dr. K. Atkinson, a Gastroenterologist and Chief of Medicine at Royal Columbian hospital, has received several requests from firefighters and their GP's for colon cancer screening. The Medical services plan has notified them that these requests do not meet their guidelines and therefore will not cover this service. MSP has a task force on screening and will only cover those with a family History, even though WorkSafe BC has presumptive legislation for Primary site colorectal cancer for firefighters employed for at least 20 years. We are currently working on a recommendation to the City and WorkSafe BC to pay for this type of cancer screening. In the interim, we suggest talking with your Doctor if you have signs and symptoms and/or family history.

For more info click on this link: [Colorectal cancer](#)

PSA screening:

It is recommended that firefighters are screened for prostate specific antigen (PSA). For firefighters 44 years of age and under, it is recommended that they are screened once every three years. For firefighters 45 years of age and older, they should be screened on an annual basis. Currently our Extended health benefits only cover this test if you are 45 years or older, payable to a maximum of \$35.00.

Other recommended cancer screening:

Skin cancer: regular skin exams should be performed during annual physicals.

Testicular cancer: some studies have shown that firefighters are 4 times as likely to get testicular cancer as the general population.

Bladder Cancer: if available, Matritech's NMP22(R) BladderChek(R) can be used to detect a bladder cancer nuclear matrix protein known as NMP22 in urine of patients. It is a proteomics-based diagnostic test for the diagnosis and monitoring of bladder cancer. NMP22 BladderChek is the first and only rapid assay approved by both the FDA and Health Canada for diagnosis and monitoring that physicians can use in their offices to help identify patients with bladder cancer.

Currently, the City of San Francisco and its fire department (SFFD) are providing free bladder cancer screening to all its current and retired firefighters. The NMP22® BladderChek® Test, a point-of-care urine test, developed and marketed by Matritech (Amex: MZT) is being used in the screening program. San Francisco is the first major city to fund and provide free annual testing for bladder cancer to its firefighters. To date, over 900 firefighters have been tested with the NMP22 BladderChek Test.

Suggested Annual Medical Screening Components for Firefighters

The following suggested Annual Medical Assessment is meant to assist in guiding the Health Care Practitioner in establishing a baseline medical. Its annual use will help to evaluate and identify the impact of workplace exposures which may result in potentially serious disease, early. It is intended to enhance and support early detection, prevention and good health. Overall fitness, as for any occupation, is essential to prevent injury and mitigate disease.

Through Provincial Regulation, eight types of cancers have been identified as presumed to be work-related, provided the firefighter has a minimum number of years service. Refer to table below.

Cancer/Illness	Criteria--Years of Service	Cancer/Illness	Criteria--Years of Service
Brain cancer	10 years	Leukemia (certain types)	15 years
Bladder cancer	15 years	Ureter cancer	15 years
Kidney cancer	20 years	Esophageal cancer	25 years
Colorectal cancer	10 years (diagnosed prior to 61 st birthday)	Heart injury	Within 24 hours of fighting a fire or participating in a training exercise involving a simulated fire emergency
Non-Hodgkin's lymphoma	20 years		

Other potential sites of cancer include: Testicular, Skin, Breast (women) and Reproductive organs

Part I: Review of Systems

- Diseases of the Senses** (deafness, vertigo, visual deficiencies, etc.)
- Cardiovascular Diseases** (hypertension, myocardial infraction, angina, embolism, arrhythmia, congestive heart failure, aortic aneurysm, peripheral vascular disease, syncope, surgery and procedures, etc)
- Respiratory Disease** (asthma, bronchitis, emphysema, etc)
- Diseases of the Musculoskeletal System** (fracture(s) or amputation, arthritis, chronic pain, etc.)
- Metabolic Diseases** (for diabetes see next question)
- Diabetes:** Yes No Type: _____
 Treatment: Diet
 Oral Medication (dosage frequency) _____
 Insulin (dosage frequency) _____
- Neurological Diseases** (seizures, cerebrovascular diseases, Parkinson's, Multiple Sclerosis, dementia, head injury, etc.)
 Date of first seizure: _____ (DD/MM/YYYY) Date of last seizure: _____ (DD/MM/YYYY)

8. **Other Diseases** (blackouts, fainting spells, anemia, cancer, blood dyscrasia, phlebitis, emboli, etc.)
9. **Gastrointestinal System** (abdominal/inguinal/umbilical hernia, abdominal surgery, etc.)
10. **Family History of...** (cardiac, pulmonary, metabolic disease, etc.)

Part II: Physical Examination

General Appearance: _____ Right handed Left handed

Height (cm/inches): _____ **Weight (kg/lbs):** _____

1. **Cardiovascular:** Apical Rate: _____ Rhythm: _____
Murmurs: _____ Blood Pressure: _____
2. **Respiratory:** Rate: _____ Rales: _____ Wheezes: _____ Other breath sounds: _____
3. **Musculoskeletal:** (Check for amputations, ROM, change in power or sensation, active joints)
4. **Neurological:** Gait & Stance: _____ Reflexes: _____
Tremor: _____ Coordination: _____
5. **Immunization Status:**
Td: _____ Polio: _____ MMR: _____

Hep A/B: (suggested only): _____
 • Vaccines should be administered as required unless there are medical or religious reasons to the contrary.

Part III: Suggested Laboratory Tests, Studies and Investigations:

The very nature of the act of firefighting makes it difficult to identify the myriad of components and combinations to which one would be exposed. The following test, studies and investigations have been determined to assist in the early detection of disease and are the recommendations of the Health and Wellness Programme for the International Association of Firefighters.

Complete Blood Count (CBC)	White blood cell count (with differential); Red blood Cell count; Hematocrit; Hemoglobin; Red Blood cell indices (MCV, MCH, MCHC); Platelet count	Basic screening test in all patients, most frequently used. Give valuable information about patient's diagnosis, prognosis, response to treatment (if any) and recovery.
Urinalysis	PH, Glucose, Ketones, Protein, Blood, Bilirubin, (Microscopic: WBC, RBC, white blood cell casts, red cell casts, crystals)	Most useful indicator of health and disease, especially helpful in the detection of renal or metabolic disorders
Electrolyte Tests	Calcium; Potassium; Sodium	Blood chemistry is a means of identifying many of the body's chemical constituents found in the blood. Very few diseases show a single abnormality, thus it is often necessary to measure several body chemicals to establish a pattern of abnormality, characteristic of a particular disease.
Blood Sugars	Glucose - fasting	
End Products of Metabolism	Bilirubin; Blood Urea Nitrogen; Creatinine;	
Enzyme Tests	ALT ; Alkaline Phosphatase; AST; LDH; GGTP	
Protein Tests	Total Blood Proteins; Albumin	
Lipoprotein Tests	Cholesterol (total and ratio); Triglycerides	
Additional Blood Studies	Carboxyhemoglobin; Carbon Dioxide; BC Sera Pro; CA 125 (females) PSA	*measures the level of oxygenation in the blood * measures for cancer in women * measures for prostate function
Pulmonary Function Studies	Spirometry; Chest x-ray (every three years)	
Cardiac Investigations	EKG (for those over 50, consider a stress test)	
Additional Investigations	Skin exam; Colonoscopy; Pap Smear	