

Summary of Physiological Responses to Firefighting

- → Cardiovascular (Increased HR and BP, Decreased SV, Increased Arterial Stiffness)
- → Hematological (Decreased Plasma Volume, Hemoconcentration, Procoagulatory)
- → Thermoregulatory (Elevated Core Temperature, Dehydration)
- → **Respiratory** (Increased Breathing Rate and Oxygen Consumption)
- → Metabolic (High Oxygen Cost, Increased Lactate, Fatigue)
- → Immune/Endocrine (Increased Leukocytes and Hormones)
- \rightarrow Nervous (Sympathetic Surge and Increased Adrenaline)
- → Muscular (Increased Oxygen Use and Heat Production)

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

Firefighter Fatality Statistics



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

	Care	er	Voluntee		
Cause/Contributing cause	No.	(%)	No.	(%)	
Heart attack*	142	(39)	306	(50)	
Stress/Overexertion	138	(97)	301	(98)	
Other	4	(3)	5	(2)	
Motor vehicle-related traum	a 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	1	A175 A5:			
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 every cardiac LODD, an estimated 17 non-fatal cardiac events occur

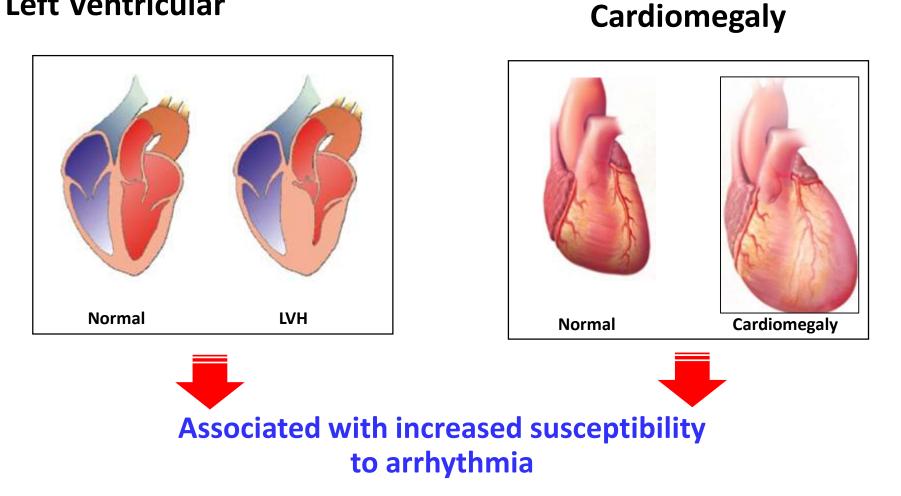
on duty each year.

*For example, myocardial infarction or arrhythmia.

¹ Includes deaths caused by burns, cerebral vascular accidents, drownings, electrocution, heat exhaustion, and trauma.

Structural Changes

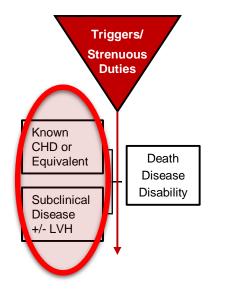
Left Ventricular



Cardiomegaly/Left Ventricular Hypertrophy

Risk factors:

- Hypertension heart must work harder to pump against a high pressure
- Obesity heart must work harder due to an increase in circulating blood volume (obesity is also associated with hypertension)
- CHD narrowed arteries cause the heart to work harder to deliver adequate blood flow



Left Ventricular Hypertrophy

Results from 3 retrospective studies that examined autopsy data for duty-related cardiac fatalities

Evidence of LVH at autopsy:

- 76% (n = 52; 25 autopsies*) (Kales et al., *New Engl J Med*, 2003)
- 57% (n = 87) (Geibe et al., *Am J Cardiol*, 2008)
- 70% (n = 87; age ≤45 years) (Yang et al., *Am J Cardiol*, 2013)

LVH has been shown to be an independent predictor of cardiac death

*left ventricle described in 25 autopsies

Exposures

"Toxic Soup" of Known & Unknown Carcinogens

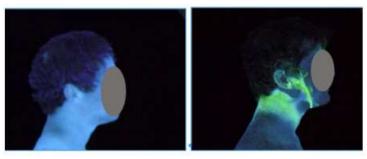
- CO
- Formaldehyde
- Metals
- Flame retardant (PCBEs)
- Benzene
- PAHs
- NO2
- Glutaraldehyde
- Toulene
- Zylenes
- Styrene

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

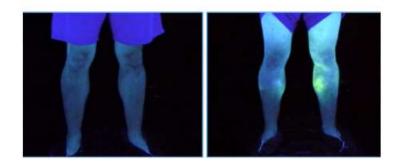


Exposures: Dermal Absorption

Before After







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

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

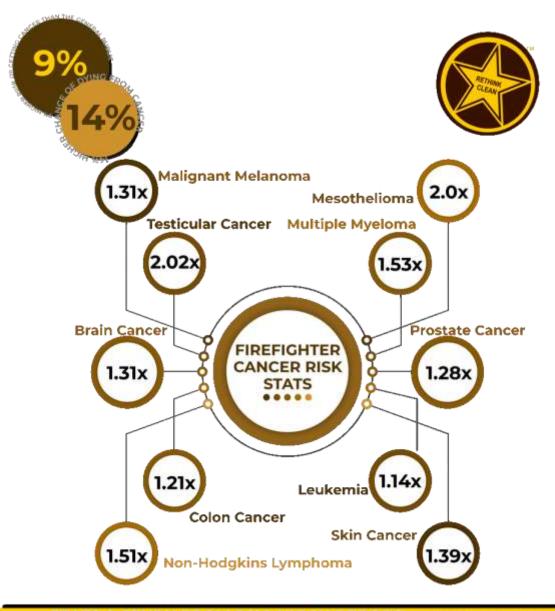
> Jeff Stull, RTI study commissioned by IAFF



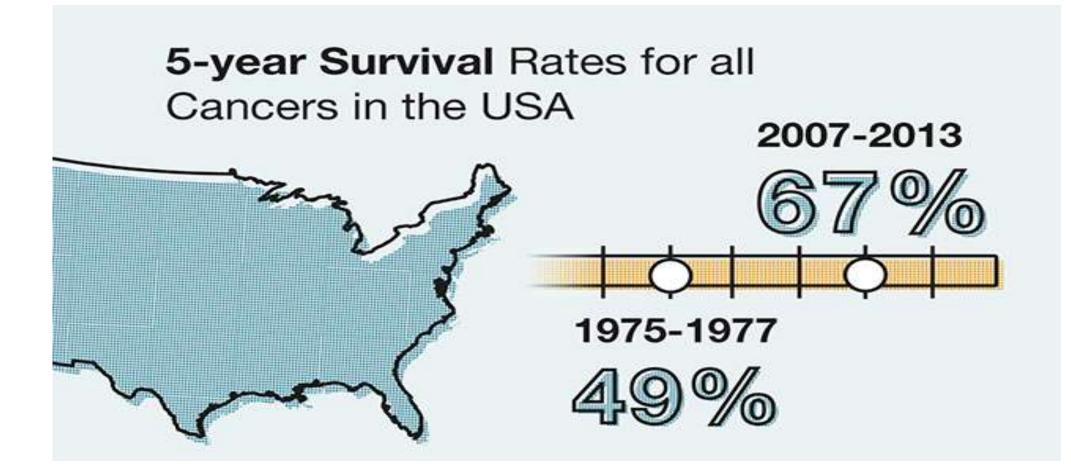
Lifetime Risk of Developing Cancer:

Approximately 39.3 percent of men and women will be diagnosed with cancer of any site at some point during their lifetime, based on 2014-2016

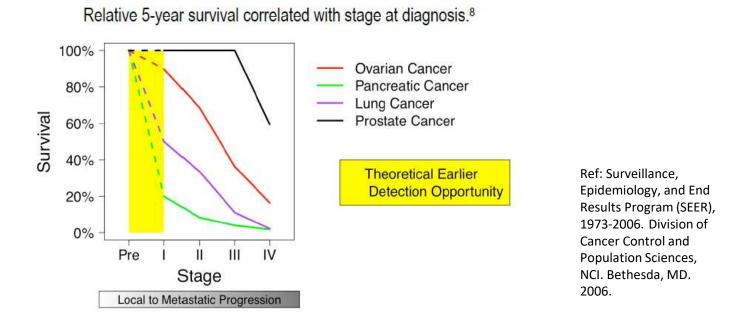
Elevated Risk.....It's Real!



Cancer Treatments



Cancer: Early Detection is Key



- **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)



"Your worst day is our everyday" ~Into the Fire (2005)

Suicide

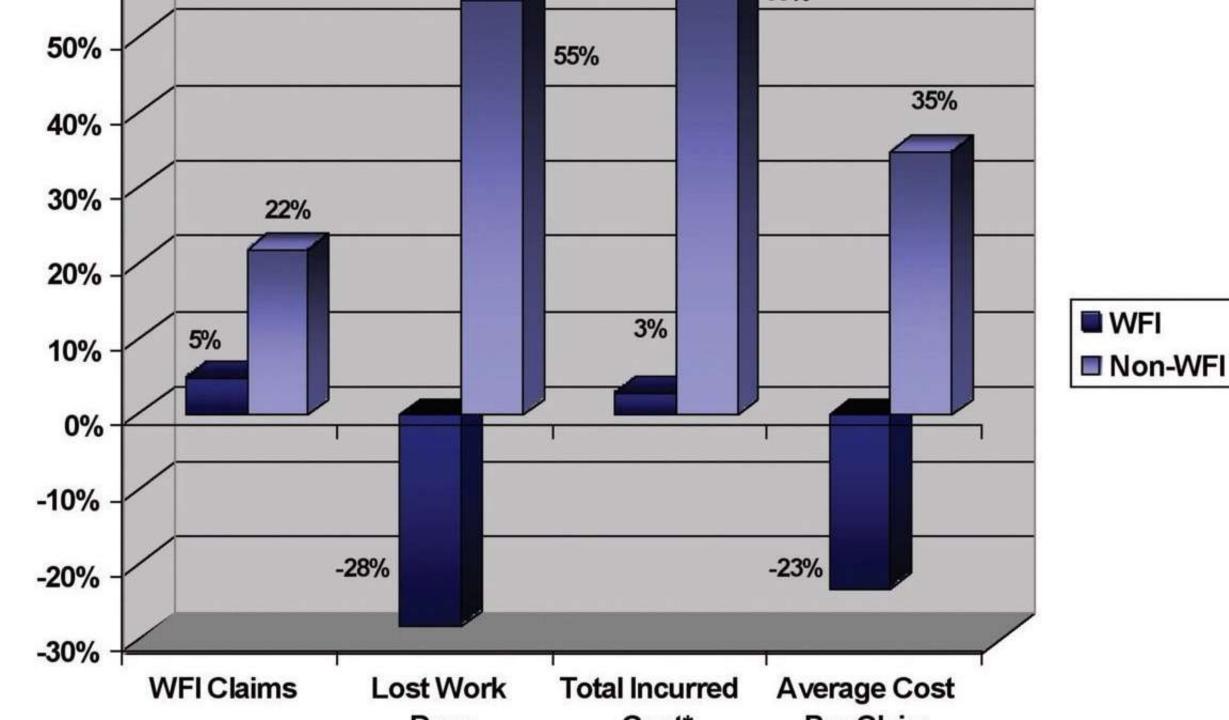
- Recent survey, nearly half of firefighters report having considered suicide
- 15.5% reported attempting suicide
- Women in protective services (fire, law enforcement, EMS) had the highest rate of suicide of any occupation studied
- 1.9-8.7% in general population attempt suicide

		Implemen	ting WF		Not Implementing WFI				
	Claim Date	WFI Claim s	Days Lost	Total Incurred Cost*	Average Cost Per Claim	Non- WFI Claims	Days Lost	Total Incurred Cost*	Average Cost Per Claim
	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
PRE	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
- 1	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
OST	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%

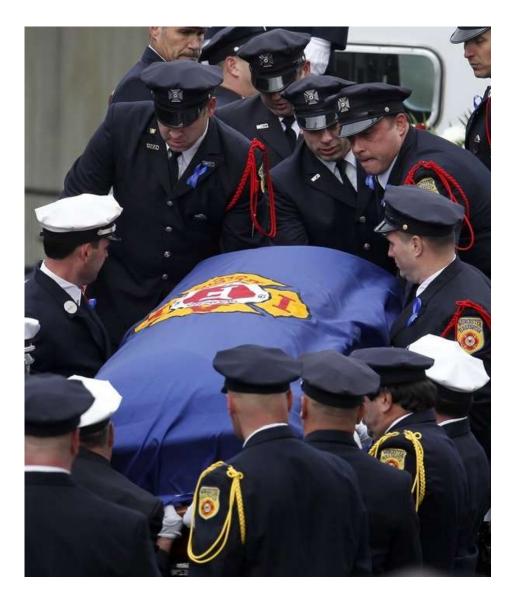
* p<.05

**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.







"Because when we hit the fire ground, your risk factors become my risks."

~ Firefighter Steve Mast

Are We Getting Physicals?

	Fully Career		Primarily Career with Volunteers		Primarily Volunteer with Career		Fully Volunteer	
	2006	2016	2006	2016	2006	2016	2006	2016
All firefighters	69.2%	80.0%	65.0%	74.9%	49.9%	52.5%	46.6%	44.8%
Firefighters who use breathing apparatus only	3.5%	1.2%	5.4%	2.4%	8.0%	3.5%	6.4%	3.1%
Hazmat technicians only	N/A	4.8%	N/A	2.3%	N/A	1.4%	N/A	0.6%
Interior firefighters and drivers only	0.1%	0.2%	1.3%	0.9%	2.4%	2.0%	4.8%	1.5%
My department doesn't require, recommend or provide annual physicals	27.2%	13.9%	28.4%	19.5%	39.7%	40.7%	42.2%	50.0%

Are We Getting It Right?

	Fully Career		Primarily Career with Volunteers		Primarily Volunteer with Career		Fully Volunteer	
	2006	2016	2006	2016	2006	2016	2006	2016
NFPA 1582	65.7%	37.9%	66.9%	45.7%	62.9%	40.7%	52.8%	37.5%
IAFC/IAFF Wellness								
Fitness Initiative	12.6%	15.2%	7.2%	13.2%	2.2%	5.7%	2.1%	3.9%
State	12.4%	5.5%	15.5%	6.2%	8.9%	7.6%	9.7%	10.8%
Local	32.6%	16.0%	32.4%	14.9%	30.4%	19.6%	26.4%	19.0%
None	N/A	2.0%	N/A	1.2%	N/A	1.3%	N/A	1.9%
Unknown	N/A	23.5%	N/A	18.8%	N/A	25.1%	N/A	27.0%



Behavioral Assessment

	Fully Career		Primarily Career with Volunteers		Primarily Volunteer with Career		Fully Volunteer	
	2006	2016	2006	2016	2006	2016	2006	2016
Yes	12.0%	17.2%	9.4%	14.3%	8.1%	8.3%	1.4%	6.2%
No	88.0%	82.8%	90.6%	85.7%	91.9%	91.7%	98.6%	93.8%

360 Medical Size-Up Scenario	Analog to Fireground	Solution
No Medical Evaluation	No size-up	Implement Medical Evaluations
Inappropriately Cleared by HCP Unfamiliar with Stress of FF	Person doing size- up not qualified	Have Medical Evaluations done by HCP familiar with physiological and environmental strain of FF
Medical Evaluation but Findings Not Followed-up On	Size-up done but not used	Implement Health and Fitness Program. Encourage Individual Responsibility
Medical Evaluation, Things Appear Normal	Sometimes things go wrong	Continue to Search for Better Screening Tools

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

A Healthcare Provider's Guide to Firefighter Physicals

A HEALTH CARE PROVIDER'S GUIDE TO FIREFIGHTER PHYSICALS YOUR PRIVENT IS A THREHSHTER!

 Designment has an one occupational health risks the to the demands of their 2th. Finalighters reutinely aperate in bank work environments with

in excessive heat. In emotionally chapped altabation in these chemicals a dense antale a setteres abaital diallerges

- Forfighters were more than 78 pounds of real-priorit.
- Trengthers branche compressed att.

Findighters represent a dictivel soluted of the general population.

Firefighters As Tactical Athletes Pass attents thatal rechains entropyed. streams increase the heefgiter's call of motivality. **hosiological Demonds of FireRything** and mantality for:



and investigation openal

Addition and many Plan 71,000 Interim a tanget efighters, 40.8% have considered lucide on 15 have had in altympt Aurop for mann of

12 chars and in 3 Cosodian priorities, other tunes of captury are considered work-without

landy lotory and Medgle holds: domnide ald 1. The for your \$1.

to acyce its the increast is it and the healthcas acceler is the evaluation treatment, and organize creatilizerus of the health and well-sets of Norfethiers. The recommendations in this document are supported by angoing closed measure of freetyptian and its fite enterwar experience and separate of the properties ang for them. These recommendations are offered as apathenes for beathcare providers making clinical maters regarding the care of these patients. They are not to bee the place of indeptual method judgment queting your patters. As with any christe reference, they should be used with the unsentanting that

many information, wave belowing the new

spirity weards that result in the information and resource default.

PERMIT Antiple-lasts fright Manufacture (1991) fast

AADNINALSISIAL ALACTY AND TOYOTA

PHYSICAL EXAMINATION CHECKLIST INCOMMENSION OF STREET,

C Via St N ill M his failures

Muth-Sphert PC and much fronte surgity, warrings and much surgery

Law 199 (BC list from The Lineses, No.2)

D Rotes Directili, so can, heavy ret, orgen adulates

C Tests Inter Cit, same only, last, same of your [] Impai halt binary manue, sone series one take

light of a disease ment of the property and more than you're build and a story of the And plan, to control to \$25.00 all study security or parentical pits. Manufal shorter to be builty uses of host of And philes, and these service entry advantional particular in successful in heritagenerative solution and successive shareses (VA). We therefore produce to the single's unservice, and aggreed and and "Ad" the hence, building dealers, in this way high no proceshartest.

- O Technical Industrial and Apple restaurant ind taxing a stranding being a get from when the Daniel cognition, thereing entropy before imaging a new technological in a fact, which one that at
- "Busing the base based on their reducements of the property of the second section of Stream Stream Wey Same IT and a register work toward stream have
- Unsettigentics more water are automic to water sighted with the two description, where it's

401034 DISCO.

Ones suprant to the reason and had from manipul image planters, agains, and the assesses of helpites and To visite descent the National Artiflate for Discontinues (white and result, NUTA) cardinated a heads are studied where it (2011) Religion is ante unantant tre plenia las leixen fodgales ya save To fodgales tudad soverlagter site at restainingen uf chever than the private UT parameter is reported, with regarding, percentation preserve frequency and of specially option to contact process provide efforts to these particular press. The United particular processing many many many particular proinduces it must been of the URM animitar in the process parameter. The beams of an expected shall experimencarries and further taken have been brough advecting to their presents that will be press the object and marked programment to prior the first start prior and a meriodic or the party of prior to party of the

- C Chemistry of the spectrum of a period straining balance of an A
- Nexal FSI with light internant binance C-U. Sufficient internation regenting the tot and banefits of concerning and regencer the life income
- 21 Including them Annual managem improved as it. Those serving a strate age I from a loss, many or programm income
- Mount territolise men and territation down of manimation. C . Answire to be all second and appropriate interacting failers at
- C Inside result to minute branch.

ARTICLE PROPERTY AND INCOMENTS.

The legit controls will depend with continenent of the legiting haar is a legit to idente of maniformerical injustry. Law had spreaments apparents (10. at a) on which reactively spreaments brighters. They wild reary, appenand the number also market, which being its applicant mentions with the possibility of personner abustics, choose and boundering of many position of reactionerse sparse

C Address underfang musicanitemial loans, here a far fad mage of mores, invited integri and heidelig as well as one main every

Name as a second state of the second

D . Data sign Robbits on their many turing metting

REIMARCHICK, REACTING The mental and provad serve difficing per reporter report to taken or readily depression, wantly at an over environments per barent: tree, establish these. Set websites with data being an end to address data therite. C International

1 Name and Add. Income on solid property of a state state. 2. ADDED TO REPORT AND INCOMENDATION AND ADDRESS OF A DESCRIPTION OF A DES

LONG THE LOW

to the feat of their, herby har we when impossible options and other importances, or in basis that has had to prove Internet in a hardware a bracket and the bracket and hardware by one time advect down of down and has been as a free to be the sector protocol of the times on the invested all families and which a second and should be ball the following were 2. Surveying Reader and annual automorphisms in the other shite latting of the protocol hash problem, and it

- name training is some first for party passes first for one C Card was finded but a real from with the restriction products of financial or washing blocks, thread their
- avoid served and an asser J modelah industrial C Gamiler ins time IT he arteming its long second rings for anthesis at

14124 Decomposit

They donted as left, many a ballyter left black they even highers all soil factors as where a It is repeating to proof helphone for since dependent data free tableating arrange for that he many origin arrange on diversities during, distante, digenously, and adding to be digited. C Anno designation of the had other

- Times his does need not inside them have a sub-
- 1 Marghi & Second State 1 fears benefician the Denseling Bolt Actual recommends and Dent of 1 STP begrowmener the free lattice schedule state

1 Anternationals (b) / environment/contractions intent. Hill of A Deposit of test articlass grave (20) against gather puter structure (3,7%) (10), 1 of

house his is not going the other in

INCOME.

Tradigious an other fits on the source of all assegging contrast to express to MC tradition A. A. and C. Wood after infectious lineaus. 21 Stationers to access to access on the second endors a second state of the SME Million and the Chanadier bezanites. A important.

- D basine and accula along to PC PD, PD and the community binant
- C Rethansi Mania saint



The low rational According of the 12nd induces in principality and the following contributor and products for first theirs, offset and only first searcher in the development of this Number's Golds to Rowlighter Physicals

CONTRIBUTORS.

It Janesia Abs. 208 htt conceases income fathering. MC Name Labor, 50. Warrange Thomas West Personale Name 71. inclusive states (actions have for Departure that); 55 Territory, 10, 107 (Species of Second Space, 1) Mahard States on Mah. W. Hannah's Manhard Street, Hannah Mat. Seattanets \$15.00 insection \$1000 interact. Tare interest, MAT Tarener for Sing and all their Research Tarener, \$40 Ministeries \$1, Mini 2014 matt laters Yarks with maniput for Charl Labour. In committing With Name And Jackerson, 7 Whethers 30 to Decision Method Section, G. Sampling, 64-LVE, Secting rearing termine, Sat Days (2) Lang Salar 22 MPR Transmitting Tot Antonio 22

ACCULTURE OF A

Insuration All Amprils America America MI In Second 20, 10 ML - Interdy of Rissish - Marcon II Stream Forcesses, MP. Charged and Photoes, N. Starres, M. Index Adv, MI, MP1 Heart Heart Elevel Instant of Name and N include and the base have been be-Aberbacks IN/ Ande Long hair tate (Inumines Ind) (here have if (Assort Sandher MC and Isaats Insertis Straty Madees Salings), 407 Ann Samts MC Strengton Graduate Inc. Training Co. M. Taxant Disary, MCAM. House Courts have been been been despensed weathr Desp. Name at

WEIGHERS AND L

Names are in the party many otherway and other party of a party of the party of the party of the 1 No. 7 May and Andreas Stationer in a state line of the barrier in a state of the state of the state in 212 No. 7 May 2 million of the state of I have been and been and the same same same same to be the time from the same time is the same time to be 1 See C. Koll, 20 applied uses 201 Second in Pranty Institute Informations of Data Second and Prob area 2010;27(2) and interchant 201 A Practice of all Property and the second states of Collinguistics in the section of a failed at

ADDITIONED APACOURT PE

MMI (M. Scolari a Cospetitions Scopelyne Method Program to be Department MMI (M. Mp. Press Halo (2006) and departs in case are student for a later or statement Produced Analysis (M. adding the state where the part of the balling of the state of the



FST/R

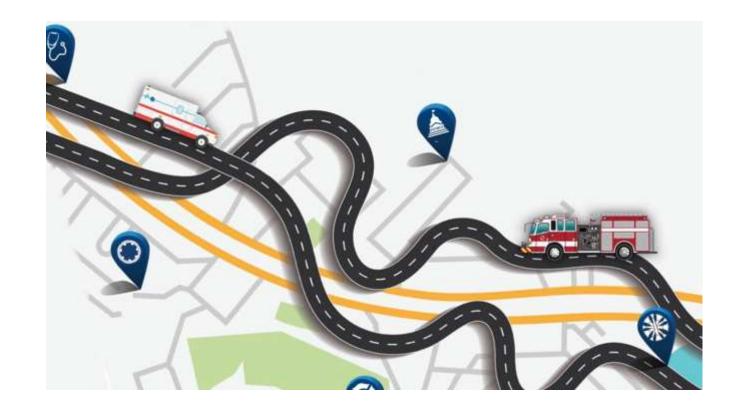


The Healthcare Provider's Guide will be out and available 11/1/2016. Look for the Press Release from the IAFC.

Emergency Services Roadmap to Health & Wellness

• NFPA 1582 Q & A

- General
- Fire Administration
- Healthcare Provider
- Risk/Benefit Manager
- Fire administration responsibilities
- Healthcare provider responsibilities
- Resources for all firefighters, as well as info for specific types:
 - Career
 - Wildland
 - EMS
 - Volunteer
 - Candidate
- Data for city/county officials
- Resources for labor
- Resources for family and friends



Broward County LODD





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	And the second se
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 Function Test (Less Than 70%)	11
OTHER SIGNIFICANT FINDINGS	and the second second
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	

rutal number of ratients seen, 034

2017 AGGREGATE DATA SIGNIFICANT FINDINGS

Number of First Responder Patients	11967
MASSES/SUSPICIOUS CANCER	
Gallbladder	33
Liver	44
Kidney	92
Spleen	40
Bladder	11
Prostate	14
PSA (Prostate Specific Antigen) increase over 1 Year	122
Testicular	34
Ovarian	28
Uterine	92
Pancreas	22
Thyroid	193
Thyroid Suspicious Nodules being monitored	679
TOTAL	1404
CARDIOVASCULAR DISEASE	
Elevated LDL/HDL ratio (Heart Disease Risk)	511
*Stage 2 Hypertension (Stroke Risk)	187
*Abnormal ECG/Stress Test (Abnormal Rhythm)	495
*Carotid Stenosis >50% (Stroke Risk)	54
Hypertrophy (Thickening/enlargement of the Heart)	120
*Severe Heart Valve Disfunction	90
*Bicuspid Aortic Valve	16
*Pericardial Effusion	3
*Abdominal Aorta Aneurysm (>4)	8
*Decreased heart function (low EF)	16
TOTAL	1500
PULMONARY FUNCTION	
*Abnormal Pulmonary Function Test (Spirometry)	228
TOTAL	228
CRITICAL ABNORMAL BLOODWORK	
HAZMAT (Heavy Metals and Cholinesterase)	36
Positive Hepatitis C	7
*Diabetes, Elevated A1c >8.1 (Diabetes)	148
Decreased WBC (At risk for viral infections and Leukemia)	290
Chronic Kidney Disease/ Renal Failure (low eGFR)	168
TOTAL	649
TOTAL CRITICAL ABNORMAL FINDINGS:	3863
	1.000
Number of First Responder Patients	11967
* IN NFPA 1582 Guidelines	

Cardiovascular and Pulmonary Testing

- Cardiac Treadmill Stress Test
- Resting EKG
- Pulmonary Function Lung Capacity
- Metabolic Syndrome Analysis
- Body Composition Analysis





Fitness Assessments

- Functional Fitness Testing
- Muscular Strength, Endurance, and Flexibility Evaluation
- Cardiovascular
- Stretching Programs
- Fitness Recommendations and Goals
- Injury Reduction Training
- Personal Fitness Rx
- Nutritional and Diet Needs Analysis

Cardiovascular Structural Changes



CARDIAC ENLARGEMENT IN U.S. FIREFIGHTERS

Findings and Recommendations from Non-Invasive Identification of Left Ventricular Hypertrophy/ Cardiomegaly in Firefighters

July 19, 2017



© 2017 National Fallen Firefighters Foundation



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, <u>but also higher than</u> <u>established estimates in the fire</u> <u>service in general</u>.
- 40% of firefighters had a waist circumference greater than 40", which places them at a <u>high risk for</u> <u>heart disease</u>.

- 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!

Data Behind the Program

- There have been a total of <u>1952</u> **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 <u>150</u> 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





TARGET WEIGHT 3,580











BECOME A TRUE CATALYST FOR CHANGE...

BE A BSO EMPLOYEE WELLINESS 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.

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.





Partnerships Transforming Our Community's Health











What do you have to lose?

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