



Rules of Engagement: Firefighter Health & Wellness

Sara A. Jahnke, Ph.D.

Director & Principal Investigator
Center for Fire, Rescue & EMS Health
Research

National Development & Research Institutes

Assistant Executive Chief Todd LeDuc
Broward County Fire Rescue

Firefighting is Bad for Your Health



“Probably the greatest stress ever imposed on the human cardiovascular system is the combination of exercise and hyperthermia. Together, these stresses can prevent life threatening challenges, especially in highly motivated athletes who drive themselves to extremes in hot environments.”

-L.B. Howell,
In Human Cardiovascular Physiology

-NFPA 1582 Relevance and Enforcement (Kerrigan, 2016)

Firefighter Fatality Statistics



MMWR™

Morbidity and Mortality Weekly Report

Weekly

April 28, 2006 / Vol. 55 / No. 16

TABLE. Number and percentage of fatalities among career and volunteer firefighters, by cause/contributing cause — United States, 1994–2004

| Cause/Contributing cause | Career | | Volunteer | |
|---|------------|-------------|------------|-------------|
| | No. | (%) | No. | (%) |
| Heart attack* | 142 | (39) | 306 | (50) |
| Stress/Overexertion | 138 | (97) | 301 | (98) |
| Other | 4 | (3) | 5 | (2) |
| Motor vehicle–related trauma | 44 | (12) | 160 | (26) |
| Vehicle collision/crash | 30 | (68) | 116 | (73) |
| Struck by vehicle | 12 | (27) | 33 | (20) |
| Other vehicle-related (e.g., crushed by or fell from a vehicle) | 2 | (5) | 11 | (7) |
| Asphyxiation | 74 | (20) | 45 | (7) |
| Caught/Trapped | 56 | (76) | 31 | (69) |
| Other (e.g., lost inside a structure or exposed to smoke) | 18 | (24) | 14 | (31) |
| All other† | 108 | (29) | 99 | (16) |
| Caught/Trapped | 32 | (30) | 19 | (19) |
| Fall | 8 | (7) | 15 | (15) |
| Exposure (e.g., to smoke) | 9 | (8) | 14 | (14) |
| Stress/Overexertion | 16 | (15) | 14 | (14) |
| Structure collapse | 8 | (7) | 3 | (3) |
| Other | 35 | (32) | 34 | (34) |
| Total | 368 | | 610 | |

* For example, myocardial infarction or arrhythmia.

† Includes deaths caused by burns, cerebral vascular accidents, drownings, electrocution, heat exhaustion, and trauma.

For every cardiac LODD,
an estimated

17

non-fatal cardiac events occur
on duty each year.

Causes of CVD

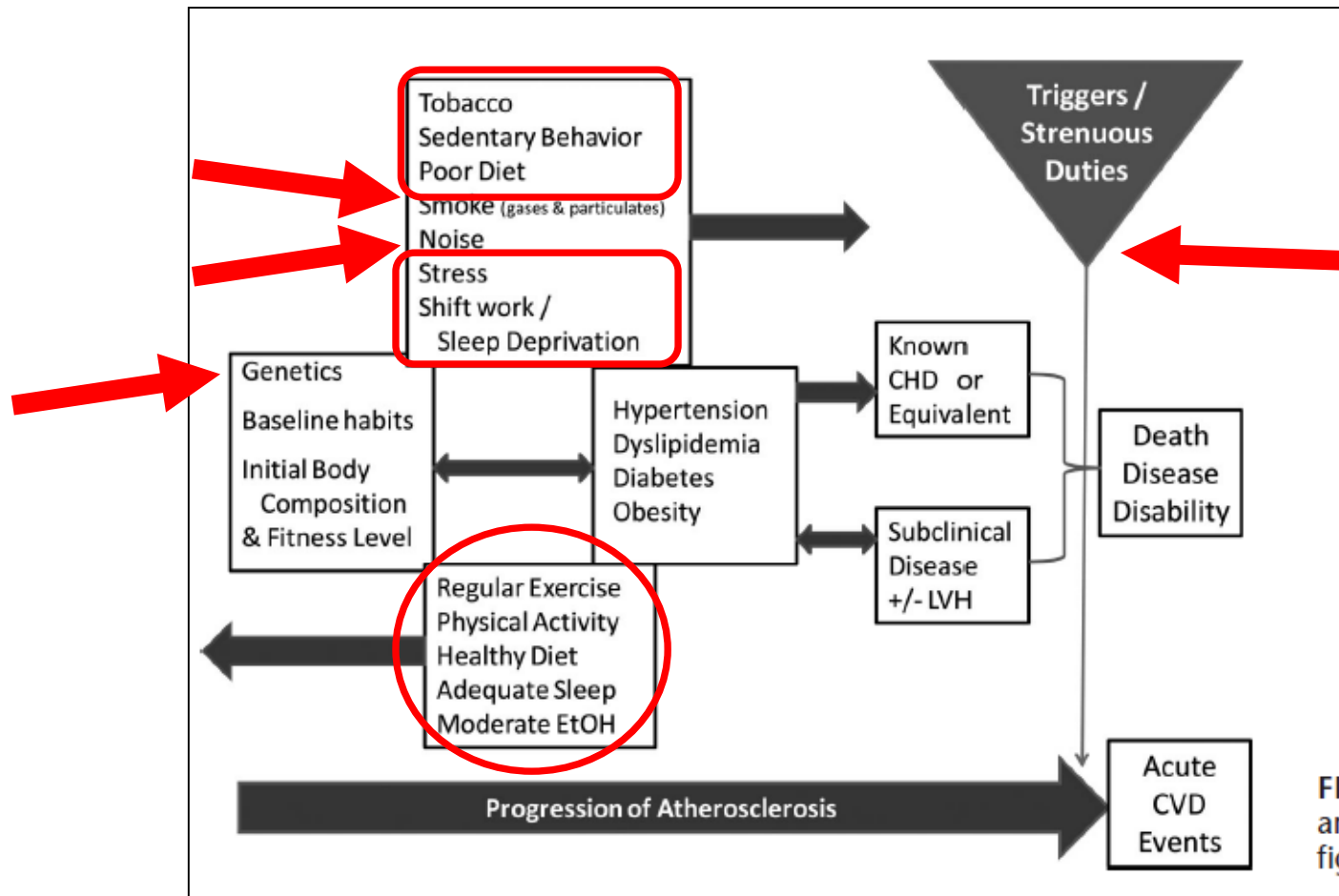


FIGURE 6. Theoretical model of atherosclerosis and possible adverse health outcomes in fire-fighters.

Sudden Cardiac Death (SCD)



Case control study using NIOSH fatality data of firefighter LODDs (≤ 45 years; Yang et al. 2014)

- Hypertension increased risk x12
- Cardiomegaly (heavy heart) increased risk x5
- Hx of CVD increased risk x 7
- Smoking increased risk x 3.5
- Of SCD deaths, 63% were obese

NOTE: Among non-cardiac deaths, obesity was STILL a significant predictor of LODD

The Data: Cancers Related to Firefighting

| | Meta-analysis LeMasters et al. (2006) | Cohort Study Daniels et al. (2013) |
|------------------------------|---|---|
| Type of Cancer | SRE ^a (95% CI) Likelihood | SMR ^b (95% CI) SIR ^c (95% CI) All SIR ^c (95% CI) First |
| Bladder | | -- -- 1.18 (1.05-1.33) |
| Brain | 1.32 (1-12-1.54) Possible | |
| Buccal Cavity and Pharynx | 1.23 (0.96-1.55) Possible | 1.40 (1.13-1.72) 1.39 (1.19-1.62) 1.41 (1.20-1.66) |
| Colon | 1.21 (1.03-1.41) Possible | |
| Intestine | | 1.30 (1.16-1.44) 1.21 (1.09-1.33) 1.29 (1.16-1.43) |
| Kidney | | 1.29 (1.05-1.58) 1.27 (1.09-1.48) 1.24 (1.04-1.48) |
| Leukemia | 1.14 (0.98-1.31) Possible | |
| Liver, Gall Bladder, Biliary | | 1.30 (1.06-1.57) -- -- |
| Lung | | 1.10 (1.04-1.17) 1.12 (1.04-1.21) 1.13 (1.04-1.22) |

| | Meta-analysis LeMasters et al. (2006) | Cohort Study Daniels et al. (2013) |
|----------------------|---|---|
| Type of Cancer | SRE ^a (95% CI) Likelihood | SMR ^b (95% CI) SIR ^c (95% CI) All SIR ^c (95% CI) First |
| Malignant Melanoma | 1.32 (1.10-1.57) Possible | |
| Melanoma | | |
| Mesothelioma | | 2.00 (1.03-3.49) 2.29 (1.60-3.19) 2.00 (1.31-2.93) |
| Multiple Myeloma | 1.53 (1.21-1.94) Probable | |
| Non-Hodgkin Lymphoma | 1.51 (1.31-1.73) Probable | |
| Oesophagus | | 1.39 (1.14-1.67) 1.62 (1.31-2.00) 1.71 (1.36-2.13) |
| Prostate | 1.28 (1.15-1.43) Probable | |
| Rectum | 1.29 (1.10-1.51) Possible | 1.45 (1.16-1.78) -- -- |
| Skin | 1.39 (1.10-1.73) Possible | |
| Stomach | 1.22 (1.04-1.44) Possible | |
| Testis | 2.02 (1.30-3.13) Possible | |

Exposures

“Toxic Soup” of Known & Unknown Carcinogens

- CO
- Formaldehyde
- Metals
- Flame retardant (PCBEs)
- Benzene
- PAHs
- NO₂
- Glutaraldehyde
- Toulene
- Zylenes
- Styrene

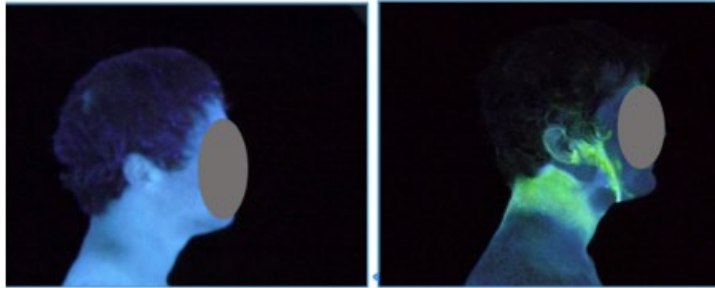
Note: Short duration but high intensity believed to be particularly dangerous



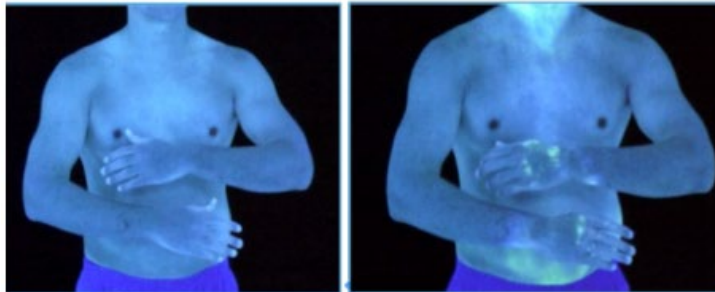
Exposures: Dermal Absorption

Before

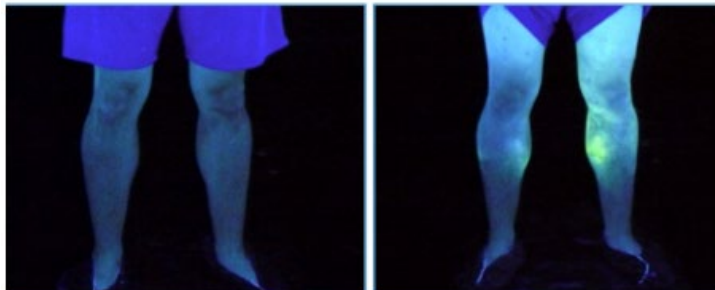
After



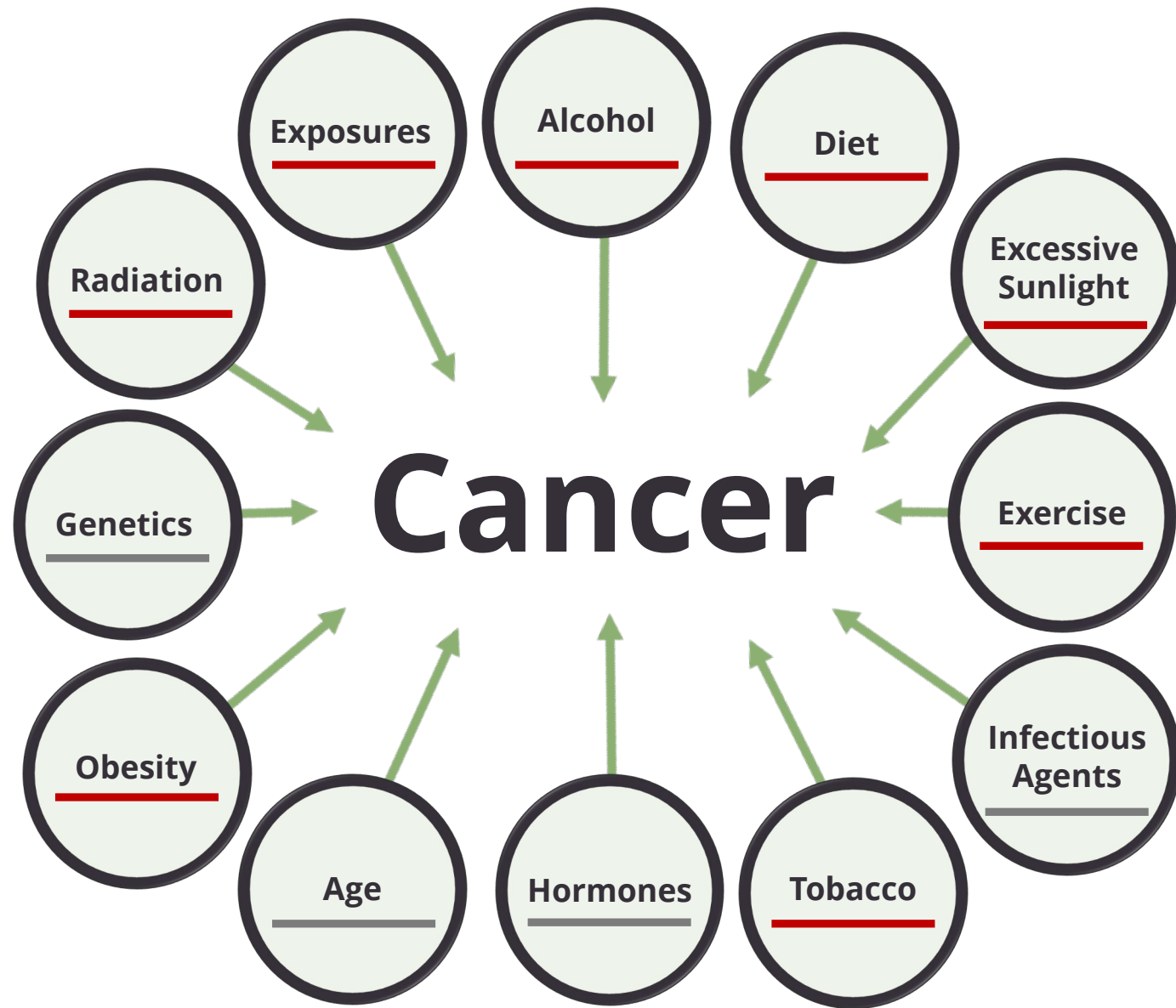
Polycyclic Aromatic Hydrocarbons (PAH) contamination high on wrist, neck, forehead, and back



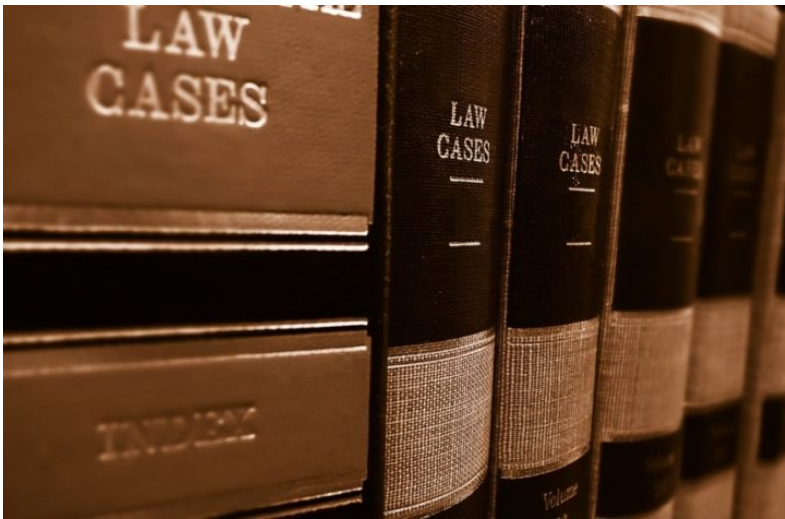
The neck and groin areas are particularly vulnerable (NIOSH 2013)



Jeff Stull, RTI
study commissioned by IAFF



Cancer Link: Making the Case



Case Summary

Workers Compensation Claim

| | |
|-------------------------|---------------------------------|
| Name | XXXX |
| Department | XX Fire Department |
| Diagnosis | Esophageal Adenocarcinoma |
| Age at Diagnosis | 53 |
| Age at Death | 54 |
| Ethnicity | White |
| Tobacco | Never |
| Alcohol | No alcohol |
| Obesity Status | BMI 31.8, worked out 3x week |
| Elevated Risks, Studies | Daniels, Tsai |
| Exposures Linked to Dx | PAH, Asbestos, Styrene, Benzene |

Document Review

- Medical records
- Depositions – department liabilities (e.g. physicals, mitigation, culture)
- SOGs/SOPs
- Exposure records

Modifiable Risk Factors

Obesity

- Fitness
- Nutrition

Alcohol Use

Tobacco Use

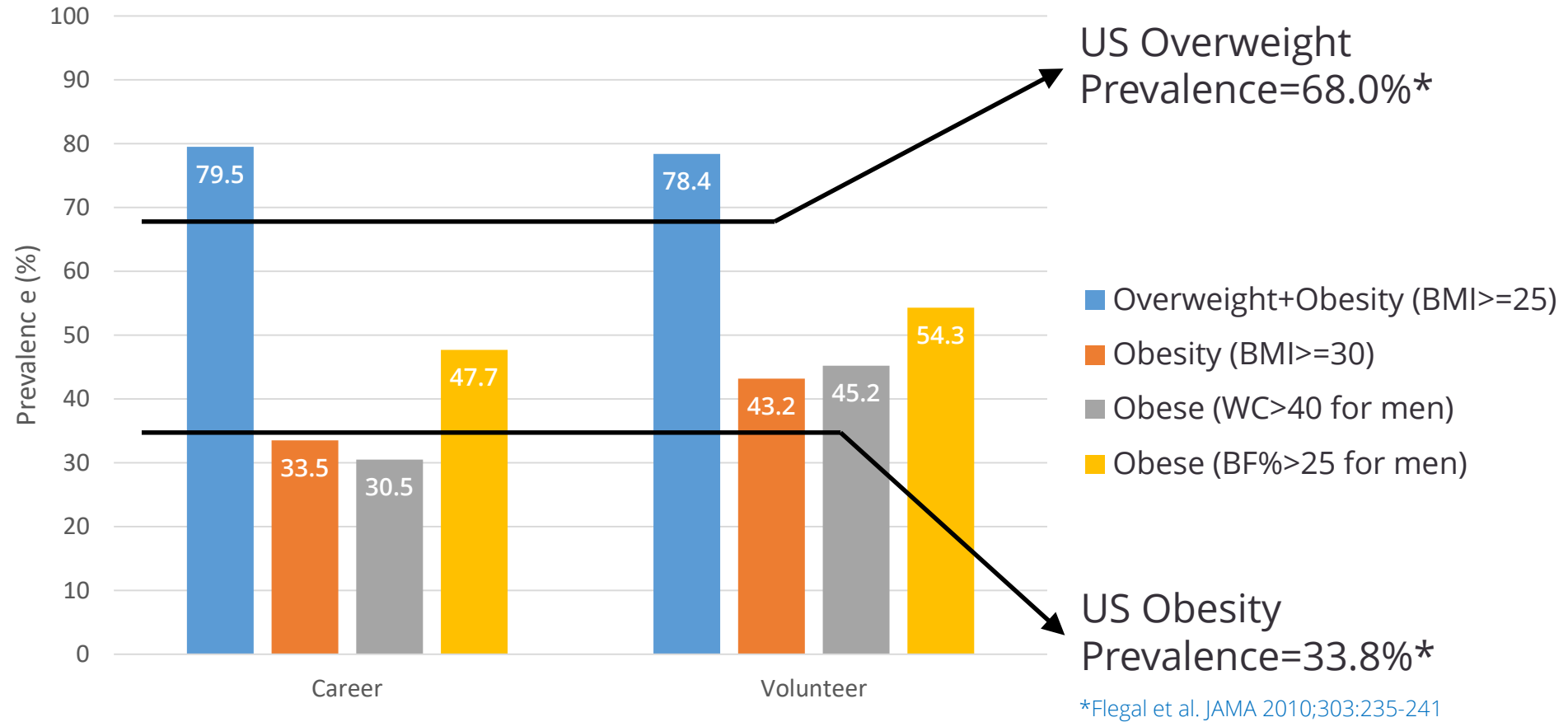
Sleep

Exposures



Overweight and Obesity Prevalence

Fire & Emergency Services



Firefighter Data from Poston et al., 2011: FIRE Study. Range in the published literature, BMI ≥ 25: 73-88%

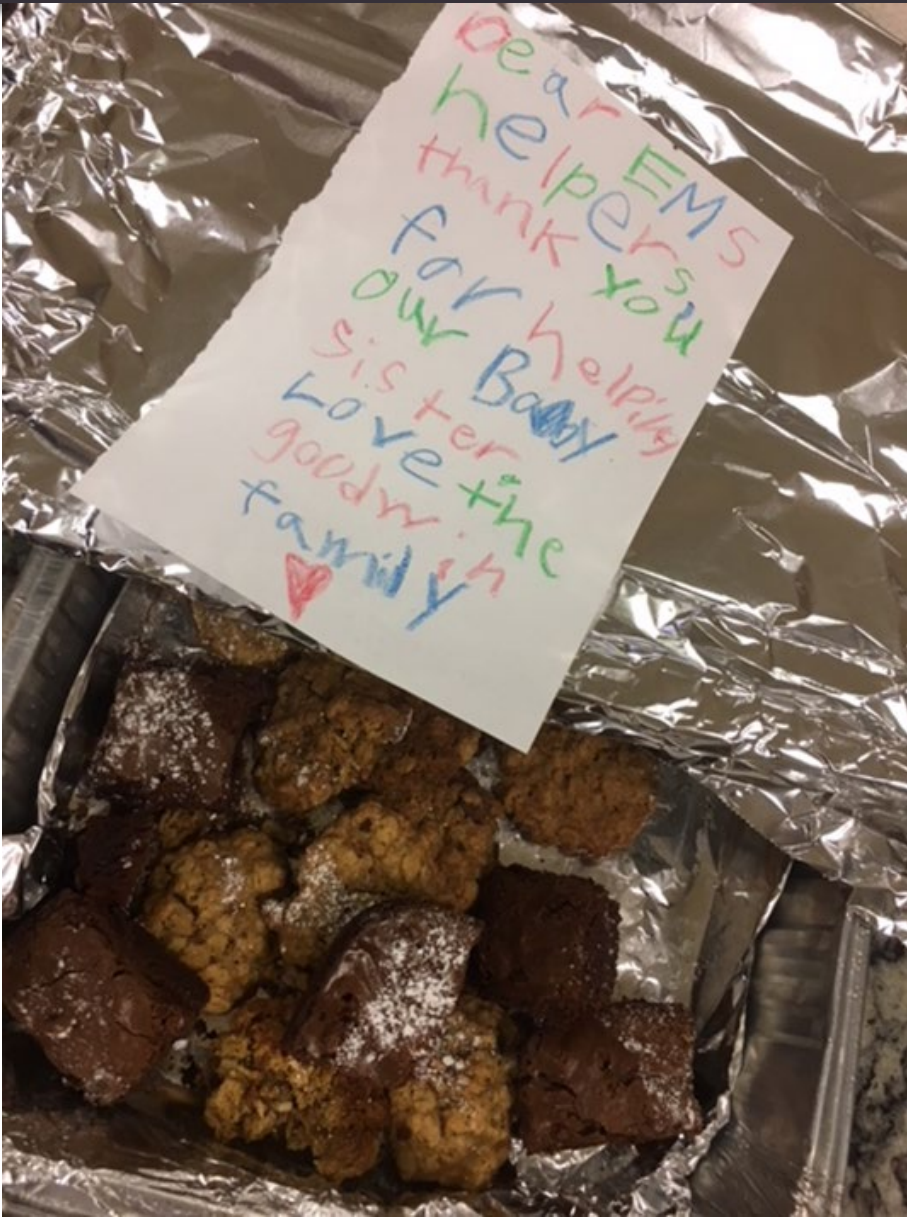
Meals as Bonding



"...just eating with them on those days I put on some weight and it's very difficult to do that because part of the fire service family is built around that kitchen table. That's where it takes place. That's where real problems are solved."

"Yeah, at some stations, just everybody just brings their own food in...You know, they have problems in their groups and they don't seem to cook up as much...just like guys that don't get along together."

Firehouse Environment



- Irregular eating patterns
- Traditions
- Food availability

Portion Sizes

Best Potato Soup - Feeds 6-8 people or 4-6 firefighters

- 4 Cups potatoes, diced but unpeeled
- 1/4 LB butter
- 2 Cups finely diced yellow onions
- 1/2 Cup flour 1 Quart warm water
- 1/4 Cup chicken bouillon
- 1 Cup potato flakes
- 4 Cups half and half
- 1/2 tsp. Tabasco sauce
- Salt, Pepper, Garlic powder and Dried Basil to taste

Sauté onions in melted butter for 10 minutes in large kettle.

Add flour to onions and butter and cook for 5 minutes, stirring until flour is absorbed.

In a separate container combine, water, chicken bouillon, potato flakes, and seasonings.

Stir until no lumps remain.

Add to onion mixture, 1 cup at a time.

Add half and half, stirring until smooth and lightly thickened.

Reduce heat and simmer for 15 minutes.

In a separate pan, the potatoes should be covered with water and brought to a boil, and simmered for 20 minutes.

Drain potatoes and add to soup to complete. If too thick for taste, milk may be added to thin down.

Serve with chopped green onions and cheese ! sprinkled on top.

Cook time approx. 40 minutes

Definitions: According to Scientists

1 drink = 12 fl oz of regular beer = 5 fl oz of table wine = 1.5 fl oz shot of 80-proof spirits
(whiskey, gin, rum, vodka, tequila, etc.)



about 5%
alcohol



about 12%
alcohol



about 40%
alcohol

Definitions: According to Scientists



Alcohol Use by Firefighters in Central US

SHORT REPORT

Alcohol use among firefighters in the Central United States

C. K. Haddock, S. A. Jahnke, W. S. C. Poston, N. Jitnarin, C. M. Kaipust, B. Tuley and M. L. Hyder
Center for Fire, Rescue & EMS Health Research, National Development and Research Institutes, Inc., Leawood, KS 66224, USA.
Correspondence to: C. K. Haddock, Institute for Biobehavioral Health Research, National Development and Research Institutes, Inc., 1920 West 143rd Street, Suite 120, Leawood, KS 66224, USA. E-mail: keithhaddock@hopehri.com

| | |
|--------------------|--|
| Background | Although the US National Fire Service is concerned about alcohol use among firefighters, little research has been conducted on the topic. |
| Aims | To survey alcohol use patterns among career and volunteer firefighters. |
| Methods | Data were from a population-based cohort study of male firefighters conducted in randomly selected career and volunteer departments. Data were collected from 2008 to 2010. |
| Results | There were 656 participants from 11 career and volunteer 13 departments included in the study with a response rate of 97%. Career firefighters drank approximately 10 days per month (just about half of their off duty days) and drank relatively heavily on those days. Fifty-eight per cent of career and 40% of volunteer firefighters averaged three or more drinks and similar percentages reported binge drinking on the days they consumed alcohol. In general, firefighters who drank but did not binge drink tended to have the best health outcomes, while those who binge drank typically were at highest risk of negative health outcomes. Nine per cent of career and 10% of volunteer firefighters who drank self-reported driving while intoxicated in the previous 30 days. |
| Conclusions | Given the high rates of heavy and binge drinking, local and nationally coordinated efforts to increase the surveillance of drinking behaviour among firefighters and the development of targeted prevention interventions are critically needed. |
| Key words | Drinking; fire service; health. |

Introduction

Studies demonstrate a J-shaped relationship between alcohol intake and health, where moderate use is protective, while heavy consumption results in negative outcomes. Heavy alcohol use is associated with injuries [1], neurological impairment [2], social problems [3], liver disease [4] and cancer [5]. Given their critical role in public safety, the National Fire Service (NFS) is concerned about alcohol use by firefighters [6]. This study provides the first population-based examination of patterns of alcohol use in the NFS.

Methods

The data are from a large cohort study examining risk factors for injury among firefighters in the International Association of Fire Chief's Missouri Valley Region (Colorado, Iowa, Kansas, Missouri, North Dakota,

Nebraska, South Dakota and Wyoming). Data were collected in 2008–10. Sampling methodology are presented in detail in a previous report [7].

The protocol was approved by the National Development and Research Institutes Review Board. Eleven career and 13 volunteer departments were randomly selected and contributed data to this study. The research team met with crews to overview the project, and of firefighters solicited, 97% agreed to participate. The survey was confidential and no individual results were provided to the department. Given the very small number of females, only data from male firefighters are presented.

Measurement items were modelled after previous occupational surveys. Items included the following: alcohol use—During the *past 30 days*, have you had at least one drink of any alcoholic beverage such as beer, wine, a malt beverage, or liquor?; amount drank—During the *past 30 days*, on the days when you drank, about how many drinks did you drink on the average?;

Heavy Drinking

- 53% career
- 39% volunteers

Binge Drinking

- 56% career
- 45% volunteers

About 10% of firefighters reported driving while intoxicated in the past month

Alcohol Use and Abuse

National Cohort of US Career Firefighters

Survey (All participants)

Heavy Drinking: 44.7%

Binge Drinking: 50.2%

Average daily intake: 3.5 drinks

Dietary Recall (Off duty days)

Beer Drinks: 3.9

Wine Drinks: 2.0

Liquor Drinks: 6.8

Calories from alcohol:

Average = 551.4 kcals

Range = 12.5 to 3,404



Calories from Alcohol



| NUTRITION FACTS | |
|--------------------------------|--------|
| Serving Size 7.6 oz | |
| Calories 550 | |
| Amount Per Serving | %Daily |
| Total Fat 29g | 45% |
| Saturated Fat 10g | 50% |
| Trans Fat 1.5g | |
| Cholesterol 75mg | 25% |
| Sodium 1000mg | 42% |
| Total Carbohydrate 46g | 16% |
| Dietary Fiber 3g | 13% |
| Sugars 9g | |
| Protein 25g | |
| Calcium 260mg | 25% |
| Potassium 0mg | |
| ** Based on 2,000 calorie diet | |

Alcohol Use: Reasons

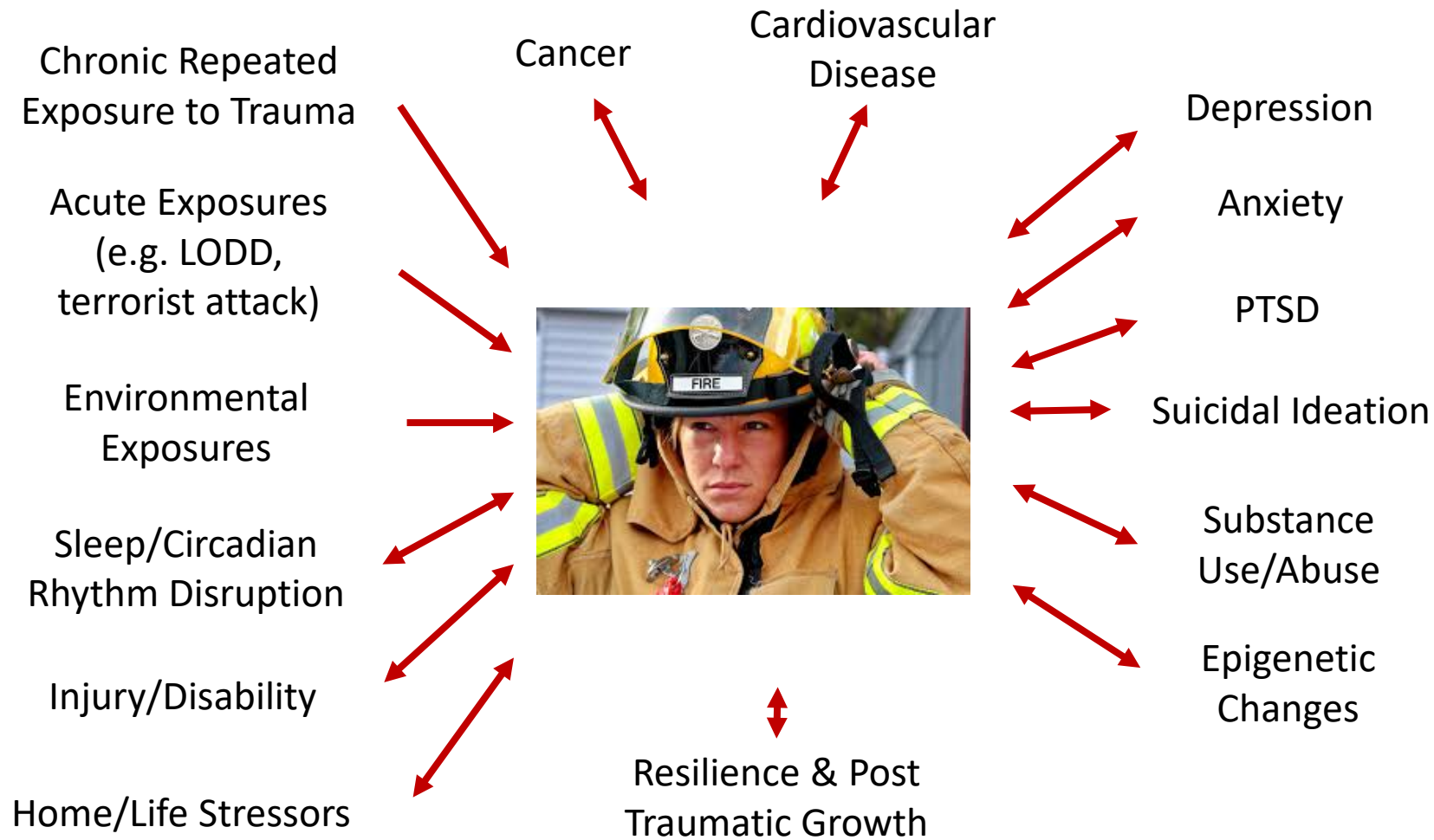
Shift Schedule: “One thing that's different with us, though, I mean we work ten days a month, so we got a lot of days that we don't work the next morning. That's one reason why - maybe that's my excuse, I don't know.” Firefighter, Career

Camaraderie: “I use it as an excuse to unwind on the four days, you know what I mean? You get together in a big group, go out, have a drink, tell war stories, laugh about stuff we did. Just act - act like exactly we did at the station, except do it with beer - with a drink.” Firefighter, Career

Stress Management: “The stress of the job...when you get off...you want something that will help you unwind.” Firefighter, Career

Tradition: “They (firefighters) all seem to be social and if you look back throughout the history of the fire service when my great grandfather was on up through the ranks what's union hall if there wasn't an open bar or a party somewhere.” Chief, Career

A Complex Interplay



Suicide

- Recent survey, nearly half of firefighters report having considered suicide
- 15.5% reported attempting suicide
- Women in protective services (fire, law enforcement, EMS) had the highest rate of suicide of any occupation studied
- 1.9-8.7% in general population attempt suicide

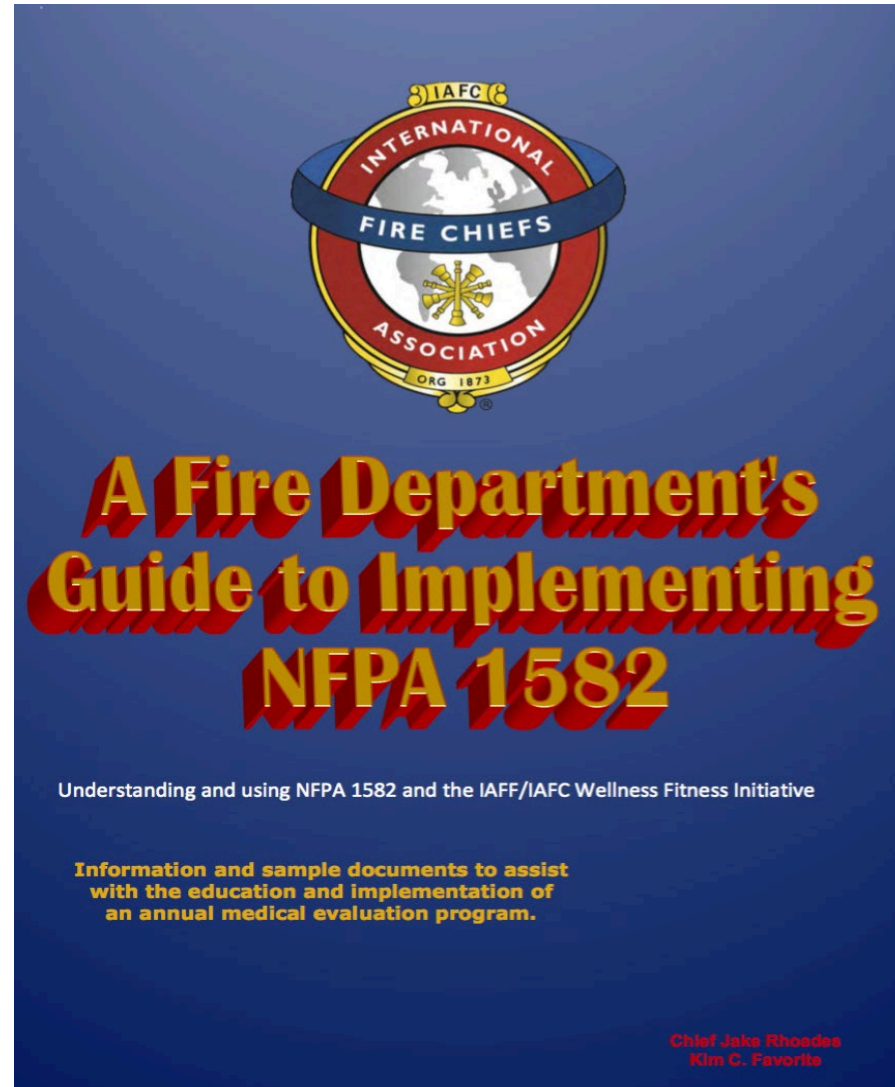
Why do we have to get a physical?

We deserve a physical.

Essential Job Tasks

- Wearing PPE and SCBA while performing Firefighter Tasks
- Toxic Fume exposure
- Climbing flights of stairs while carrying equipment
- Elevated core temperatures and dehydration
- Extended periods of emergency operations requiring extreme exertion
- Communicate effectively in high stress
- Critical decision making and problem solving during physical exertion

The Application

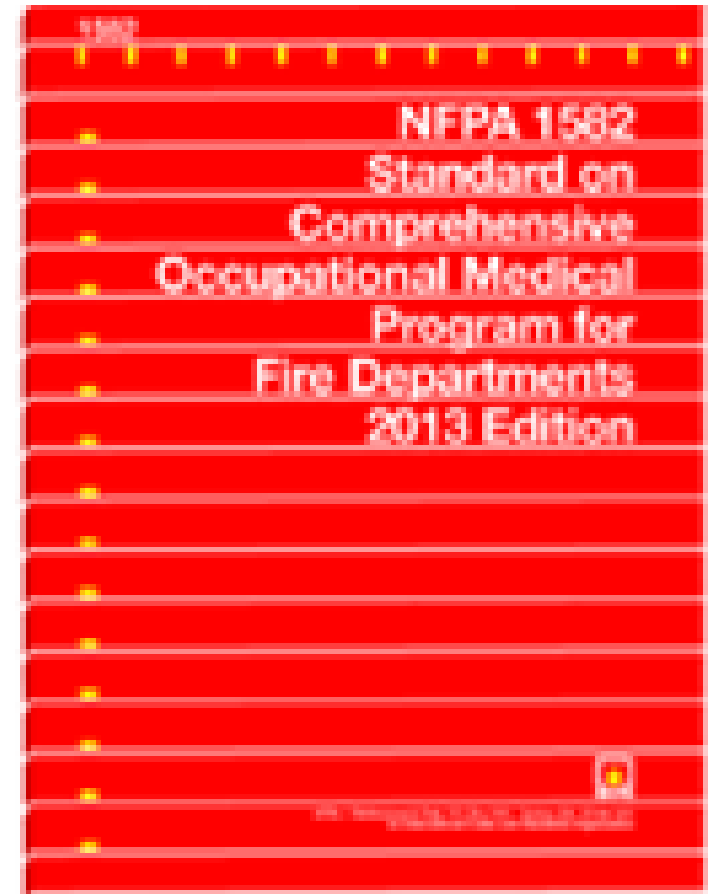


Program Application

- Priority for All Personnel
- “Fire Chief to Firefighter”
- Mandatory Participation
- It is OK to use the word “Shall”
- PPE and SCBA Mandates
- Behavioral and Mental Health
- Rehab / Remediation

Comprehensive Program

- Annual Physicals
- Physical Agility Test
- Behavioral Health
- Cancer Screenings
- FitBit
- The First Twenty
- Functional Capacity Examination



| | Implementing WFI | | | | | Not Implementing WFI | | | |
|------|------------------|------------|-----------|----------------------|------------------------|----------------------|-----------|----------------------|------------------------|
| | Claim Date | WFI Claims | Days Lost | Total Incurred Cost* | Average Cost Per Claim | Non-WFI Claims | Days Lost | Total Incurred Cost* | Average Cost Per Claim |
| PRE | 1991 | 401 | 4213 | \$1,582,424 | \$7,645 | 344 | 3689 | \$2,243,993 | \$6,699 |
| | 1992 | 407 | 4753 | \$1,951,752 | \$7,571 | 339 | 3899 | \$2,155,654 | \$6,553 |
| | 1993 | 429 | 5759 | \$2,418,216 | \$7,626 | 347 | 3431 | \$2,402,384 | \$6,900 |
| | 1994 | 436 | 6085 | \$3,576,916 | \$8,146 | 359 | 3220 | \$2,385,562 | \$6,697 |
| | 1995 | 438 | 6326 | \$3,600,762 | 8,247 | 342 | 4441 | \$2,702,118 | \$7,279 |
| | 1996 | 434 | 6895 | \$4,236,084 | \$8,321 | 372 | 4189 | \$2,764,044 | \$6,724 |
| | 1997 | 488 | 6580 | \$4,329,490 | \$9,299 | 356 | 3878 | \$2,401,968 | \$7,060 |
| | Totals | 3033 | 40,611 | \$21,695,644 | \$56,845 | 2,459 | 26747 | \$17,055,723 | \$47,912 |
| POST | 1998 | 386 | 3351 | \$2,458,116 | \$6,233 | 371 | 3515 | \$2,536,780 | \$7,278 |
| | 1999 | 400 | 3834 | \$2,627,379 | \$6,177 | 387 | 4672 | \$3,104,697 | \$8,167 |
| | 2000 | 435 | 4716 | \$2,891,569 | \$6,391 | 442 | 5823 | \$3,476,799 | \$8,517 |
| | 2001 | 452 | 4847 | \$3,075,236 | \$6,115 | 464 | 6404 | \$3,806,243 | \$8,856 |
| | 2002 | 498 | 4725 | \$3,688,405 | \$7,175 | 428 | 6335 | \$4,080,519 | \$10,054 |
| | 2003 | 531 | 4702 | \$3,871,945 | \$7,061 | 449 | 7208 | \$4,919,355 | \$11,146 |
| | 2004 | 508 | 5496 | \$3,663,493 | \$7,073 | 482 | 7431 | \$5,067,383 | \$10,590 |
| | Totals | 3210 | 31671 | \$22,276,143 | \$46,225 | 3,023 | 41388 | \$26,991,766 | \$64,608 |
| | Percent Change | 5%* | -28% | 3%* | -23% | 22% | 55% | 58% | 35% |

* p<.05

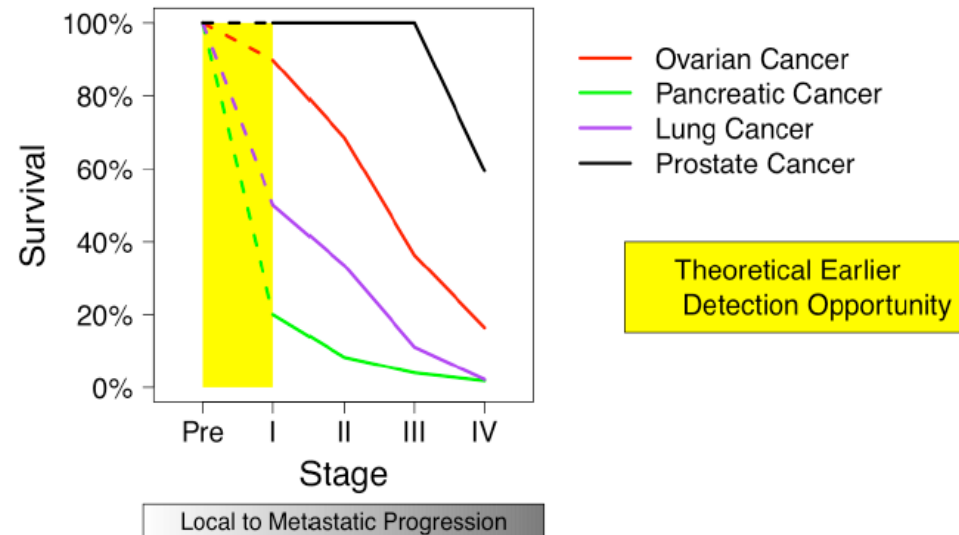
**All Costs are adjusted in 2001 dollars

This appears to be a positive return on investment with getting most of the initial costs back the first year and then getting a positive ROI of at least 1:2 for year two. Therefore, every one dollar spent on firefighter wellness, via implementation of WFI, results in an almost immediate return of over two dollars in occupational injury/illness costs.

Success Story: Broward County Sheriffs Office Department of Fire Rescue

Cancer: Early Detection is Key

Relative 5-year survival correlated with stage at diagnosis.⁸



Ref: Surveillance, Epidemiology, and End Results Program (SEER), 1973-2006. Division of Cancer Control and Population Sciences, NCI. Bethesda, MD. 2006.

- **Colon cancer:** 91% 5 year survival if caught early, 11% if it has already spread (Horner et al., 2009)
- **Prostate cancer:** 100% 5 year survival if caught early (ACS, 2009)
- **Breast cancer:** 98% 5 year survival if caught early, 15% survival in later stages (ACS, 2009; Cancer Research UK)
- **Bowel cancer:** 9 of 10 will survive 5 years if caught early (Cancer Research UK)



BROWARD SHERIFF FIRE RESCUE

2014-2015 SIGNIFICANT EARLY DETECTION FINDINGS

HEART & ARTERIAL DISEASE

| | |
|--|----|
| Left Ventricular Hypertrophy | 37 |
| Cardiac Valve Insufficiency (Follow Up Needed) | 2 |
| Decreased Ejection Fraction | 2 |
| Carotid Artery Blockages (Severe) | 5 |
| Pericardial Effusion | 3 |
| Hypertension (Currently Undiagnosed or Uncontrolled) | 60 |
| Abnormal EKG (Follow Up Needed to Monitor) | 7 |
| Abnormal Stress Test (i.e., BP Response, PVC Patterns) | 8 |

AORTA

| | |
|--|---|
| Aortic Root (Dilated >4 cm)- Currently Being Monitored | 6 |
|--|---|

CANCER & ORGAN DISEASES

| | |
|---|----|
| Diabetes (Currently Undiagnosed or Uncontrolled) | 18 |
| Kidney | 22 |
| Liver | 55 |
| Pancreatic | 1 |
| Spleen Enlargement | 8 |
| Spleen Mass | 2 |
| Gallbladder Polyps | 20 |
| Ovarian Cyst (Follow Up Needed) | 1 |
| Uterus | 3 |
| Prostate Enlargement | 26 |
| Prostate Mass | 9 |
| Hypogonadism | 44 |
| Thyroid Nodules (Follow Up Needed)(6 Confirmed Thyroidectomy; 6 Confirmed Thyroid Cancer) | 55 |
| Thyroid Nodules (Monitor/ No Follow Up Needed) | 83 |
| Testicular Mass(Confirmed Cancerous) | 1 |



| PULMONARY/ RESPIRATORY | |
|---|------------|
| Pulmonary Function Test (Less Than 70%) | 11 |
| OTHER SIGNIFICANT FINDINGS | |
| Obesity | 79 |
| High Cholesterol/Triglycerides | 42 |
| Elevated PSA Blood Levels (Prostate) | 13 |
| Low Testosterone (< 200 mg/dl) | 68 |
| Abnormal TSH (Thyroid Function) | 19 |
| Hepatitis C | 2 |
| Complete Blood Count (CBC) Abnormality | 11 |
| Significant Thrombocytopenia | 4 |
| Aberrant Nevus (Follow Up Needed) | 2 |
| Decreased Renal Function (eGFR< 59 mL/min/1.73) | 2 |
| Severe Bilateral Hearing Loss | 3 |
| Positive Fecal Occult Stool Test (Follow Up Needed) | 3 |
| TOTAL NUMBER OF SIGNIFICANT FINDINGS: | 737 |

Total Number of Patients Seen: 634

Hidden Dangers Lurk



The Invisible Danger of Bunker Gear Transfer.mp4

Fuel 2 Fight Study

- Baseline assessment consisted of data from 89 personnel (3 Stations of BSO's 22 Stations).
- Of those assessed – **85.9%** were in the **overweight or obese** category – a rate not only higher than the general US population, but also higher than established estimates in the fire service in general.
- 40% of firefighters had a waist circumference greater than 40", which places them at a high risk for heart disease.
- The test sampling of 3 BSO fire stations was strictly voluntary yet all employees assigned to these stations chose to participate.
- Average weight loss was 4lbs during the study compared to the average firefighters 3 pound weight gain over the same timeframe.
- Firefighters advised the study was instrumental in them making lifestyle changes in their eating habits and exercise programs.
- Departmental Level Assessment shows that **48.8% of BSOFR is high risk/obese** (almost half of the Department!)

Obesity Trends, U.S. Firefighters

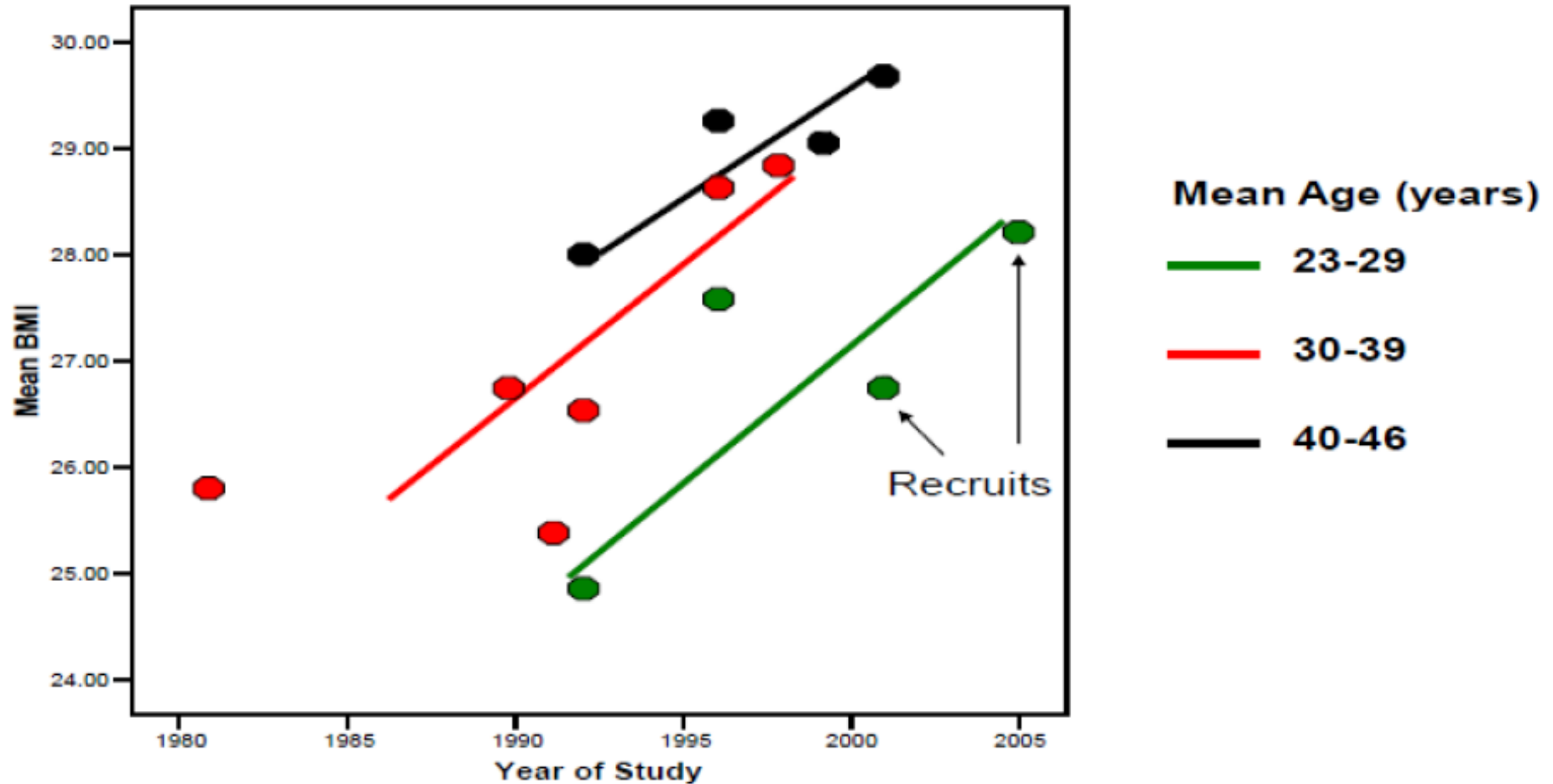


FIGURE 1. Mean BMI by age from firefighter studies: 1980–2005. From Soteriades et al.³

Data Behind the Program

- There have been a total of 1952 **open** and **closed** claims excluding presumption claims under F.S. 112.18 heart claims.
- Indemnity payments have been issued in the amount of \$1,498,053.22
- Medical payments have been issued in the amount of \$6,947,146.58
- As it relates to presumption claims under F.S. 112.18 we have 150 **open** claims.
- Indemnity payments have been issued in the amount of \$3,306,155.09
- Medical payments have been issued in the amount of \$10,149,665.71

BROWARD SHERIFF'S OFFICE



**BESITY
EIGHT
LOSS**

Program



TOTAL WEIGHT



Target
Weight loss
as a Team
(20 members)
454lbs

TEAM #1

BRUNDZA, AARON P
CARVAJAL, JAVIER
CHANDLER, CHRISTOPHER
CONNOLLY, ROBERT
KRUPIN, JEFFREY
LEHMANN, KYLE
PARRA, ROBERT
PELLECEC, SERGIO
PHIPPS, BRIAN
REID, JAMES
SAINTIL, KENCI
SANCHEZ, NIKKO
SIEB, RICHARD
THARP, MARLON
RIGGIO, MARK
HACKLER, JAMES
HERNANDEZ, ANDRES
PETERS, HOLLY
WOODWARD, ALISHA
SCHWITZER, JOSHUA



TARGET WEIGHT
3,580



BECOME A TRUE CATALYST FOR CHANGE...



BE A BSO EMPLOYEE
**WELLNESS
CHAMPION!**

ANSWER YOUR CALL TO BE A PART OF THE BSO
FITNESS PROMOTION FORCE! CONTACT US
A.S.A.P. TO TAKE ADVANTAGE OF THE SPECIAL
FITNESS FOUNDATION TRAINING THROUGH
YMCA AND SPECIALIZED TRAINING EXPERTS.

E-MAIL DEREK_HUGHES@SHERIFF.ORG TO SIGN-UP OR CALL (954) 831-8251
FOR MORE INFORMATION ABOUT THIS AND OTHER WELLNESS PROGRAMS.

Broward Sheriff's Office is partnering with the Broward Regional Health Planning Committee to improve the well-being of all BSO personnel.

We want to identify fitness-minded personnel from all across the agency who are interested in helping to motivate fellow employees to achieve greater activity levels and physical fitness.

Our goal is to make effective exercise more accessible to our staff at every region of the agency.

You don't have to be a fitness guru to make valuable contributions. Many of you are already helping others. Let us help to coordinate the effort.



You're Invited!
**"MEET THE
CHEFS"**



AUGUST 19 & 20

Time: 12pm-3pm

Location: *DeliverLean Kitchen, 4351 NE 12th Terrace,
Oakland Park, FL 33334*

You're invited to "Meet the Chefs" at *DeliverLean* for an educational nutrition workshop and interactive culinary demonstration.

Enjoy a complimentary lunch and experience a cooking demo with *DeliverLean* Executive Chefs, James Donato and Andrew Whiteman, who will give you helpful tips on how to achieve your goals and eat your way to a more fulfilling lifestyle.

RSVP by 8/17 to:

Derek Hughes at Fit.Nutrition@Live.com
or call 954-263-5425



**You've come so far to give up now...
Let's do this together!**

Join a fun **Weight Loss Challenge to
help you reach your weight loss goals.**

You can win great prizes for reaching your goal weight!

In this weight loss challenge you will get:

- Group support to cheer you on
- A personal fitness coach
- Individualized fitness and nutrition plan
- Helpful tips and information on good nutrition and long term health
- FREE group fitness workouts
- ALL participants will receive great incentives with more opportunities to win *great prizes!*



Space is limited; reserve your spot today!
Join the **FREE** challenge.

What do you have to lose?

To register or for more information, call
Chief LeDuc 954-831-8291 or todd_leduc@sheriff.org

Healthy Food Guidelines: Color Coding System

For simplicity, foods and beverages have been grouped into three distinct categories: healthiest, healthy and unhealthy.



Healthiest (GO!): The best choices include vegetables, legumes whole fruits, whole grains, seafood, lean meats, nuts, seeds, unsaturated oils, water, unsweetened teas and low fat dairy without added sugar.



Healthy (SLOW!): Moderate foods containing good nutrients, but have higher sugar, saturated fat, sodium or calories. This includes processed foods, refined grains, red meat, whole fat dairy, dried fruits and 100% juice.



Unhealthy (WHOA!): Limit highly processed foods with low nutritional value, usually high in saturated fat, hydrogenated oils, added sugar or sodium. This includes most desserts and junk food, added salt, syrups, energy drinks, alcohol, sports drinks and sodas.



IAFC SHS Healthcare Provider's Guide to Firefighter Physicals

Research Backed,
Experience Driven

Annual Medical Physicians

- Have you ever wondered if the cold symptoms you're experiencing are caused by some potentially devastating disease?
- When was the last time you had a medical physical examination?
- When was the last time you had a medical physical exam especially for firefighters?
- Does your healthcare provider know and understand the physiological demands of firefighting; the hazardous materials firefighters are exposed to; or the potentially devastating illnesses and injuries firefighters are most prone to?
- If they did know this information about firefighting; would they change how they treated you?

We think they would.



A Healthcare Provider's Guide to Firefighter Physicals

- Description of the physiological demands of firefighting
- Health Statistics
 - Cardiovascular Events, Musculoskeletal Injuries, Behavioral Health Issues, Cancer
- Review of systems
 - Cardiovascular Health and Fitness
 - Cancer
 - Musculoskeletal Injuries
 - Behavioral Health
 - Lung Disease
 - Sleep Disorders
 - Infectious Diseases
- Clinical recommendations for health monitoring
- References
- Additional Resources

Annual Medical Physicals

- Annual medical physicals provide reassurance; you would know the common cold you are suffering with is just that, the common cold, and not something worse because you just had an annual physical with no findings.
- If the last time you had a medical physical was more than one year ago; you need to get checked.
- If your healthcare provider doesn't know the occupational risks of firefighting; the physiological demands, the hazardous material exposures, the illness and injuries firefighters are most prone to; you need to bring the *Healthcare Provider's Guide to Firefighter Physicals* to your next appointment.
- *Don't delay, schedule your medical physical today!*

Summary

- The data does not lie, the data is real, and the impact is forever...
- Realize that your tenure as a is just temporary. Its OK to have those uncomfortable conversations that may hurt feelings; even if those feelings are yours.
- Making an impact on the health and wellness of todays fire service is at a critical juncture.
- A commitment to the community, A commitment to our people, A commitment to the taxpayers



Thank you!

Sara Jahnke
Director & Principal investigator
Center for Fire, Rescue, & EMS Health Research
sara@hopehri.com
913-238-5648

Todd Leduc, Assistant Fire Chief
Broward County Sheriffs Office
Department of Fire Rescue
Todd_Leduc@sheriff.org
954-410-3862



Questions?