Life Scan Wellness Centers

Saving the Lives of America's Heroes

Ian Womack *(left)*
St. Pete Fire Rescue
Thyroid Cancer

Matt Corso
Spring Fire Department, TX
Rare Stage 2 Testicular Cancer

Chief Shelby Willis
Largo Fire Rescue
Thyroid Cancer

Curtis McClendon
Largo Fire Rescue
Kidney Cancer

Paul Marzella
Cape Coral Fire Department
Aortic Root Aneurysm

John Trese
Largo Fire Rescue
Prostate Cancer

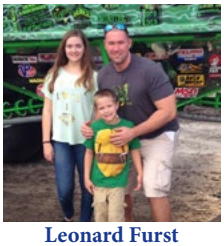
Jeff Bergamo
City of South Pasadena
Fire Department
Testicular Cancer

Steve Wagner
East Lake Fire Rescue
Testicular Cancer

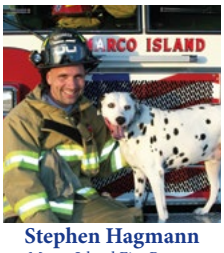
Kelly Hallman
Hillsborough County Fire Rescue
Thyroid Cancer

Rusty McCord
Englewood Fire Rescue
Quadruple Bypass

Chris Thompson
Broward Sherriff's Fire Rescue
Rare Thyroid Cancer



Leonard Furst
Cedar Hammock Fire Rescue
Thyroid Cancer



Stephen Hagmann
Marco Island Fire Rescue
Kidney Cancer

Andy Harold
Jacksonville Fire Rescue
Thyroid Cancer

Jason Happe
Palm Harbor Fire Rescue
Aortic Root Aneurysm

Tony Upchurch
Albemarle Fire Department
Thyroid Cancer

Troy O'nan
Hillsborough County Fire Rescue
Aortic Root Aneurysm

Gerry Pingitore
Ottawa Fire Department
Ascending Aortic Aneurysm

SAFETY, HEALTH AND SURVIVAL SECTION
INTERNATIONAL FIRE CHIEFS ASSOCIATION
EVERYONE GOES HOME

Life Scan would like to extend a special thank you to those heroes who risk their lives to protect ours

LIFE SCAN
Wellness Centers

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813.876.0625

www.LifeScanWellness.com

What is Life Scan Wellness Centers?

LIFE SCAN
Wellness Centers

The Life Scan Wellness Centers program focuses on early detection and prevention for public safety officers. All services provided by Life Scan are carefully selected to maintain uniformed personnel's overall health status including physical and mental capabilities. The selection of services is based on the National Fire Protection Agency (NFPA) and the Fire Service Joint Labor Management Wellness-Fitness Initiative (WFI); these are the governing organizations that establish the health and wellness guidelines to which public safety officers comply. The Life Scan program described in this book is up to date with the current NFPA 1582 and 1583 editions as well as the WFI 3rd edition. To assure an effective wellness program, all Life Scan specialists thoroughly understand the essential job tasks of uniformed personnel and the program is tailored to meet the specific needs of this population.

Life Scan's vision of a strategic plan of health and wellness for your employees is exciting and should become a benchmark for the future of healthcare for employers as we embark on a new healthcare system for our country. Life Scan's background in the area of professional medical services and prevention-based health, wellness, and fitness programs spans over fifteen successful years in development and implementation of programs for state municipalities and counties to fit their specific needs. Life Scan's unique formula generates a healthier and more productive work force resulting in reduced absenteeism, better interventional care, and substantial healthcare cost savings to the employer with the potential to save the lives of America's heroes.

NFPA®

WFI

For more information, visit the NFPA website at www.nfpa.org

WE PROTECT THOSE WHO PROTECT US.

Exclusively designed to meet the unique needs of public safety officers, Life Scan offers an annual occupational health, wellness, and fitness evaluation that focuses on early detection and prevention. We will assist your department in complying with OSHA and state guidelines as well as NFPA medical standards; meeting your health and wellness initiatives and going beyond.

LIFE SAVING SERVICES

Our integrated approach and an expanded wellness program allow us to successfully identify virtually every disease to ensure short term and long term well being.

Prevention of Fatalities

With a focus on early detection and treatment, Life Scan offers a thorough health examination as well as recommendations for achieving and maintaining a long term healthy lifestyle and managing medical risks to prevent fatalities. Data collected by Life Scan shows a decline in irregular findings after abnormalities were identified and addressed. This data indicates a reduction in concerns as a result of the wellness program. Thorough examinations and attention to detail have allowed us to identify many illnesses that show no signs or symptoms such as:

- Heart Disease
- Stroke
- Cancer
- Diabetes
- Aneurysms
- and more

NFPA and OSHA Compliant

Our detailed medical evaluations ensure that candidates and members are capable of performing job tasks with minimal risk of sudden incapacitation. We are familiar with NFPA standards and OSHA state requirements and can meet these standards while identifying specific markers that are the foundation of virtually every disease that typically affecting public safety officers.

"The people at LIFE SCAN are highly recommended. My cancer was detected so early

"**Thank You** to the members and staff of LIFE SCAN. Not only did you save

LIFE SCAN WELLNESS PROGRAM

For Fire Rescue and Police Departments

Comprehensive Medical Exam

- NFPA 1582 Compliant Physical Exam
- Consultation with review of results and a personalized health plan
- Vital Signs
- Occupational Vision and Hearing Tests
- Hemoccult Test
- Skin Cancer screening

Ultrasound Imaging

- Echocardiogram (Heart with function)
- Carotid Arteries
- Aorta and Aortic Valve
- Liver, Pancreas, Gall Bladder, Kidneys, Bladder, and Spleen (Abdominal Organs)
- Thyroid
- Ovaries and Uterus (Women)
- Testicular and Prostate (Men)

Cardio Pulmonary

- Cardiac Treadmill Stress Test with EKG
- Electrocardiogram
- Pulmonary Function Test (Spirometry)

Laboratory Analysis

- Comprehensive Metabolic Panel (24 panel including kidney, liver & met functions)
- Complete Blood Count
- Total Lipid Panel (cholesterol panel)
- Thyroid Panel
- Hemoglobin A1C & Glucose
- Urinalysis
- Men: PSA Prostate Cancer Marker
- Women: CA-125 Ovarian Cancer Marker

WFI - Firefighter Fitness Analysis

- Metabolic Analysis with Body Fat
- Strength, Endurance, and Flexibility tests
- Diet and Nutritional Recommendations
- Personal Exercise Prescription

Medical Clearances

- Annual Medical Clearance
- Post Offer Medical Clearance
- OSHA Respirator Clearance and Mask Fit Testing

Behavioral Health Evaluation

- Behavioral Health/Trauma Screening

Improved Fitness

Our unique 8-level fitness analysis makes certain that firefighters are in top physical condition to ensure better on the job performance and overall well being. An integrated fitness initiative includes diet and nutritional analysis, a state-of-the-art fitness evaluation, and a personalized wellness plan to create an ongoing customized fitness plan for each individual officer and firefighter.

Cost Containments

Life Scan offers on site, same day examinations that reduce absences and allows firefighters to remain on duty while receiving their evaluations. Our successful early detection rates reduce health care costs and workers compensation costs because many health issues are identified before they reach catastrophic levels. Plus, the Life Scan program has a lower overall cost than many facilities offering routine occupational physicals.

"hat my blood work was still normal and I felt really good with no signs or symptoms at all."

"my life but you save the lives of firefighters and police officers every day!"

Steve Hagman, Driver/Engineer
Marco Island Fire Rescue

Ultrasound Studies

The ultrasound technician conducts a thorough evaluation of each patient's internal organs and provides the patient with copies of still images (sonograms) that may be passed on to the patient's primary physician for further evaluation and/or diagnostic purposes. Ultrasound scanning is a noninvasive, safe and painless method that uses sound waves to create real time images of the inside of the body. Performing ultrasound scans and searching for abnormalities in the major internal organs assures that the public service officers can adequately perform essential job tasks with as little risk as possible. It also aids to track the yearly effects of the environmental exposure the job entails such as exposure to toxic fumes, irritants, particulates, biological and nonbiological hazards, and/or heated gases. The following provides a comprehensive list and description of each scan conducted by the ultrasound technician at Life Scan Wellness Centers:

Echocardiogram Heart Scan

An echocardiogram is a test that uses sound waves to create a moving picture of the heart. The echoes of the sound waves are picked up by transducers and transmitted as electrical impulses, thus converting these impulses into moving pictures of the heart. This noninvasive scan allows the technician to see the heart beating as well as the heart valves and chambers of the heart. The echocardiogram allows physicians to diagnose, evaluate and monitor: abnormal heart valves, atrial fibrillation (a fast and irregular heart rhythm), congenital heart disease, damage to the heart muscle, heart murmurs, pericarditis (infection in the sac around the heart), infectious endocarditis (infection on or around the heart valves), pulmonary hypertension (abnormally high blood pressure in the arteries of the lungs), the pumping function of the heart (especially for those with heart failure), and the source(s) of blood clots. Ultimately, an echocardiogram heart scan can detect abnormalities ranging from those that are very minor and do not pose serious risks to those that indicate signs of severe heart disease requiring further evaluation by a cardiologist.

Carotid Artery Scan

The carotid artery duplex scan assesses the blood flow of the arteries that supply blood from the heart through the neck to the brain. This noninvasive procedure uses two modes of ultrasound (Doppler and B-mode) to obtain both an image of the carotid arteries as well as an evaluation of the velocity and direction of blood flow in the vessel. This particular scan is used to assess blockage or narrowing of the carotid arteries of the neck and/or branches of the carotid artery caused by plaque, blood clots or other substances in the blood stream. Blockages detected by this scan may serve as an early warning sign of a possible stroke. This scan may also aid in evaluating previously performed procedures to restore blood flow to the area (i.e., angioplasty or bypass surgery), locating a hematoma (a collection of clotted blood that may slow and eventually stop blood flow) and detecting dissection of the carotid artery that may lead to obstruction of blood flow or weakening of the wall of the artery.

Aortic Aneurysm Scan

An abdominal aortic aneurysm (AAA) is the 13th leading cause of death in the United States. The lethality of a ruptured AAA is devastating; the mortality rate after rupture approaches 90%. Therefore, it is essential to perform this preventative exam or to recognize AAA promptly. Abdominal palpation correctly diagnoses AAA only 68% of the time; whereas ultrasound is an ideal method for detecting AAA's due to its near 100% accuracy.

An AAA occurs when a bulging, weakened area develops in the side of the aorta. The aorta is the body's major artery and is crucial in delivering oxygen and nutrients to all parts of the body. Abdominal aortic aneurysms, if left untreated, can grow and may rupture or tear, which may cause life-threatening internal bleeding. The aortic aneurysm scan analyzes the circumference of the aorta; an AAA is diagnosed when the diameter exceeds 3.0 cm.

Liver, Pancreas, Gall Bladder, Kidneys and Spleen (Abdominal Organ Scan)

An ultrasound of the upper abdomen consists of examining the liver, pancreas, gall bladder, kidneys and spleen; this examination requires that the patient fasts for approximately six hours before the scan. An abdominal organ scan can detect various abnormalities including but not limited to hernias, tumors and cancer, ascites (excess fluid in the space between the tissues lining the abdomen and abdominal organs), abdominal organ swelling and stones in the gall bladder or kidney. It can also aid in determining the cause of various symptoms including abdominal pain and swelling, kidney infections, fevers as well as the cause of abnormal blood tests such as liver function tests or kidney tests.

Ovaries/Uterus Scan (Female Only)

For women, a pelvic ultrasound uses sound waves to make a picture of the organs and structures in the lower belly, specifically the ovaries and uterus. This specific exam looks at the size and shape of the uterus and ovaries as well as the thickness of the uterine lining. The procedure may ultimately detect lumps, cysts, uterine fibroids or pelvic inflammatory disease and can determine the cause of vaginal bleeding and/or pelvic pain.

A normal pelvic ultrasound for women is defined by the ovaries, cervix and uterus being normal in shape, size and location as well as being absent of growths, tumors, fluid or other problems. Small cysts in the ovaries may be normal in certain women. An abnormal pelvic ultrasound is present in women who present with the following conditions: a large or abnormally shaped uterus, the presence of cysts or tumors, a thicker than normal endometrial stripe (lining of the uterus) which may indicate an increased risk for endometrial cancer, an abnormal amount of fluid in the pelvis, or the presence of pelvis inflammatory disease or abscesses.

Testicular/Prostate Scan (Male Only)

For men, a pelvic ultrasound uses sound waves to look at the seminal vesicles and the prostate gland, check for prostate cancer, and determine if urinary problems are caused by an enlarged prostate. A normal pelvic ultrasound in men is one which the prostate gland and seminal vesicles are normal in size and shape and no growths, tumors or other problems are present. One of the most common abnormal findings in this exam is an enlarged prostate gland (also known as benign prostatic hypertrophy). Other findings that result in an abnormal testicular/prostate scan include an abscess, tumor or abnormal amount of fluid in the pelvis. According to a study by the University of Cincinnati, firefighters face a 102% increased risk of developing testicular cancer and 28% increased risk of prostate cancer, emphasizing the importance of this screening.

Bladder Scan

The bladder scan portion of the abdominal ultrasound scan is conducted on both men and women to determine whether the bladder empties completely during urination by viewing the bladder both before and after urination and to find the cause of urinary problems or urine in the blood. For the test it is required that the bladder is full to obtain the best results; therefore, patients are advised to drink 4-6 glasses of water within the hour of the scan.

A normal bladder scan will show a bladder that is an appropriate size and shape with no stones or abnormal growths. The scan should confirm that the bladder empties completely before and after urination and that urine flows normally from the ureters into the bladder. If the bladder has an abnormal shape or thick wall, a growth or stone is seen within, or the bladder does not completely empty after urination then further evaluation may be suggested.

Thyroid Scan

A thyroid ultrasound is an imaging method used to see the thyroid, a gland in the neck that regulates metabolism. This scan checks the thyroid for normal size, shape and position; the ultrasound can determine the difference between a sac containing fluid (cyst) and abnormal tissue that may or may not be cancerous (tumor). Abnormalities of the thyroid may be due to cysts, goiter (enlargement of the thyroid gland) or thyroid nodules (raised bumps that are wider than 0.5 cm). This scan can ultimately lead to the detection of one of several types of cancers that may be present in or around the thyroid gland.

Urinalysis

The ultrasound technician performs a comprehensive urinalysis exam which serves various purposes. It is required as a drug test as part of the pre-employment process and for employees the urinalysis is utilized for screening purposes. The technician searches for urinary tract infections as well as proteins, ketones, and glucose in the urine. Employees may be required to submit to drug testing as well; this is verified in departments' individual contracts.

Cardio-Pulmonary/ Fitness Evaluations

Life Scan's unique 8-level fitness analysis conducted by a Clinical Exercise Physiologist makes certain that public safety officers are in top physical condition to ensure better on-the-job performance and overall wellbeing. An integrated fitness initiative includes diet and nutritional analysis, a state-of-the-art fitness evaluation, and a personalized wellness plan to create an ongoing customized fitness program for each officer and firefighter. Life Scan's cardio-pulmonary and fitness evaluation protocols are specifically chosen to meet the 2013 NFPA 1582 and 1583 standards as well as OSHA standards. The following provides a comprehensive list and description of the fitness assessments conducted at Life Scan Wellness Centers, including references to specific NFPA standards as well as the 13 essential job tasks as described by the NFPA which necessitate the conduction of these assessments:

Electrocardiogram (EKG)

The resting electrocardiogram (EKG) is a noninvasive procedure that records the electrical activity of the heart over a period of time. The EKG is used to measure the rate and regularity of heart beats, as well as the size and position of the chambers, the presence of any damage to the heart, and the effects of drugs or devices used to regulate the heart. An EKG is a way to measure and diagnose abnormal rhythms of the heart, particularly abnormal rhythms caused by damage to the conductive tissue that carries electrical signals, or abnormal rhythms caused by electrolyte imbalances or oxygen deficiencies.

The Clinical Exercise Physiologist at Life Scan Wellness Centers performs baseline (resting) assessments including a resting EKG and blood pressure to search for signs of heart disease and hypertension (high blood pressure) prior to beginning a stress test.

St. Petersburg Fire & Rescue

Cardiac Treadmill Stress Test with EKG

Once a resting EKG is conducted and baseline values are established, the Clinical Exercise Physiologist may begin the stress test with the patient if resting values are conducive to testing. The term exercise stress test refers to stressing the body by putting an exercise load on it and measuring the response; this type of testing is considered the "Gold Standard" academically and medically for heart disease screening. The stress test conducted at Life Scan is a sub-maximal stress test, which means the patient works until a pre-determined heart rate is achieved; this pre-determined heart rate is 85% of the predicted maximum heart rate. The protocol used for the treadmill stress test is the Bruce Protocol, which is the most widely used for a treadmill test; this is a multistage protocol consisting of several stages of progressively greater workloads (the treadmill's incline becomes steeper and its speed becomes faster with the advancement of each stage) until the target heart rate is attained. Overall, the EKG stress test allows the exercise specialist to determine maximal exercise capacity (VO_2max) while also detecting early signs of coronary artery disease.

Overall, stress testing is an important tool in assessing public service officers because it aids in:

- Determining whether an individual is physically fit to perform essential job duties without undue risk of harm to self or others
- Monitoring the effects of exposure to specific biological, physical, or chemical agents that may be related to hazardous working conditions
- Detecting any patterns of disease in the workforce that might indicate underlying work-related problems
- Providing the safety officer with information about his/her current health
- Providing a cost-effective investment in the early detection, disease prevention, and health promotion of the fire fighter
- Developing recommendations for exercise prescription and rehabilitation
- Complying with federal, state, provincial, and local requirements

An exercise stress test is just one diagnostic test that may be used in the determination of an individual's fitness for duty. The determination of fitness for duty must not be made on the basis of a single test, but rather on a comprehensive evaluation of the individual that includes diagnostic testing, personal medical history, and other indicators of health status. For example, another assessment built into the Life Scan format to compliment the stress test is the echocardiogram which is part of Life Scan's ultrasound studies; the Exercise Physiologist will often refer to results from the Ultrasound Technician or vice versa to reinforce certain findings. The NFPA suggests the importance of the stress test to ensure that the public service officer is capable of withstanding unpredictable emergency requirements for prolonged periods of extreme physical exertion without benefit of warm-up, scheduled rest periods, meals, access to medication(s), or hydration (NFPA 6.9.1).

Pulmonary Function Test (Spirometry)

The pulmonary function test (PFT) is a method of assessing the function of the lungs; PFT's are a way of detecting and quantifying abnormal lung function in a noninvasive manner and are one of the most common diagnostic tests for measuring lung function. Spirometry measures how quickly air can be expelled from the lung and is performed by having an individual blow into a device called a spirometer. This machine measures the volume of air that is exhaled as a function of time. Spirometry does not measure the amount of air in the lungs, just the amount of air entering or leaving the lungs; therefore, it is most useful for measuring diseases that cause obstruction to air flow (i.e., asthma, COPD, chronic bronchitis, emphysema).

Although many measurements can be made from a PFT, the Life Scan Exercise Physiologist focuses special attention on the Forced Vital Capacity (FVC), Forced Expiratory Volume in 1 second (FEV_1), and the ratio of FEV_1 to FVC (FEV_1/FVC). Stated simply, FVC is the volume of air (liters) that can forcibly be blown out after full inspiration and FEV_1 is the volume of air that can forcibly be blown out in one second. The ratio FEV_1/FVC can suggest the presence of the following pulmonary diseases: obstructive lung disease if the FEV_1/FVC ratio is less than 75% of predicted; mixed pattern disease if the FEV_1/FVC ratio is between 75-85% of predicted AND both FEV_1 and FVC are reduced; or restrictive lung disease if the FEV_1/FVC ratio is greater than 85% of predicted and both FEV1 and FVC are reduced.

As indicated by the NFPA, public service officers may be exposed to toxic fumes, irritants, particulates, biological (infectious) hazards, nonbiological hazards and/or heated gases despite the use of personal protective ensembles and SCBA (NFPA 6.8; 7.7.4); the unique nature of these individuals' work environment necessitates spirometry. It is recommended because it may reflect early changes in the lungs, prior to the onset of symptoms; this allows for earlier intervention and treatment of a potential medical problem. The Wellness/ Fitness Initiative does not recommend the use of spirometry to automatically exclude a fire fighter or public safety officer from work but rather, to monitor changes over time and to treat abnormalities before they become clinically significant. Additionally, an FVC or FEV_1 less than 70% of predicted prevents the safe use of SCBA due to increased minute ventilation requirements leading to earlier than expected depletion of air in the SCBA cylinder.

Metabolic Analysis with Body Fat

The Clinical Exercise Physiologist performs a body fat assessment using skinfold measurements; this method of assessing body fat involves the use of calipers to pinch the skin in distinct areas to determine the thickness of the skin. Skinfold measurements are one of the most practical and accurate ways of determining body fat percentage. The accuracy of predicting percent fat from skinfolds is approximately ±3.5%; whereas most other methods of determining body fat percentage, including the popularly referenced Body Mass Index (BMI), have greater than ±5.0% error. Skinfold measurements produce more accurate results because they distinguish fat from muscle mass and bone; unlike methods such as BMI, which merely attempt to predict body composition solely upon one's height and weight. Life Scan uses a 3-site method for assessing body fat using skinfold calipers; for men, the three sites are the chest/pectoral, abdominal and thigh; for women, the three sites include the triceps, suprailiac (above the hip bone), and thigh. These sites are specific to the 2013 NFPA 1582 Annex C.2.1.2.

By assessing the patient's height, weight, age, body fat percentage, resting heart rate, aerobic capacity as well as other biometric variables, the Clinical Exercise Physiologist may then conduct a metabolic analysis to estimate daily caloric expenditure and needs of the patient. Understanding body fat percentage and the health risks associated with being overweight and obese is imperative for a public service officer due to the physical demands of the position. The Life Scan Exercise Physiologist assists patients in understanding their current body fat classification and how to maintain or develop lower risk stratification.

Strength, Endurance and Flexibility Assessments

Physical fitness is important for all public safety officers based on the high demands of their job duties. This is exemplified by the fact that while wearing personal protective ensembles and SCBA, safety officers must search, find, and rescue-drag or carry victims ranging from newborns to adults weighing over 200 pounds to safety despite hazardous conditions and low visibility (NFPA 8.2.2.2). Public safety officers must also be able to climb six or more flights of stairs while wearing protective ensemble, including SCBA, weighing at least 50 pounds, or a duty belt, and carrying equipment/tools weighing an additional 20 to 40 pounds (NFPA 8.2.2.4). The following describes the fitness assessments conducted by the Clinical Exercise Physiologist which encompasses all aspects of muscular strength, endurance and flexibility:

Muscular Strength

Muscular strength is assessed by a Jamar Hydraulic Hand Dynamometer (used for grip strength) as specified in the 2013 NFPA 1582 Annex C.2.1.5. Bilateral grip strength measurements serve to detect muscle imbalances and nerve impingements in the arms, shoulders and neck. According to the WFI, adequate grip strength is crucial in numerous emergency tasks such as lifting and carrying equipment, moving patients, holding and operating hose lines, raising extension ladders and removing victims.

Muscular Endurance

To assess muscular endurance, Life Scan utilizes the push-up or bench press test as well as the static plank evaluation. The YMCA bench press test is an assessment which uses a constant weight for all individuals based on gender to assess upper body endurance; males bench 80 pounds and females bench 35 pounds. The Exercise Physiologist sets a metronome to 60 beats per minute (bpm) then instructs the patient to lie supine on the bench in the five-point contact position. The patient then performs as many complete bench presses as possible, extending the arm fully and bringing the bar down to the chest. In the event a bench press is unavailable for use at a department or station, the Exercise Physiologist will conduct a push-up test in its place. The push-up test spans over 2 minutes and the patient is instructed to stay on cue with a metronome set to 80 bpm. An object is placed 5 inches in height under the patient's chin and a push-up is counted only if the chin touches the object. Additionally, the Exercise Physiologist will have the patient perform the static plank evaluation which is an indicator of core endurance. This is a timed test that involves the patient lying prone while supporting the body on forearms and toes and maintaining a neutral position by keeping the back flat. Any deviations from appropriate posture warrant two verbal warnings and a third infraction is cause for termination of the test. The test is also terminated if the knees touch the ground, or if the patient achieves the NFPA optimal time of 4 minutes. These assessments are specific to the 2013 NFPA 1582 Annex C.2.1.9 and C.2.1.11.

Flexibility

Life Scan implements the YMCA sit-and-reach protocol which uses a sit-and-reach box or a tape measure to assess lower body flexibility; this test is NFPA's 2013 specified protocol and is indicative of flexibility in the low back, hamstrings, and shoulders (Annex C.2.1.12). According to the WFI, the leading type of line of duty injury within the fire service is sprains and strains. Furthermore, the most prevalent line of duty injury that leads to premature departure is back injuries. Back health and flexibility are critical to the health and safety of uniformed personnel, which makes assessing this component of fitness imperative.

Diet and Nutritional Recommendations/ Personal Exercise Prescription

Based upon the results of the previous assessments the Clinical Exercise Physiologist at Life Scan consults with the patient regarding a personalized exercise prescription and the establishment of realistic goals for enhanced health and wellness. The Exercise Physiologist provides tips and strategies for achieving these goals including, but not limited to, educational handouts, tips on useful phone applications and web pages, as well as personalized diet and nutritional recommendations.

Physical Examination

The Life Scan Mid-Level Practitioner is responsible for providing an annual comprehensive medical assessment for uniformed personnel. The medical examination provides invaluable health status assessments of both the individual and department wide. The medical evaluation is intended to identify whether an individual is physically and mentally able to perform essential job duties without undue risk of harm to self or others, monitor acute and long-term effects of the working environment of uniformed personnel, detect patterns of disease in the workforce that might indicate underlying work-related health concerns, provide quantifiable medical information on the entire workplace, and inform uniformed personnel of their occupational hazards and health status. This medical evaluation complies with federal, state, provincial and local health and safety requirements. The Mid-Level Practitioner has a thorough understanding of the public service officer positions including essential job tasks, physical demands, psychosocial stressors, various environmental exposures and the effects of medical conditions on essential job tasks. The following outlines the medical evaluation provided by the Mid-Level Practitioner:

Health History Questionnaire

A medical history questionnaire is completed by each patient prior to the physical examination. This questionnaire is essential for establishing a medical baseline and annual questionnaires provide follow-up information to aid in identifying changes in health status.

Vital Signs

The Mid-Level Practitioner, in addition to the other specialists at Life Scan Wellness Centers, checks each patient's most basic body functions including:

- **Body Temperature**- measured orally
- **Pulse Rate-** measured and recorded by the Clinical Exercise Specialist through the use of an electrocardiogram (EKG) and measured manually by the Mid-Level Practitioner
- **Blood Pressure-** measured and recorded by the Clinical Exercise Specialist both at rest and during the (EKG) stress test.
- **Respiratory Rate-** manually assessed

Head, Eyes, Ears, Nose and Throat (HEENT) Exam

The hands-on physical examination includes the assessment of the head, eyes, ears, nose and throat (HEENT) with the inclusion of occupational hearing and vision examinations. The HEENT includes a thorough evaluation of:

- **Head**- searching for shape abnormalities or evidence of previous trauma that may interfere with the use of SCBA or other Personal Protective Equipment (PPE).
- **Eyes**- searching for inadequate eye function or diseases that can potentially impair essential job tasks such as driving capabilities as well as the ability to accurately read placards and street signs. The eye exam consists of tests for visual acuity, pupil function, and extra ocular muscle motility as well as external examination of the eyes.
- **Ears**- the physical assessment of the ears includes an evaluation of the auditory canal and tympanic membrane. Public safety officers should have adequate hearing in order to hear and understand the spoken voice under conditions of high background noise, or hear, recognize and directionally locate cries or audible alarms.
- **Nose**- inspected for deformities or diseases which could potentially affect the ability to properly secure facial personal protective equipment (PPE) or to detect harmful toxins and chemical fumes
- **Mouth/Throat**- evaluation of the oropharyngeal cavity, gums, teeth/dental structures, palate, tongue, tonsils and posterior pharyngeal wall is conducted to detect pre-cancerous changes due to environmental exposure
- **Neck**- evaluation of major vessels, lymph nodes, salivary and thyroid glands, physiologic functioning (e.g., swallowing, saliva production), and an assessment for abnormal masses, gland enlargement, or suspicious skin lesions. Range of motion of the cervical spine is also assessed and noted. Any neck or throat abnormalities can impair the safety and performance of one or more of the essential job tasks.

Occupational Vision and Hearing

The assessment of vision includes evaluation of distance, near, peripheral, and color vision; more in depth, the visual evaluation comprises: visual acuity screening for both far vision acuity and near vision acuity with the eyes tested separately, vision testing to determine both uncorrected and corrected visual acuity, color vision testing using color plates, and a peripheral vision evaluation. This screening is used to detect presbyopia, or near visual loss, which is common in adults and escalates in prevalence with increasing age. Other common visual disorders that may be identified are cataracts, macular degeneration, glaucoma, and diabetic retinopathy.

A hearing examination, which is done in accordance with 29 CFR 1910.95, “Occupational Noise Exposure,” is conducted at the following frequencies: 500 Hz, 1000 Hz, 2000 Hz, 3000 Hz, 4000 Hz, 6000 Hz and 8000 Hz. The testing is done in an ANSI-approved soundproof booth with pure tones presented at various intensities until a threshold is established. This test is important for uniformed personnel because by nature of their occupation, they are at an increased risk for noise-induced hearing impairment at an earlier age.

Cardiovascular and Pulmonary Function

The Mid-Level Practitioner manually evaluates cardiovascular and pulmonary function in addition to the electrocardiogram (EKG) and echocardiogram provided by the other Life Scan specialists. This portion of the examination includes auscultation of the heart (identifying heart sounds, extra sounds, clicks and murmurs) and major arteries. Inquiring about changes in a patient's aerobic capacity as well as identifying and explaining modifiable and non-modifiable cardiac risk factors is part of this portion of the examination as it could indicate pulmonary or cardiac disease. The respiratory exam includes an inspection for respiratory rate and effort, presence of coughing, sneezing or other signs indicative of respiratory diseases, and auscultation for breath sounds and any abnormal sounds. Spirometry is an effective screening and surveillance exam for pulmonary disease and is included as part of Life Scan's examining process; however, this screening is conducted by the Exercise Physiologist who further discusses the results (See page 9). Additionally, OSHA Respiratory Clearance is provided to any departments that require it.

Gastrointestinal Examination

The gastrointestinal exam includes inspection, palpation, percussion and auscultation. Generally, the right upper quadrant is palpated for evidence of liver, colon or gall bladder disease; the left upper quadrant is palpated for spleen or colon pathology; palpating the right and left lower quadrants is helpful for evaluation of colon disease. This exam aids in the detection of masses such as tumors, hernias or lymph node enlargement.

Genitourinary Examination

The genitourinary examination for men includes testicular, penis and inguinal hernia evaluations. This part of the examination allows the Mid-Level Practitioner the opportunity to discuss testicular and prostate cancer screenings as well as techniques for self-examination of the testicles. This exam may be deferred if the patient prefers to obtain these exams from his own primary care physician. The genitourinary examination for women includes a clinical breast exam and an evaluation of the gynecologic Pap smear and mammography. This part of the examination allows the Mid-Level Practitioner to discuss breast and cervical cancer screenings and techniques for self-examinations of the breasts. This exam may be deferred if the patient prefers to obtain these exams from her own primary care physician.

The rectal screening scans for rectal masses and mucosal abnormalities such as hemorrhoids, anal fissures, and cancerous lesions; it also detects prostate abnormalities in men. These assessments are critical to safely performing a majority of the essential job tasks such as crawling, lifting and carrying heavy objects, wearing protective gear, and operating from heights or uneven surfaces.

Hemoccult Test

This test is used to detect the presence of fecal occult blood (FOB), which is blood in the feces that cannot be seen through the collection of a small sample of the patient's stool. This test is most often used to help detect colorectal cancer; however, other positive results may include: gastroesophageal cancer, GI bleeds, diverticulae, hemorrhoids, anal fissures, colon polyps, ulcerative colitis, Crohn's disease, celiac disease, GERD, esophagitis, peptic ulcers, gastritis, inflammatory bowel disease, vascular ectasias, portal hypertensive gastropathy, aortoenteric fistulas, hemobilia, endometriosis, and trauma. This simple test is necessary for public service officers because research has shown that firefighters have a 21% increased risk of developing colorectal cancer.

Lymph Node Inspection

The Mid-Level Practitioner palpates and inspects various areas of the body to detect abnormalities. An examination of the lymph nodes for enlargement, tenderness, and mobility in the cervical (neck), supraclavicular (above the clavicle), inguinal (groin) and the axillary (upper limb and breasts) regions is conducted.

Musculoskeletal Evaluation

In the musculoskeletal exam, the Mid-Level Practitioner inspects and palpates for structural asymmetries, active range of motion of all major joints, the sensation of pain with any of the above and a complete joint specific examination. Limitations or abnormalities are noteworthy in order to provide timely provision of physical therapy and to record those injuries that may be relevant to future worker's compensation, pension or disability claims.

Skin Cancer Screening

The examiner inspects the skin for color, vascularity, lesions, and edema. Examination of the skin for moles or other suspicious lesions is critical because these sites could be cancerous; in fact, firefighters face approximately a 39% increased risk for skin cancer. The examiner closely inspects areas of the skin that are often overlooked, such as between the fingers and toes, because these sites are where dangerous carcinogens like melanoma can be found. Inspection of the skin may also aid in determining if an individual is at increased risk for burn damage and infection.

Neurological Evaluation

The neurological examination for uniformed personnel includes a general assessment of mental status, cranial nerve function, cerebellar function/coordination, motor system, sensory system, balance and gait, and the reflexes. Significant neurological abnormalities can greatly affect a public service officer's ability to perform the essential job duties. This population's exposure to heat, stress, activity and variable shift work have the capacity of taking a toll on the neurological system.

Behavioral Health Evaluation

First responders are exposed to scenes and situations that are beyond the comprehension and coping capabilities of the average person; they see, hear, and smell what no human being should ever have to experience. Life Scan incorporated a behavioral health/trauma screening into our physical exam.

Consultation with Review of Results and a Personalized Health Plan

Upon completion of the physical examination the Mid-Level Practitioner reviews the results obtained by all the Life Scan specialists, the patient's lab work (completed prior to the patient's visit to Life Scan), and the results of any other scans or tests (e.g., MRI's, chest/lumbar x-rays, mammograms and CTA of heart). In reviewing the results, the examiner takes the time to focus on patient education and the incorporation of a personalized health and wellness plan. This health and wellness plan includes an exercise prescription as well as diet and nutritional recommendations; these recommendations are based on the patient's laboratory analysis and the findings and recommendations from the Clinical Exercise Physiologist. The Mid-Level Practitioner also refers patients to appropriate interdisciplinary health practitioners for follow up care (e.g., cardiology, endocrinology, primary care physician, etc.) in the event of significant abnormal findings. The Mid-Level Practitioner works closely with the Ultrasound Technician and Clinical Exercise Specialist to provide detailed and beneficial recommendations that are tailored to each patient's specific needs based on the results of all examinations conducted by each specialist.

Additional Testing Also Available:

- **Brain MRI**
- **CT of Coronary Arteries, Calcification Scoring**
- **On-Site Employee Health Clinic**
    - Life Scan's vision is to expand upon our background in public safety physicals with the addition of on-site employee health clinics. On-site employee health care is a comprehensive, employer-sponsored healthcare program for employees, managed by a third-party healthcare organization; this model helps to manage healthcare costs while also creating a healthier, happier and more productive workforce.

      In contrast to on-site clinics of the past, where organizations only focused on prevention and treatment of occupational injuries, Life Scan's on-site health clinic model has evolved into a comprehensive package. Life Scan takes a proactive approach on prevention of chronic disease through targeted wellness programs as well as evaluation and treatment for both occupational and non-occupational illness and injury.

      By integrating the Life Scan Wellness Program prevention-based physicals with an Employee Health Clinic option, you will be assured a higher utilization, earlier intervention, and achieve your goals of reduced costs and healthier long-term employees, potentially with your dependents and retirees as well. Life Scan can be your dedicated partner in providing an effective, cost saving model in healthcare.
- **Laboratory Analysis: QuantiFERON (QFT) Gold (TB Blood Test)**
- **Chest and Lumbar X-Rays**
- **Hazmat Physicals/ Swat Team Physicals**
    - Tailored to meet the specific needs of the individual department
- **Post Offer Physicals**
- **Laboratory Analysis: Vitamin D, Hydroxy**
- **Laboratory Analysis: Cholinesterase and Heavy Metal Testing**
- **Laboratory Analysis: HIV**
- **Laboratory Analysis: Hepatitis A, B, or C test**
- **Laboratory Analysis: Tetanus/DP**
- **Urine Drug Screen, DOT 10 Panel or 10 Panel, I-Cup in office**
- **Drug Rescreen with confirmation**
- **PortaCount Quantitative Mask Fit**
- **Hep B Titers**
- **Hepatitis Vaccines**
    - A=2 shot series; B=3 shot series
- **Medical Review Officer (MRO)**
- **PPD Skin Test**

For additional information contact us at:
1011 N. MacDill Ave.
Tampa, FL 33607
Phone: (813) 876-625
Email: Patricia.Johnson@lifescanwellness.com

SUBJECT:
JACKSONVILLE SHERIFF'S OFFICE ~LIFE SCAN WELLNESS PROGRAM
FY 2001-2010
Report to the City of Jacksonville
Sheriff John Rutherford

Experts consider law enforcement to be one of the most stressful professions. So stressful, in fact, that the average person in law enforcement has almost three times the incidents of cardiovascular disease and an average life span of over 10 years less than the general population. Looking back over the last 20 years of the Jacksonville Sheriffs' Officers' Deaths in the Line of Duty, the Number One killer of our Police Officers has been Heart Attacks.

We established the JSO/Life Scan Wellness Center in 2001 and since the inception participation in this program has saved over 100 police officers' lives. In the State of Florida, the Heart & Lung Presumption places the burden of the cost for heart and lung disease for our police officers on the City of Jacksonville. As a result, the medical cost to our city for just one heart attack is over $250,000.00. We can add up the other costs of losing an officer such as recruiting and training a new officer, disability and pension benefits, overtime, and other related medical expenses. The financial costs are potentially over a staggering one million dollars per incidence. However, the real cost is paid by society when this trained police officer is no longer alive and cannot return to his family, friends, and community.

Since the opening of the JSO~Life ScanWellness Center in July 2001, we have identified:

- 26% of our officers have an existing cardiovascular condition that could lead to a heart attack or stroke.
- There has been a reduction of the percentage of heart related conditions from 38% to less than 10%.
- Overall body fat has decreased by 27.9%.
- The City of Jacksonville reports that the rate of Workers Compensation Claims have been steadily declining over the past 10 years with a reduction of over 63% in heart and hypertension related claims and a decrease of 15% in work related injuries as a direct result of a more fit force.
- The past two years we have had the best return-to-work record for City of Jacksonville Workers Compensation Claims and a significant reduction of absenteeism.
- Most important, through our program of early detection of Heart Disease, Cancer, Aortic Aneurysms, and other serious medical conditions we have saved over 100 officers' lives and prevented countless potentially catastrophic illnesses while still in early, treatable stages.

Remember, developing a well-run health, wellness, and fitness program for our department is a ***911 emergency***. Maintaining the health and fitness of our officers can be a matter of life and death. Sheriff Rutherford has met the challenge and many of their valued police officers that may have been lost to illness will return home tonight.

Gerald Shaw, RN
Human Resources, Risk Management
Jacksonville Sheriff's Office

SIGNIFICANT FINDINGS

Jacksonville Sheriff's Office

Ultrasound Studies	
Thyroid	**93**
Heart/Cardiac	**3**
Aorta	**10**
Abdominal Abnormalities	**39**
Pelvis	**11**
Testicles	**5**
Other	**9**
Cardio-Pulmonary/Fitness Evaluations	
High Blood Pressure (>140/90)	**92**
EKG/ Stress Test ST Elevation or Depression	**18**
EKG/ Stress Test Premature Ventricular Contractions (PVC)	**12**
EKG/ Stress Test Bundle Branch Blocks	**38**
EKG/ Stress Test Arrhythmias	**13**
Pulmonary Function Test (PFT)	**73**
Physical Examination and Laboratory Tests	
Positive PPD	**23**
Positive Guiac (potential colon cancer)	**3**
Hepatitis C (can lead to liver failure)	**4**
Prostate Specific Antigen (PSA) (potential prostate cancer)	**6**
Hemoglobin A1C (potential diabetes)	**14**
Total Number of Significant Findings	**466**

*** Table represents significant findings over a 12 month period that could have been potentially fatal**

**** Sample Size= 2200 Patients**

SIGNIFICANT FINDINGS

Hillsborough County Fire Rescue

Heart and Arterial Disease	
Cardiomyopathy	**4**
Coronary Artery Blockages	**3**
Carotid Artery Blockages (Severe)	**8**
Aorta	
Aorta (aneurysm) currently being monitored	**6**
Aorta (aneurysm) repaired	**3**
Aortic root (dilated >4 cm) currently being monitored	**9**
Aortic Valve Repairs	**4**
Aortic Valve Disease (currently being monitored)	**12**
Aortic Valve Repairs	**4**
Cancer and Organ Diseases	
Kidney Cancer	**4**
Kidney Disease (includes 2 Kidney Failures)	**9**
Liver Disease	**14**
Pancreatic Cancer	**1**
Ovarian Cancer	**2**
Breast Cancer (includes 1 male with Breast Cancer)	**3**
Prostate Cancer	**7**
Thyroid Cancer	**18**
Testicular Cancer	**5**
Pulmonary/Respiratory	
Pulmonary Function Test (<70%)	**5**
Total Number of Significant Findings	**121**

***8-year time frame with an average number of firefighter physicals per year: 400 annual**

SIGNIFICANT FINDINGS

Pinellas County Sheriff's Office

Heart and Arterial Disease	
Cardiomyopathy (enlarged heart)	**2**
Coronary Artery Blockages	**3**
Carotid Artery Blockages (severe)	**3**
Undiagnosed Hypertension	**23**
Undiagnosed Diabetes	**19**
High Cholesterol (>200 with abnormal HDL/LDL)	**48**
Aorta	
Aorta (abdominal aneurysm) *	**4**
Aorta (abdominal aneurysm) repaired	**2**
Aortic root (dilated >4 cm) *	**4**
Aortic Valve Repairs	**2**
Aortic Valve Disease *	**4**
Cancer and Organ Diseases	
Kidney Cancer	**1**
Kidney Disease (includes 1 Kidney Failure)	**2**
Liver Disease	**3**
Pancreatic	**1**
Ovarian Cancer	**2**
Breast Cancer	**1**
Prostate Cancer	**3**
Bladder Cancer	**1**
Colon Cancer	**1**
Thyroid Disease (Undiagnosed Hyper/Hypo Thyroidism)	**45**
Thyroid Cancer	**7**
Testicular Cancer	**2**
Melanoma Skin Cancer	**2**
Brain MRI's	
Benign tumors/legions *	**3**
Total Number of Significant Findings	**188**

*** These conditions are early stage in disease process and currently being monitored for changes and determination of intervention by medical specialists**

**** Significant findings span over 24-month period**

SIGNIFICANT FINDINGS

2017 AGGREGATE DATA
11,967 FIRE FIGHTERS

LIFE SCAN FIGHTING CANCER AND HEART DISEASE

According to a multi-year study released in 2015 by The National Institute for Occupational Safety and Health (NIOSH), firefighters have a 9 percent higher risk of being diagnosed with cancer and a 14 percent higher risk of dying from cancer than the general population. The report also delves into the even greater risks firefighters face for developing certain types of cancers. Another key takeaway from the study is that 61 percent of line of duty deaths for career firefighters between 2002 and 2016 were attributed to cancer. "The Firefighter Cancer Support Network FACT Check"

"Cardiovascular disease is on the increase as well. The Harvard Study (2017) found 45% of the nation's line-of-duty firefighter fatalities are due to cardiovascular disease (CVD).

The following Aggregate Data represents significant findings from a cross-section of Life Scan's thirty thousand firefighter patients from both career and volunteer fire departments located in twelve states during 2017. This critical data is supportive of the conclusions from prestigious studies on firefighter health and their increased risk for heart disease and cancer. These significant findings are potentially catastrophic diseases that were identified early through Life Scan's integrated approach that includes a comprehensive physical, laboratory blood work, ultrasound imaging, and cardiopulmonary testing.

2017 AGGREGATE DATA SIGNIFICANT FINDINGS

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
Hyperthrophy (Thickening/Enlargement of the Heart)	120
*Severe Heart valve Dysfunction 90	90
*Bicuspid Aortic Valve	16
*Pericardial Effusion	3
*Abdominal Aorta Aneurysm (>4)	8
*Decreased heart function (low EF)	8
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	**3363**

**In NFPA 1582 Guidelines*

Polk County Professional Firefighters - Local 3531
P.O. Box 998 Highland City, Florida 33846-998
Office: (863) 585-8301

Jeff Calcutt	*Danny Washington*	*Jay Schwartz*	*Heather Coburn*	*Jeremiah Gilley*
President	*Vice-President*	*Treasurer*	*Secretary*	*Grievance Chairman*

IAFF Local 3531 is submitting this letter to explain why our Polk County Fire Rescue firefighters need a more comprehensive annual physical examination. A firefighter is often the first person on the scene of some of the most disturbing and devastating events in people's lives. This may include the death of a child, homicide, suicide, rape, child abuse, family violence, drowning, fatal car accidents and acts of terrorism. They also wear heavy and restrictive clothing, carry awkward equipment and work in dangerous environments. Firefighters often enter buildings in smoky and hot conditions and may even hang from buildings and perform high angle rescues. They also handle situations involving hazardous materials that could include biological, chemical and nuclear agents.

These high levels of stress, physical demands and long-term exposure to chemicals and infectious disease can take their toll on the health of firefighters and especially to their cardiovascular system. This intense work in environments of high heat, low oxygen, high carbon monoxide and other combustible products often produces a maximum heart response. These and other risks are what account for nearly 50% of fire ground deaths being heart-related," *(New England Journal of Medicine,* March 07). Cardiovascular, respiratory and thermoregulatory strain on firefighters is profound, increasing the odds of heart attack from 12-126 times while fire fighting. Cancer is also another hazard of the job. An analysis of 32 studies published in the *Journal of Emergency Medicine* in 2006 showed that many cancers were significantly associated with firefighting. These included testicular (highest risk), multiple myeloma, malignant melanoma, non-Hodgkin's lymphoma, prostate, skin, brain, rectum, pharynx, stomach, colon and leukemia. The University of Cincinnati conducted a study in 2009 where researchers revealed that firefighters developed 10 types of Cancer more frequently than any other occupation. The most virulent was testicular cancer. Firefighters also face a 53% greater risk of contracting Multiple Myeloma, which is a deadly cancer that attacks bone marrow. When a firefighter sweats, it opens the pores on all areas of the skin, which includes the arm

pits, groin, neck, jaw angle, and scalp. Chemicals then utilize these areas to travel into the bloodstream, attacking the body's blood cells.

The most common types of cancer and increased risks to firefighters are: Testicular-102%, Multiple Myeloma-53%, Non-Hodgkin's Lymphoma-51%, Skin-39%, Brain-32%, Prostate-28%, Stomach-22%, and Colon-Rectal-21%.

Because of the physical nature of their work, firefighters are also at a significant risk for musculoskeletal injury with back injury being the highest reported, followed by the upper and lower extremities. In a given year, the IAFF Death and Injury Survey indicates that one out of every five firefighters will die or be injured in the line of duty, so prevention and proper rehab is essential. That is why the *International Associations of Fire Chiefs and International Association of Fire Fighters* recommend that a "Fire Service Occupational Physician" monitor their patient's long term effects of the working environment, including exposure to chemical and biological agents and disease patterns that might indicate work-related health concerns.

Therefore, it would be ideal for our Polk County Fire Rescue firefighters to have a comprehensive NFPA 1582 yearly medical exam performed by a company that specializes in and has vast knowledge of NFPA 1582 physicals that would include the following: head to toe physical exam per NFPA 1582, vital signs, skin cancer screening, visual acuity test, hearing exam, breast exam, personal consultation with review of testing results at physical appointment, recommendations for medical intervention & behavioral modification changes, cardiac assessment to include: Echocardiogram, resting EKG, cardiac treadmill stress test with V02 max calculation (Bruce Protocol), carotid arteries ultrasound, aortic aneurysm ultrasound, cancer and disease assessment to include, thyroid ultrasound, liver, pancreas, gall bladder, spleen, & kidney ultrasounds, bladder ultrasound, pelvic ultrasound for women (external), testicular ultrasound for men, laboratory blood tests to include: thyroid panel, occult blood screen, PSA for men (prostate cancer marker), CA-125 for women (ovarian cancer marker), lipid panel, diabetes tests (glucose and hemoglobin A1C), pulmonary function test, urinalysis with chem strip, complete blood count (hemogram with diff), comprehensive metabolic panel (CMP), OSHA respirator medical clearance, fitness program (NFPA 1582 Guidelines) to include: fitness and agility evaluation, body composition analysis, stretching/flexibility/endurance analysis, nutrition and diet recommendations, personal fitness recommendations, medical clearances

to include: OSHA respirator medical clearance, Hep B antibody screening, Hep B Antigen (titer), Hep C Screening, and TB Test (interferon).

The Union is presenting this request after having determined our current physical process was not covering some of the most important health risks of our occupation. Early detection is the key in reducing the mortality rate and providing our firefighters with a comprehensive look at the occupational hazards we face everyday working as firefighters. While studying the differences in the Wellness Center physical and a Lifescan physical, it was determined that a Lifescan physical can be performed in a more efficient manner and with an eventual cost savings to the county's general fund by reducing long term health care costs. Lifescan will come to any location we set and perform comprehensive NFPA 1582 physicals at a rate of nine firefighters a day or forty five a week. Lifescan will complete all firefighter physicals within a two month time period. All physicals will be completed while on duty, thus saving the two hours of overtime now paid to firefighters for the Wellness Center process.

Wellness Center physicals have had and will continue to have a negative effect on the county's general fund and do nothing to help early detection of life changing catastrophic illnesses that could affect our firefighters, their families and co-workers. As you can see, not only does this have a negative impact on our firefighters lives but it also has a negative impact on the long term cost of health care for the County. It has been shown that early detection of serious illnesses can have a smaller impact on claims and reduce the mortality rate.

In closing, we have attached information on firefighter deaths from 2007-2012. This information was taken directly from the *International Association of Firefighters* website database of firefighter deaths. We would like you to review the nature of death column. It is under this column that we believe that the validity of this request stands proven, we need to do everything in our power to provide the most comprehensive physicals possible for the health and well being of our firefighters as well as being good stewards of the tax payer's money in the long run.

Thank you for taking the time to read this letter and for your efforts in optimizing the health of our Polk County Fire Rescue firefighters.

Study: Firefighters face higher cancer rates

REGION — One of the most dangerous occupations in the world is becoming even more hazardous for its workers — but a new study suggests that the people we expect to protect us are not being adequately protected against the risks of their profession.

A study released by the University of Cincinnati has determined that firefighters are at a greater risk of developing four different types of cancer than the general population — and also suggests the protective equipment firefighters are using is insufficient in protecting them against cancer-causing agents.

In a report by the university's environmental health department, researchers found that firefighters are twice as likely to develop testicular cancer and have significantly higher rates of non-Hodgkin's lymphoma and prostate cancer than people in other professions — and overall found 10 cancers that were either possibly or related to firefighting. The report also confirmed previous findings that firefighters are at greater risk for multiple myeloma, which is a cancer of the bone marrow for which there is currently no known cure.

The research is the largest comprehensive study to date investigating cancer risk associated with working as a firefighter and concludes that firefighters need better protection on the job. The findings were published in the November issue of the Journal of Occupational and Environmental Medicine. Dr. Andrea Ruskin, a hematologist and oncologist at the Whittingham Cancer Center at Norwalk Hospital, said while "it's nothing that has caught our eye, it's no surprise.

"They are exposed to so much," she said. Ruskin said firefighters' exposure to certain carcinogens can have a devastating effect on their health.

"They can get DNA damage," she said. However, Ruskin said not every firefighter on the job will get cancer, much the same as that not every smoker will develop lung cancer.

"It's a combination of exposure and genetic predisposition," she said.
Research shows that environment, including diet and lifestyle, causes up to 90 percent of all cancer.

The team of researchers at Cincinnati analyzed information on 110,000 firefighters from around the nation — most of them full-time, white male workers — from 32 previously published scientific studies. Researchers believe there is a direct correlation between the chemical exposures firefighters experience on the job and their increased risk for cancer. Fire Chief Denis McCarthy said there have been "dramatic changes" in the equipment that firefighters at the Norwalk Fire Department use for protection. McCarthy said during the past 10 years, there have been significant upgrades in the breathing apparatus firefighters use, which went from "one-size-fits-all" to a custom fit. New regulations also have prevented recontamination by adopting standards to clean firefighters' "turn-out gear," which are the coats, pants and helmets firefighters wear; and all fire stations are equipped with diesel exhaust removal systems.

According to the study, firefighters are exposed to many compounds that the International Agency for Research on Cancer has designated carcinogens. These include benzene, diesel engine exhaust, chloroform, soot, styrene and formaldehyde.The substances can be inhaled or absorbed through the skin and occur both at the scene of a fire and in the firehouse — where idling diesel fire trucks produce exhaust.

"Stations are not only living quarters, but it's a garage, too," McCarthy said. "We have the latest standard for protection against airborne agents."

Researchers at Cincinnati studied the risk for 20 different cancers. The epidemiologists found that half the studied cancers — including testicular, prostate, skin, brain, rectum, stomach and colon cancer, non-Hodgkin's lymphoma, multiple myeloma and malignant melanoma — were associated at varying levels of increased risk with firefighting. Researchers found firefighters have a 100-percent higher risk of developing testicular cancer, a 50-percent higher risk for multiple myeloma and non-Hodgkin's lymphoma, and for prostate cancer it's a 28-percent increased risk, compared with non-firefighters.

"There's a critical and immediate need for additional protective equipment to help firefighters avoid inhalation and skin exposures to known and suspected occupational carcinogens," said Dr. James Lockey, a professor of environmental health and pulmonary medicine at Cincinnati, and the lead researcher of the study. "In addition, firefighters should meticulously wash their entire body to remove soot and other residues from fires to avoid skin exposure."

Lockey said that firefighters' exposure to carcinogenic toxins "occur not when they are in the fire, but when they are in the vicinity of the fire."According to information from the American Cancer Society, workplace exposure is often considerably higher than general environmental exposure. And while the society does not play a direct role in classifying or identifying carcinogens, it does provide information and guidance on environmental cancer risks.The effect of environmental exposure was brought home in a recent report that found that nearly 70 percent of rescue personnel and workers who responded to the Sept. 11, 2001, terrorist attacks on the World Trade Center suffered from lung problems during and after the recovery efforts. Mike Dubron, president and founder of the Los Angeles-based Firefighter Cancer Network, said his organization will establish regional directors throughout the nation this year. Dubron said he established the network because firefighters are largely "alpha males that don't reach out to others" about private health issues.

"All (cancers) are alarmingly increasing for firefighters," he said.

Amanda Harper, a spokeswoman with the public relations department at the University of Cincinnati, said the situation with firefighters is very real. "These people are public servants and need to be protected," she said.

Testimonials

See what others have to say about our services

"As a Chief Fire Officer and IAFC Safety, Health & Survival Section Secretary with over twenty-eight years in the fire service in one of the Nation's most populous Counties, I am acutely aware of the importance of appropriate annual medical screening that are specific to the unique occupational risks our firefighters face. The realities of occupation exposure place firefighters at risk for elevated rates of cardiovascular disease, cancer and behavior health issues. It is through early preventative screenings and detections afforded to every firefighter and public safety professional that we can reduce preventable line of duty deaths and disabilities." Within Broward County, Life Scan Physicals have provided early detection of cardiovascular disease and cancer, allowing for successful intervention and return to work- a real lifesaver!

Todd J. LeDuc, MS, CFO, FIFirE

Assistant Fire Chief/Executive Liaison Broward County, FL.

Secretary, IAFC Safety, Health & Survival Section

Editor, Surviving the Fire Service

Life Scan not only saved the QUANTITY of my life, but the QUALITY of the remaining days of the rest of my life." -Nelson Reyes, North Miami Police Dept.

"I continue to be impressed by [Life Scan's] professional and knowledgeable staff who utilize the latest technology in an effort to provide the very best comprehensive health assessment services to our employees." - Gordon A. Bass, Jr., Former Director Jacksonville Sheriff's Office

"LIFE SCAN SAVES LIVES"

FIRE AND RESCUE DEPARTMENT
HEALTH & SAFETY OFFICE

Captain Ken Middleton and Captain JJ Rogers

July 19, 2010

Ms. Patricia Johnson
Life Scan Wellness Centers
1011 North MacDill Avenue
Tampa, FL 33607

Dear Ms. Johnson and Chief Moreland,

We are very excited to share with you a case we are currently working to assist here in the Health and Safety Office. It involves one of our Engineers, a forty-five year old otherwise healthy man who recently went to Life Scan for a physical exam prior to his yearly respiratory fit test.

While at this exam the technician performing his abdominal ultrasound became concerned and began to ask questions about the family history of our firefighter. She had found an area of concern on his left kidney and in the course of her care passed her findings on to the clinician that would complete his physical. At the conclusion of this visit it was stressed to our firefighter the importance of an immediate follow-up with his PCP. Now, a short time later, he is scheduled to have that kidney removed secondary to cancer, next week. It is believed at this time to be in the very early stages and not affecting his lymphatic system.

Research clearly shows that a comprehensive Health, Wellness, and Fitness Program can identify areas of health concern, prevent catastrophic illness and continuously improve and maintain our employee's health and fitness. Due to the very nature of our occupation there is a substantially higher risk of illness and injury and, in fact, actuarial studies show that Public Safety personnel live on average 15 years less than other Public Employees. Thus the need for these programs and annual physical examinations as we constantly strive to provide healthy employees to our citizens and a long and healthy retirement to our firefighters.

What is clear here is that because of the Health, Wellness, and Fitness Programs currently in practice by the JFRD, and in this case the physical exam administered by Life Scan, a 45 year-old, married, father of two has the blessing of finding and treating a potentially fatal disease process early on. We will surely keep you posted on his progress.

Best Regards,

Ken Middleton, Captain
JJ Rogers, Captain
Rob Mericle, Captain
Health and Safety Office Jacksonville Fire / Rescue

For the cost of a dress uniform, Life Scan saved my life.

On November 9, 2016 I went in for my Life Scan. I was 33 years old, healthy with no medical conditions or symptoms. Life Scan found a large mass in my abdomen and after several weeks of tests I was diagnosed with rare Stage 2 Testicular Cancer. The Spring Fire Department thought I was valuable enough to provide me this test and Life Scan saved my life. The most valuable thing we have in life is time and because of them I have more time with my wife and 2 young children. I have more time to continue to do the job I love, and I don't have any restrictions doing it. Thank you to the Spring Fire Department and Life Scan.

Matthew Corso
Senior Captain-Logistics
Spring Fire Department
Spring, TX 77373

Patricia Johnson, CEO
Life Scan Wellness Centers
Tampa, Florida

Dear Patricia,

I wanted to express my thanks for the service Life Scan has provided me and share my story with you. The first year my department began using Life Scan I was pregnant and missed my evaluation. I was able to get my physical several months later-November 2007. I had a clean bill of health and thought that was the most comprehensive physical I had ever received. The following year, June 2008, our department had scheduled the annual physicals again. This time there were several small nodules on my thyroid. At the very same time a firefighter in my department was diagnosed with Papillary Cancer. He had a nodule that grew in size from one year to the next and upon biopsy revealed cancer. I made an appointment to have the nodules biopsied and the results came back abnormal. Surgery was quickly scheduled and I too was diagnosed with Papillary Cancer. Fortunately for me the cancer was contained to the left side of my thyroid gland and had not reached the surface of the tissue. I did not have to get radiation treatment and, aside from bi-annual follow-up, the worst is over.

At the time of my surgery I had a one-year-old child. I frequently think about the what-ifs… What if I did not have the scan? Where and when would the cancer have revealed itself? As you well know thyroid cancer is not associated with any symptoms. There is no pain or indication that cancer is present, not until the cancer spreads to another issue or organ. The ultrasound detected the thyroid nodule early in the cancer process and the result was positive. Life Scan changed my life.

The job of Firefighting involves calculated risk. Risks that involve immediately dangerous situations and danger that is not seen immediately, but found many years later. The health risks that are associated with firefighting are far reaching. Life Scan offers the most comprehensive examination available to our profession. Florida does not have cancer presumptive laws to protect firefighters. When a firefighter is diagnosed with any type of cancer, the treatment, time off from the job and any follow-up care is handled by the firefighter through private insurance and available sick time. Prevention and early detection is the key to ensuring a successful outcome.

Finally, I want to say thanks to your staff. Tammy and the rest of the clinical staff go above and beyond. They care about each and every patient. Many of our employees have shared that the staff has called them to ensure they were comfortable with the medical information and followed-up when it was necessary. For myself, you and Tammy are like family. Thank you again.

Sincerely,
Shelby Willis
Division Chief
Largo Fire Rescue

Life Scan Wellness Centers
Patricia Johnson, CEO
February 4, 2018

Fort Lauderdale Fire Rescue (FLFR) used to provide just entry level physical examinations for all firefighter/paramedics and Ocean Rescue Lifeguards (Ocean Rescue is under fire rescue), and annual medical screenings for HazMat and Marine/Dive Team, in which, Marine/Dive Team receive limited immunizations. While completing our accreditation process through the Commission on Fire Accreditation International (CFAI) in late 2014 and accreditation status in August 2015; we conducted a comprehensive risk analysis and identified the need to implement mandatory annual physicals for our incumbent full-time fire personnel under a well-defined and medically validated wellness/fitness program. In order to do this, the department submitted an Assistance to Firefighters Grant (AFG) in December 2015 and was awarded the grant in August 2016. Life Scan Wellness Centers was chosen to conduct the physicals.

Being the grant writer, and program/project manager, I will admit that our personnel along with myself were a bit scared on what our department's results were going to be. The majority of our findings were comparable to what the findings were in other departments in the State of Florida. Many of my firefighters went to their primary care physicians or specialists to do follow-ups with their findings.

The most rewarding success story for this grant award was a Captain, now retired, was advised that he had some spots on his bladder and that he should take his results from the ultrasound and follow-up with his physician or urologist. In the follow-up process, additional tests were conducted on the employee which required a biopsy to be conducted. The results of the biopsy revealed to be cancer. The Captain was just 46-years old and 6 months away from retirement. When he was diagnosed, he called me to advise that I saved his life. I am happy to report that he was treated for the cancer and is now in remission doing 3-month check-ups to ensure that it does not return.

FLFR has now budgeted to do annual physicals that include a full health/wellness evaluation. FLFR projects a decrease in cardiac risk (high blood pressure, body weight, body fat composition, and lipid levels) with corresponding reduced risks of coronary artery disease, heart attacks, stroke, diabetes, osteoarthritis, gall bladder disease, respiratory problems and many forms of cancer. Early detection reduces health care costs and workers compensation costs because many health issues are identified before they reach catastrophic levels. Additionally, members who are medically, physically and mentally fit provide better service to their community as well as amongst themselves.

Jo-Ann Lorber, MPA, EFO, CFO, CEM, MIFireE
Battalion Chief/Assistant Fire Marshal
IAFC Executive Fire Officers Section - Chair
Fort Lauderdale Fire-Rescue

On behalf of my wife, 11-month-old daughter and myself we want to convey our thanks to you for the proactive initiative to bring “Life Scan for annual physicals. I had mine done.My Endocrinologist and he said, “I don’t know why you had an ultrasound done!

They found two types of rare cancers in their early stages from the nodules discovered by the Life Scan folks. The cancer diagnosis was a rare variation of Thyroid cancer that has no warning symptoms and another small tumor that is known to be aggressive. After metastasis there is 74% mortality in the first five years and of those that survive there is 79% mortality within 10 years. Chemo and Radiation do not work with this type of cancer and thus is considered terminal in most cases when metastasized.

Then the surgery was JAN 25.

I had no spread. By God’s grace and BSO’s proactive early scanning with “Life Scan” I was granted that miracle. Thank you and God bless you all and your families.

Christopher Thompson F.F. SP/HM 12856
Fire Rescue District 6 Port Everglades
Broward Sheriff’s Fire Rescue

May 27, 2014

Life Scan Wellness Centers
1011 North MacDill Ave.
Tampa, FL 33067

The Albemarle Fire Department through a twist of fate became aware of Life Scan and their services in 2009. I was a newly promoted fire chief and during the Christmas holiday had been talking with my brother, a deputy sheriff in Florida, about ways I could improve our department. During our discussions he began telling me about Life Scan and their impact on him. My brother had gotten a physical as part of a pilot program through his sheriff's department. During our discussions we began comparing the physical I had been getting to the physical he had gotten, there was no comparison. The physical provided by Life Scan was so much more detailed than the physical provided to me and other members of our department.

Upon returning home after the Christmas holiday I began researching Life Scan. I reached out to the company for additional information but wasn't too optimistic due to the fact they were only located in Florida. During our conversations there was discussion about how Life Scan could bring their physicals straight to our department, three states away from their closest office. I obtained pricing and set out to determine if switching our physicals to Life Scan was the best for our personnel and city.

I obtained comparison pricing from the provider that was doing our physicals at the time. I was careful to be sure I got pricing for all of the components provided by Life Scan. I was shocked and amazed when I received the quote from our provider to perform the same tests as Life Scan. The cost for our entire department to have their physicals performed by Life Scan was the same cost for less than three personnel to have comparable physicals by our provider. The cost from our current provider for one person to have the echocardiogram, stress test and carotid arteries ultrasound was more than eight complete physicals from Life Scan.

The cost of our Life Scan physicals was an increase from our current provider at the time. The Life Scan physicals increased our total cost for our physicals by nearly 37%. Although we realized a sizeable increase in the total cost of our physicals the real savings came when a true comparison of the tests performed was conducted.

When I completed my research and realized getting Life Scan to our department could be a reality it was a no brainer for me. I had to do everything I could to increase our budgeted amount for physicals in the upcoming budget cycle. I quickly realized, although our city would be paying more for each person's physical, the investment in our personnel was very small. Our city would be investing less than $1.25 per day per employee. That is a very small price to pay for our most important resource, our personnel.

I was successful in getting our City Council to support the increased funding for our physicals. In September 2010 our department had our first physicals from Life Scan. The results of the physicals were more than I had expected. There were a total of six personnel identified as having issues related to their heart that required follow up. This was surprising since our department had been conducting physicals for our members for the past twenty years.

The most rewarding success from our change to Life Scan came in January 2011. During our 2010 physicals the ultrasound revealed nodules on the thyroid of one of our personnel. The results of the ultrasound were given to the employee and they were told to follow up with their personal physician. In the follow up process, additional tests were conducted on the employee which required a biopsy to be conducted. The results of the

biopsy revealed the nodules on the thyroid were cancerous. In January 2011 the wife of our firefighter called me and told me "you saved my husband's life".

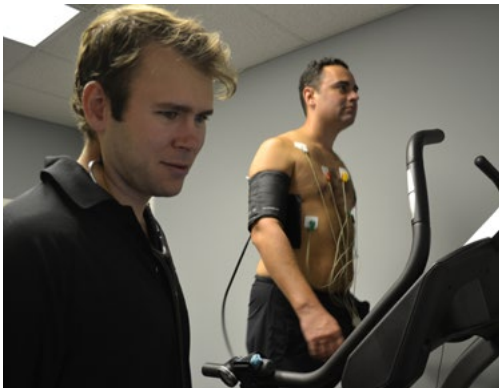
The thyroids and all of the cancer were removed which required the employee to be out of work for a very brief period. Due to early detection by our Life Scan physicals the cancer was contained to the thyroids of our firefighter. The firefighter's physician stated if we had not had the Life Scan physical, which detected the abnormal thyroids, the cancer would not have been caught until it has spread to other organs in the body. The early detection provided by our Life Scan physicals prevented this firefighter from a lot of pain and suffering!

The results from just this one person made the investment of our Life Scan physicals pay for itself forever in terms of unrealized savings. If the cancer had spread in this employee how much would the lost time during cancer treatments cost our department? If the cancer had spread how much money would our insurance carrier have had to pay out in claims for cancer treatment? If the cancer had spread how much pain, suffering and expense would our firefighter have been faced with? The fortunate thing is that we will never know the answer to these questions because the cancer was detected early and did not spread throughout the firefighter's body.

I will continue to fight each budget year to keep funding in our budget for our Life Scan physicals. We invest millions of dollars in our facilities and equipment. Why can't we invest hundreds of dollars in our most important asset, our personnel?

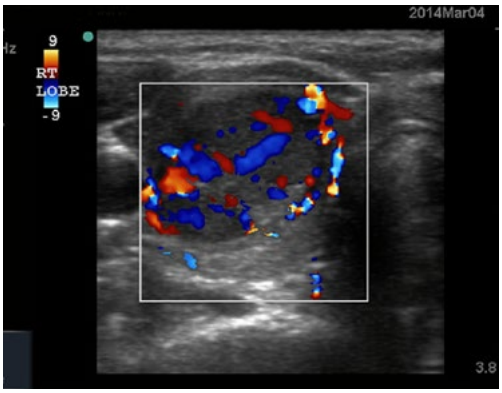
Sincerely,

Shawn Oke
Fire Chief; Albemarle Fire Department
At-Large Director; Safety, Health, and Survival Section - IAFC



Patricia Johnson, CEO

813.876.0625
Patricia.Johnson@lifescanwellness.com
www.LifeScanWellness.com



Life Scan Saves Lives Too!

LIFE SCAN saved my life the very first time I had a Life Scan physical... They made it very comfortable and the staff was excellent in their knowledge... The people at LIFE SCAN are highly recommended. My cancer was detected so early that my blood work was still normal and I felt really good with no signs or symptoms at all... Thank You to the members and staff of LIFE SCAN. Not only did you save my life but you save the lives of firefighters and police officers every day!

Steve Hagman, Driver/Engineer
Marco Island Fire Rescue

Without Life Scan I would not be here today. I probably would have had a major heart attack... Because of the early detection from Life Scan I was back to work light duty in six weeks and back to firefighting in just eight weeks.

Russell (Rusty) McCord
Englewood Fire Department

If it were not for this program and these fantastic people at Life Scan, I would not be here to enjoy my family and the rest of my life. Thank you to Life Scan and the Hillsborough County Fire Rescue for this gift of life.

Reed Scott Schenfield
Hillsborough County Fire Rescue