



## Response to Questions on the 2016 LOBs

**Request By:** Supervisor Herrity

**Relevant LOB(s):** LOB #236

**Question:** Provide additional information on steps the Fire and Rescue Department is taking to reduce injuries, sick days, workers compensation claims, and overtime.

**Response:**

The Fire and Rescue Department (FRD) has several Wellness/Fitness Programs in place to help reduce firefighter injuries. These programs are targeted at reducing the number of worker’s compensation claims, reducing lost time due to injuries which results in increased overtime costs to maintain minimum staffing, and reducing costs for medical treatments of injured personnel. By reducing the overall rate of injury and preventable disease, FRD may reduce associated financial costs.

During calendar year 2014, there were 516 total injuries reported. In comparison, during calendar year 2015, there were 446 total injuries reported. This represents nearly a 14 percent reduction in total injuries. Below is a breakdown of work days lost and associated costs resulting from injuries (all data calendar year):

Workers Compensation Related Metrics	2014	2015	Percent Change
Total number of workers' compensation claims	274	268	-2.2%
Total number of lost days to workers' compensation claims	3,706	3,940	6.3%
Medical costs associated with workers' compensation claims <sup>1</sup>	\$2,753,293	\$1,840,040	-33.2%
Overtime paid to cover workers' compensation claims <sup>1</sup>	\$1,298,162	\$1,581,797	21.8%

<sup>1</sup> Annual Cost data is impacted significantly by the methodology used to categorize recurring injuries. If an injury occurs that can be tracked back to an original injury, the medical costs associated with the secondary injury are applied to the year the original injury occurred; however, the overtime figures are reflective of the year in which the overtime is paid out.

The following pages summarize the efforts in place to help reduce firefighter injuries.

The primary goal of the FRD’s Wellness/Fitness Program is to promote the long term health, wellness and quality of life of members. This program aims to reduce sprain and strain injuries as well as conditions such as cardio vascular disease, diabetes and cancer. The Wellness/Fitness Program (Well-Fit) incorporates strategies in fitness, nutrition and functional movement to provide firefighters the tools needed for a healthy life, successful career and active retirement.



## **Wellness Injury Reporting Form**

When a firefighter submits an injury packet, they are provided a 'Well-Fit Injury Reporting Form'. This anonymous form is returned to the Well-Fit Center to assist in creating workout programs based on the types of injuries occurring.

## **Medwatch**

In conjunction with the Public Safety Occupational Health Center (PSOHC), FRD has developed Medwatch. Medwatch, which is currently in the implementation phase, is a targeted, voluntary program to identify FRD employees at risk of dying during employment or within five years of retirement. This population is estimated to be approximately 1 percent of FRD's uniformed staff.

Employees advised to participate in the Medwatch program are generally senior employees, and are mostly considered high risk due to lifestyle factors such as diabetes, obesity, and hypertension. Cardiovascular disease is the most common cause of work-related death among firefighters. The Medwatch program utilizes PSOHC medical providers and other specialists on staff, including a nutritionist, behavioral coordinator, strength and training specialist, and physical therapist to assist employees with reducing life threatening risk factors.

## **Nutritional Primer Binder**

The Well-Fit Nutritional Primer is a binder designed to provide resources to FRD personnel with information on various topics related to health and nutrition. The primer is organized in sections:

1. Buying Guides = Brand Name Ratings – These one page guides save personnel time and money while helping them to make better decisions at the grocery store.
2. Recipes – the binder can be used to save recipes that are health promoting, that have nutrition facts and cost information.
3. Meal and Snack Planning – the binder provides templates that can be used at both work and home.
4. Shopping Lists – can also be used at work or home.
5. Nutrition Action News Letters – Ten times a year an issue of Nutrition Action is delivered to all work locations. This newsletter is the most highly subscribed to health and nutrition letter in the world and is published by the Center for Science in the Public Interest (CSPI). CSPI has no industry ties and provides evidenced-based health promotion information.
6. Other Resources – Articles and other literature such as "How Diet Causes High Blood Pressure... and How to Reverse it"; and "What to do and Why" are examples of two handouts informing personnel about evidence-based nutrition and lifestyle changes that promote good health.



## **Wellness Guidebook**

The guidebook is designed to be a resource for department personnel as it relates to fitness, medical information, nutrition, injuries, behavioral health and cancer. Subject matter experts were asked to provide easy to read material to promote long term health and wellness of FRD personnel. Topics in the guidebook include:

1. Fitness – General Physical Preparedness, Movement Preparation, and Training Principles
2. Medical – Cardiovascular Disease, Cardio-Metabolic Syndrome and Sleep Disorders
3. Nutrition – 9 Steps to Healthy Eating, Diet and High Blood Pressure, and Maintaining Weight Loss
4. Injuries – Movement skills for injury prevention, knees/back/shoulder anatomy overview, Self-Treat a “Hurt”
5. Behavioral Health – Stress and how to cope, suicide awareness and prevention, and substance abuse
6. Cancer – Preventable causes of cancer, exposure reporting, and cancer presumption

## **Functional Movement Workshop**

In FY 2012 and FY 2013 Well-Fit received one-time funding to implement the Functional Movement Screen (FMS) test which is designed to identify dysfunctional movements and to develop corrective exercise instruction. This program significantly decreased the number of sprain and strain injuries in FRD. As a result, the Fire Chief identified on-going funding and the department established a Functional Movement Workshop (FMW). The FMW serves to: identify faulty movement patterns, reveal musculoskeletal mobility restrictions, expose issues with performance resiliency, and provide a platform for peer-mediated coaching and corrective interventions.

The purpose of the workshop is to identify postures, positions, and movement patterns that are detrimental to the musculoskeletal health of the firefighter while performing the tactical requirements of the job. The design of the workshop is meant to serve as an awareness tool for the operational firefighter and an opportunity for Peer Fitness Trainers (PFT's) to engage and coach members on corrective movement patterns. The FMW consists of three tactical movements to highlight the musculoskeletal systems which have historically been the most costly and frequently injured: the back, knee, and shoulder. The workshop design incorporates the deadlift, in-line lunge, and the overhead press to place common biomechanical demands on the participants. Each firefighter works individually with a PFT and receives an assessment, feedback, and instruction on the proper execution of each movement while also relating the movement back to the tactical performance of the job. In February 2016 the FMW was implemented for the 140<sup>th</sup> Recruit School class. Feedback immediately after the workshop indicated that 100 percent of the participants felt they were more aware of their respective movement pattern tendencies associated with essential firefighting tasks.



The objectives of the inaugural FMW were:

- ◆ Provide a platform for FRD PFT's to interact with firefighters in a tactical performance setting,
- ◆ Expose FRD personnel to three keystone movement patterns which address the principle biomechanical requirements of the predominant musculoskeletal systems involved in injury,
- ◆ Increase the awareness of FRD personnel to their individual movement tendencies and identify dysfunction,
- ◆ Establish a means by which Tactical Strength and Conditioning staff can identify movement dysfunction and observe the effects of load and fatigue on the identified key movement patterns to prevent potential injuries,
- ◆ Determine the suitability and efficacy of the evaluation design; to include the selected movements, the loads, the level of fatigue, the coaching worksheet, and the format of the workshop,
- ◆ Emphasize the need for "coaching" and minimize the atmosphere of "grading,"
- ◆ Entice firefighters to interact, observe, and participate in the coaching process with peers, and
- ◆ Establish a timeline which can be used to facilitate maximal exposure and future scheduling.

### **Return to Work Section**

This section works closely with the Operations Bureau by accurately tracking personnel while on injury leave and light duty and projecting vacancies in an effort to reduce the need for unexpected staffing shortages. This section utilizes a return to work plan which outlines the injured workers timeline for reentry to full duty after being cleared by the treating physician.



The charts below illustrate general expected injury healing times associated with various injuries:

**Table 1. GENERAL EXPECTED HEALING TIMES**

<b>Soft Tissue Injuries</b>	
Soft tissue injuries	3 months
Knee ligament injuries	3 months
Herniated disc - conservative treatment	3-6 months
<b>Fractures</b>	
Complex facial fractures	4-6 months
Upper limb	3-6 months
Hand fractures	3-6 months
Simple, vertebral, body compression - all levels	3-6 months
Spinal fractures/dislocations	12 months
Pelvis - no reduction	3-6 months
Pelvis - with reduction	12 months
Femur and hip fractures	6-12 months
Tibial fractures	6-9 months
Other lower limb and foot fractures	3-6 months
Complex and/or complicated fractures	6 months
Fracture dislocations of major joints (including wrist and ankle)	6 months
<b>Infections</b>	
Osteomyelitis	4-8 months
<b>Injuries to the Nervous System</b>	
Peripheral nerve injuries	3-12 months
Minor head injuries	3 months
Brain injuries with persisting neurological deficit	1 year
Spinal cord and cauda equina injuries	1 year



**Table 2. POST-SURGICAL HEALING TIMES**

<b>Shoulder</b>	
Arthroscopic Acromioplasty	4 months
Most other shoulder operations	3-6 months
<b>Knee</b>	
Arthroscopy	3-6 weeks
Arthrotomy	3 months
Ligament repair	3-6 months
<b>Ankle</b>	
Ligament repair	3-6 months
<b>Spine</b>	
Discectomy	3-6 months
Spinal fusion	6-12 months
Spinal stenosis decompression	3-12 months
<b>Nervous System</b>	
Major nerve repair	6-12 months
Minor nerve repair	4-5 months
Carpal tunnel or other nerve release	3 months
<b>Tendon</b>	
Flexor tendon repair or tendon transfer	3-6 months
Extensor tendon repair	3 months
Tendon release	3 months
<b>Amputations</b>	
Amputations - upper	3-6 months
Amputations - lower	3-12 months
<b>Reconstruction</b>	
Digital re-implantation	6-9 months