

# Fire Fighter's Health and Wellness

by Scott Miller, D.C.  
Acting Safety Officer, Ottawa, Canada





In April of 2006, we attended the funeral of Fire Fighter Mark Johnston who died from work-related cancer at 43 years old. That day I made a commitment to learn as much as possible about the International Association of Fire Fighter's *Wellness Fitness Initiative* (WFI) so that future tragedies like this might be avoided.



- Steve Desloges (third from top left) often shared with me his dream of early retirement in British Columbia. It was never reached as he died from cancer at 48 years old. I dedicate this presentation to him and all the others of this fire department who fought fires bravely and won, only to lose to a relentless disease.

This presentation is based on the information contained in the Wellness Fitness Initiative (WFI) and from studies that further support the need to establish a firefighter wellness program in our city as soon as possible.

# Why do we need a Wellness Program?

- So that the heavy costs associated with performing our duties does not burden our families.
- The Wellness Fitness Initiative (WFI) program is designed to give you a yearly check-up which is **the preventative care you deserve**. This program combines resources to decrease the risk of cancer, heart disease, injury and other illnesses.

# International Association of Fire Fighters

## Wellness Fitness Initiative

- Many cities across Canada and the United States have this non-punitive ( a non-punishment) wellness program that is 100% supported by our association (IAFF) and the International Association of Fire Chiefs.
- It was presented in 1997 and is aimed at keeping the members safe and healthy without fear of losing their jobs.

**Some Fire departments that spearheaded the program have had a wellness program for over 20 years.**

- These fire departments have a team of Doctors, Nurses and other health care professionals specifically trained to **prevent** and detect conditions like **cancer and heart disease.**

- They also address **injuries** that were done on and off the job so that they recover from injuries faster and decrease the risk of reoccurrence.

**The WFI has 5 main components.  
Here is a condensed version of each area**

- 1-A comprehensive **medical exam** specific to fire fighters, that compares your results year to year in order to detect disease pathology early.
- 2-A **fitness exam** to compare your **individual results** year to year, with no comparison to other's results.

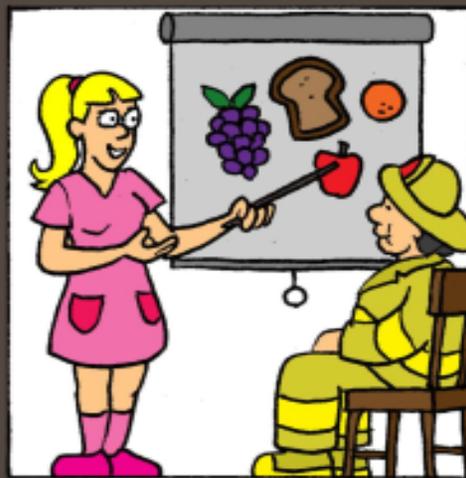
# The medical and fitness exam are great but add these three parts and you have a real wellness program!

3-Unlimited Medical rehab to repair injuries.

4-A behavioral health component for nutritional advice, Critical Incident Stress, smoking cessation etc.

5-**Confidential Data Collection** of health and fitness information to help ensure successful health claims as well as to track disease and injuries amongst its members via the IAFF's Central Data Base in Washington D.C.

# HOUSE OF WELLNESS



# Good news

- The *good news* is that *both associations*, Fire Fighters and Chiefs, agree that this is a **confidential** program that will - and has - saved lives in every participating city.
- In the past a few fire fighters feared this would be used against them. Remember, the Wellness Fitness Initiative is supported by the IAFF.
- Fire fighters no longer fear this program as **jobs are not lost, but saved.**

## **The Wellness-Fitness Initiative has and will continue to save lives.**

The Phoenix Fire Dept has recently discovered:

- **17 skin cancers** (8 basal cell, 8 squamous and 1 melanoma)
- **20 + prostate cancers**
- **15+ bowel lesions and one cancer**
- **4 bladder, 1 renal and 1 lung cancer**
- **that's over 43 cancers found in the last few years by the Fire Departments Health Team**

# The tip of the iceberg...

- Phoenix is just one of the cities saving the lives of fire fighters for over 20 years.
- The doctors and their team have also found **>250 firefighters with cardiac issues**
- They have a **70+% improvement rate**
- Problems that are caught early result in quicker treatment and the end result is...

- **Almost 100% of the cancer and heart patients are back to fire fighting.**

# Canadian WFI proof

- The Calgary Fire Department's Wellness Program performs more than 900 medicals per year for its members and discovered...
- 2005- 3 cancers and 2 cases of heart disease
- 2006- 2 cancers and 2 cases of heart disease
- 2007- 1 cancer and 1 case of heart disease
- 2008- 1 cancer and 1 case of heart disease

# Another Canadian City

- Edmonton Alberta's Fire Department recently introduced a health and wellness program.
- In 2007 they discovered
- 2 Prostate Cancers (both in fire fighters under 50 years old)
- one Colorectal Cancer

# More proof in Indianapolis' FD

Just looking at Heart issues found between  
2000-2007:

- 18 cases of coronary vascular disease treated
- 6 cases of heart arrhythmia treated
- 12 malignant hypertensions treated
- 1 Hypotension treated

**ALL 37 RETURNED TO DUTY**

# **Occupational Medicine does work!**

- The good news is that Injuries and Disease are just like fighting a fire. **If you get there early and extinguish it while it is still a one bedroom fire, the battle will often go in your favour.**
- The bad news is we sometimes down-play a sign or symptom until it is a 4<sup>th</sup> alarm fire.

- If an Occupational medical team specifically trained to deal with firefighters performs a yearly exam/test that is 2-4 hrs long, it will increase the chances of early detection.
- In firefighter's terms – early **LOSS STOP** so here are a few stats...



- **We have one in five chances of being injured or killed in every given year** states the IAFF.
- **Cardiovascular events (heart attack) is the leading cause of on-scene death, at 50%** states the National Institute for Occupational Safety and Health.
- **The odds of a heart attack while fire fighting are 12-136 times the risk** compared to regular duties as stated in the New England Journal of Medicine (2007).

# More Stats to shake you up

- Dr. Grace Lemasters and her colleagues evaluated 32 studies and published their results in the Journal of Occupational and Environmental Medicine in 2006.
- The increased risk of cancer she found in fire fighters shocked her.

- We are basically “walking into an environment that is coating firefighters bodies with cancer” and we are taking it back to our stations.
- **Tip#1 Get that gear off ASAP and shower right away!**

# Types of cancers

- Her study showed increases amongst fire fighters in the following cancers: Multiple Myeloma, Non-Hodgkin's Lymphoma, Leukemia, Brain, Testes (highest risk), Prostate, Malignant Melanoma, skin, rectum, colon, stomach and mouth.

HAH!! The fire's out and he's still wearing his O<sub>2</sub> Mask!



# Life Lesson

- **Tip#2 wear your SCBA, especially in overhaul as we are swallowing and inhaling particles and gases that end up as cancer!**

**We have known for years about firefighter risks from studies in the 70's and 80's but the effects of our job go further...**

- **Olshan, Teschke and Baird's 1990 study published in the American Journal of Epidemiology stated there are higher rates of birth defects linked to the CHILDREN of fire fighter's.**

- After fire calls we are taking the cancerous products back to the station on our gear and skin.
- As a result of our job, we inadvertently endanger our loved ones by bringing it home.

## **Dr. Stuart Baxter (Univ. of Cincinnati Academic Medical Center)**

- cancer was higher in England's chimney sweeps and almost nonexistent in Belgium and Germany during the 1700's. The English chimney sweeps bathed every week while the other countries with less cancer cleaned themselves daily.
- **So, showering and clean clothes are a priority**
- **Tip#3 DECON ASAP!**



## **PHLAME study (Promoting Healthy Lifestyles: Alternative Models Effects)**

Published by the American College of  
Occupational and Environmental Medicine  
in 2007

Divided 600 fire fighters into 3 groups, two  
of which promoted workplace wellness

1<sup>st</sup> group basically received physical testing only (EKG stress test, lab tests, strength, flexibility, body fat and dietary history).

2<sup>nd</sup> group received one on one meetings with a health counselor plus the physical testing like group one had

3<sup>rd</sup> group was also physically tested like group one but was given a team-based peer taught curriculum similar to one given in a wellness program

**Cost for the *testing* (group 1) alone  
was \$500**

***One on One* advice plus testing  
(group 2) was \$1100**

**BUT**

***A Team approach* health promotion  
program (Wellness) in group 3, with  
the same testing, was only \$585**

- The PHLAME 585\$ *team* health promotion yielded the same results as the \$1100 *one on one* advice with about 1/2 the cost.
- BUT the \$585 *team* results compared to just getting \$500 in *testing* were staggering...

**WSIB injuries DECREASED**  
by 33% while the number of  
**reportable injuries (WSIB)**  
*increased 21%* in the other  
firefighters not in a program.  
**The bottom line is that fire**  
**fighters were safer at work as a**  
**result of a wellness program.**

## The Annual Costs of Injury Claims

- in PHLAME firefighters cost decreased dramatically (nearly 2/3<sup>rd</sup>s in some cases) but that wasn't everything.
- The fire fighters themselves reported an unexpected finding...

- They reported a *35% decrease in Self-reported Injury Days Off.*
- Meaning the **fire fighters were healthier not only at work but in their personal life as well.**

# Cost Savings to Ottawa

- The Wellness Fitness Initiative reported a average cost decrease in claims to be 23% and as well reported lost days decreased by 28%. If these conservative figures were plugged into our numbers...

- Ottawa fire reported 2.5 million dollar loss in WSIB claims last year. Implementing the WFI program would result in **savings of over \$575,000**
- 9500 lost work days were reported, then 2660 days would be saved and result in almost **1.6 million dollars saved.**
- **That's OVER 2 MILLION DOLLARS IN POSSIBLE SAVINGS IF A WELLNESS PROGRAM WAS IN PLACE.**

# **But this is not just about money**

- This is about creating a job that is safer for not only us but to the hundreds of children who come through the fire hall on tours and say they want to be a fire fighter when they grow up.
- This is about creating a safer place for our neighbours children to work... or perhaps our own.

# Prevention is not just about us,

- When someone else needs help we run into burning buildings to save them, its in our nature to ignore our own safety and well being.
- We need to look at a wellness program from a different angle so it's not just about us, look at how it may impact our coworkers and family.

- What if it saved just one firefighter from getting sick on your department? (even if it's the guy who sneaks into your ice cream!) By helping get a wellness program started and you save just one family the worst news possible, it will be worth it. Our stats show...

# **OPFFA Information gathered on its Fire Fighters**

- Average lifespan of an Ontario male is **78 years** (Stats Canada)
- Average Age of Death of an **Active** Fire fighter is **45.81** years old!
- Average age of Death after retirement is **71**
- **Overall Average Age of Death in the Ottawa Fire Services is 64.81**
- **That means we die OVER 13 YEARS EARLIER than an average male.**

- We are fantastic at helping out and working for our fellow fire fighters **after** they are sick or injured. That is what sets us apart, the incredible brother and sisterhood that I am so proud of.

- BUT, I also know from all this information that it isn't good enough anymore, we need to do something **ahead** of disease and injuries, not after.
- **The Wellness Fitness Initiative has to be added to the solution.**

# Now you know what is not good enough anymore

- Remember, information learned is kept between you and the Doc for your improvement. It is for the benefit of you and your family
- Work to make the IAFF's Wellness Fitness Initiative a reality and then know inside you did all you could to prevent illness and the first step is...

# **The 1<sup>st</sup> step is early baseline medical testing and exam**

- It's an important first step and it's never too late.
- It will set the stage to compare your health, year to year.
- FDNY lost 343 fire fighters that unforgivable day on Sept 11, 2001. **If this was your city would you have dug for your lost brothers, even in the most incredibly toxic smoke that was like breathing in broken glass?**

# **I know you would and FDNY has the baseline testing that we need!**

- Since that horrible day in New York City many FDNY firefighters have had pulmonary **lung tests – 12 times higher than the normal decreased rate.**
- Over 750 fire fighters now have disability benefits, because they had baseline lung function testing prior to 911 due to the Wellness Fitness Initiative medical exam.
- Some Fire Departments that responded to the WTC without a wellness program, *took a year just to organize a post-event baseline on their lungs!*



**Make sure it is not just another program...**

- Make sure it is a complete commitment to the health, safety and longevity of all uniformed personnel. **The full Wellness Fitness Initiative program has been proven to benefit its members and save tax payers money. Please...**



- **Let your association know you are willing to step up for our fellow firefighters and our families. Staying silent will not get you the care you deserve, get the IAFF's wellness program started ASAP before a preventable tragedy strikes again.**

# **Last quote from the IAFF Wellness Fitness Initiative**

- “The Fire Services greatest asset is not equipment, apparatus or stations, but rather its personnel. It is through personnel that fire departments are able to serve the public, accomplish their missions, and make a difference in the community.”

- I want to thank the Ottawa Fire Services, its Management, the Ottawa Professional Fire Fighters Association for the opportunity to give this presentation and most of all to those fire fighters who helped in getting me there.
- Thanks to all the mentioned researchers whose passion is dedicated to helping fire fighters and who took the time to talk to me about their findings as well as Scott Stilborn, Fire Service Photography [firephoto@cyberus.ca](mailto:firephoto@cyberus.ca) and artist Terry O'Reilly [terryplanet@hotmail.com](mailto:terryplanet@hotmail.com)

June 2009