



## **WINDSOR PROFESSIONAL FIRE FIGHTERS ASSOCIATION**

*"An Association Run For and By The Membership"*

*Dear W.P.F.F.A. Local 455 Members*

*In recent years, through study of events which have resulted in severe illnesses and firefighter fatalities, it has been recognized that the extraordinary exposures which a Firefighter encounters can lead to health issues ranging from mild symptoms, up to and including death. In an effort to be more proactive for our membership through discussions with OPFFA Occupational Disease committee it has been recommended that all firefighters do a yearly medical testing.*

*With the following Screening Guideline, we are providing you with the information that will help you and your Health Care Practitioner with a more specific approach to assessing and monitoring your health, for your benefit, and the benefit of your family. As such, we are requesting that you see your physician on an annual basis or anytime you become symptomatic. This package provided for your physician is strictly meant to assist your physician in conducting a more proactive approach to the early detection and treatment of any potentially serious illness. All information should be kept on your medical record with your health care provider. It is our hope that by sharing this information with you and your physician you will partner together in the pursuit of excellent care and support longevity.*

*We encourage you to share the attached suggestions with your health care practitioner.*

*Thank You*



## **WINDSOR PROFESSIONAL FIRE FIGHTERS ASSOCIATION**

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*Dear Health Care Practitioner,*

*In recent years, studies of events including severe illness and firefighter fatalities have identified that the extraordinary exposures which a Firefighter encounters can lead to serious health issues. In an effort to be more proactive for our membership through discussions with the Ontario Professional Firefighters Association Occupational Disease committee it has been recommended that all firefighters do a yearly medical testing.*

*Recognizing the causal relationship between the exposures and demands of firefighting and serious health issues, the Windsor Professional Firefighters Association has worked to develop an early detection plan. This causal relationship has been recognized in the recent Province of Ontario's Presumptive Legislation. At this time, we are inviting you to become a pivotal piece of this initiative as the Health Care Practitioner for your patient, a Firefighter.*

*In our effort to support a proactive approach to early detection and treatment, we are requesting Firefighters to see their physicians annually or when symptomatic. To assist you in your assessment of your patient, we have included a guideline suggesting the components of a baseline and annual medical screen. These components are based on recent literature.*

*This guideline provided are strictly meant to increase awareness of the hazards faced by Firefighters, in a collaborative approach with you.*

*Thank you for your continued care and support*



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## 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 Ontario 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 below.

Cancer/Illness	Years of Service	Cancer/Illness	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 61st 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, Lungs, Skin, Breast, Prostate and Reproductive organs.

### Part I: Review of Systems

1. Diseases of the Senses (deafness, vertigo, visual deficiencies, etc.)
2. Cardiovascular Diseases (hypertension, myocardial infraction, angina, embolism, arrhythmia, congestive heart failure, aortic aneurysm, peripheral vascular disease, syncope, surgery and procedures, etc)
3. Respiratory Disease (asthma, bronchitis, emphysema, etc)
4. Diseases of the Musculoskeletal System (fracture(s) or amputation, arthritis, chronic pain, etc.)
5. Metabolic Diseases (for diabetes see next question)
6. Diabetes: Yes  No  Type: \_\_\_\_\_



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Treatment:  Diet

Oral Medication (dosage frequency) \_\_\_\_\_

Insulin (dosage frequency) \_\_\_\_\_

7. 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.



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### **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 Firefighter.

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, TSH level, Free T3 & Free T4.	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	measures the level of oxygenation in the blood * measures for cancer in women * measures for prostate function
Lipoprotein Tests	Cholesterol (total and ratio); Triglycerides	
Additional Blood Studies	Carboxyhemoglobin; Carbon Dioxide; BC Sera Pro; CA 125 (females) PSA	
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	



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*Dear Health Care Practitioner,*

*Firefighters cannot refuse to work under dangerous and hazardous conditions. As such, firefighters are exposed to a toxic soup of potential carcinogens. From smoke, firefighters are exposed to benzene; hydrogen chloride; polycyclic aromatic hydrocarbons (PAHs); chlorine; acrolein; formaldehyde; acetic acid; formic acid; oxides of nitrogen; phosgene; hydrogen cyanide; carbon monoxide; dioxins; polychlorinated biphenyls and acetaldehyde. From building materials, firefighters are exposed to asbestos and lead. Diesel exhaust exposures include polycyclic aromatic hydrocarbons (PAHs); benzo(a)pyrene; sulfur oxides. From firefighting equipment, firefighters are exposed to carbon tetrachloride and asbestos.*

*Firefighters are never exposed to one chemical compound alone. The health hazards of multiple carcinogenic exposures are greater than the sum of individual exposures. The proliferation of synthetic substances in the marketplace means that firefighters are increasingly exposed to new and multiple hazards and increased exposure means a higher likelihood of contracting cancer. There are over 70 million different chemical combinations that firefighters can be exposed to over the course of their lives.*

### **Breast Cancer**

*Carcinogens identified in the medical literature that are associated with an increased likelihood of a firefighter being diagnosed with breast cancer are benzene and PAHs. Firefighters are routinely exposed to benzene and PAHs and as part of their job cannot avoid coming into contact with these toxins. The medical and epidemiological evidence supports the fact that a reasonable association exists between the onset of breast cancer and exposures to PAHs and benzene. One study shows that firefighters are more than seven times more likely to be diagnosed with breast cancer than the general population. The evidence produced and analyzed by occupational physicians and epidemiologists demonstrates a reasonable association between the increased likelihood of having breast cancer and exposures to benzene and PAHs.*

### **Multiple Myeloma**

*Other than race, there are no known risk factors for multiple myeloma other than occupational exposures. Exposures to the following substances increase the likelihood of being diagnosed with multiple myeloma: paints; herbicides; insecticides; engine exhausts and organic solvents especially benzene and polychlorinated biphenyls (PCBs). Firefighters are likely to be exposed to these substances thus increasing their risk of contracting multiple myeloma. Firefighters are 1.5 times more likely to be diagnosed with multiple myeloma as is the general population.*



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### *Prostate Cancer*

*Prostate cancer is the most common malignancy affecting men. Firefighters are 1.3 times more likely than the general population to be diagnosed with prostate cancer. There is suggestive epidemiological evidence that the increased likelihood of being diagnosed with prostate cancer is associated with exposure to pesticides, herbicides, metallic dusts, metal working fluids, PAHs, and diesel exhaust emissions.*

### *Testicular Cancer*

*This form of cancer is most common in men between the ages of 20 and 34. Male firefighters are just over two times more likely than men in the general population to be diagnosed with testicular cancer. The soot and dusts from exposures can penetrate a firefighter's protective bunker gear and if lodged in the groin area can increase the risk of testicular cancer.*

### *Skin Cancer*

*Firefighters' exposures to pesticides, metals, combustion by-products such as coal, PAHs, pitch and tar, PCBs and mineral oils have been shown to increase the likelihood of skin cancer. When compared to the general population, firefighters are 1.4 times more likely to be diagnosed with skin cancer.*

### *Lung Cancer*

*The IAFF argues that firefighters face an increased risk of developing acute lung cancer and disease due to their exposure to asbestos. Asbestosis and mesothelioma are commonly diagnosed in firefighters because during a fire, asbestos particles from insulation, floor and ceiling tiles, pipe cement, roof shingles and plasters in older dwellings and structures can become airborne. Even when wearing protective respiratory equipment, firefighters can be exposed to asbestos particles that come through their skin and are trapped in their clothing. Non-smoking firefighters are 1.5 times more likely to be diagnosed with lung cancer and disease as are non-smokers in the general population.*

*Thank you for your continued care and support.*



I.A.F.F. L455

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The Ottawa | L'Hôpital  
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February 8, 2007

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FROM: DR. HARTLEY S. STERN  
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RE: SCREENING COLONOSCOPIES FOR FIREFIGHTERS

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Dear Doctor:

The purpose of this letter is to clarify what risks firefighters may assume in terms of acquiring colon cancer throughout their lives as a consequence of actually being a firefighter. There has been an extensive amount of literature assessing the risks of various chemical components on acquiring colon cancer.

In summary, there is still some controversy, not as to whether there is some additional risk to firefighters but rather to quantifying that risk. I have reviewed this literature and it is my opinion that the firefighters are at sufficient risk that they should assume screening programs in the same manner as someone who would have a first degree relative with the disease would have.

It is my recommendation to men and women who have a first degree relative with colon cancer in their 50's or 60's that they should begin getting screened with colonoscopy approximately at the age of 40 or ten years younger than the youngest relative. In this case, I would certainly begin screening based on the length of time of exposure and for the majority of these firefighters, I would suggest beginning at the age of 40 and doing a colonoscopy every three to five years. Certainly any symptoms of bleeding or change in bowel habit normally attributed to an older patient, I would take much more seriously in a firefighter and have a colonoscopy done almost at any age.

I hope this is of some help to you in guiding your decisions regarding requests by firefighters to have access to colonoscopies. It is heartening to note that the province has begun its population based screening program and as a consequence of that, there will be, very shortly, increased capacity to do colonoscopies across our region.

Signed:

Hartley Stern, M.D.

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*Dear Health Care Practitioner,*

*The area of the cecum, which is at the top just before the junction to the small intestine has been an area of concern for firefighters from the information that has been gathered by the Ontario Professional Firefighters Association Occupational Disease Committee. Please insure that the specialist performing the colonoscopies is aware of this area of concern for firefighters.*

*Thank you for your continued care and support.*

**Michael McGuire**

*Executive Board Member.*

*W.S.I.B. Workers Advocate.*

*Windsor Professional Fire Fighters Association.*

*I.A.F.F. Local 455*

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