



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



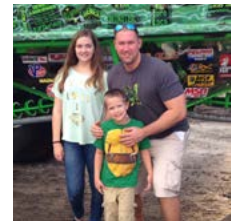
Kelly Hallman
Hillsborough County Fire Rescue
Thyroid Cancer



Rusty McCord
Englewood Fire Rescue
Quadruple Bypass



Chris Thompson
Broward Sheriff'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



Julius Halas
Florida Fire Marshal
Blood Cancer



Troy O'nan
Hillsborough County Fire Rescue
Aortic Root Aneurysm



Gerry Pingitore
Ottawa Fire Department
Ascending Aortic Aneurysm





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

What is 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.



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.

WE TACKLE THE BIG ISSUES: CANCER, HEART DISEASE AND BEHAVIORAL HEALTH

Cancer is on everyone's radar early detection saves lives. It's a fact: And firefighter risk and rates of cancer is a national crisis. The bottom line is that a standard physical cannot find cancer until it is too late. And with firefighters the cause of cancer is so often from exposure and the resulting cancer is often extremely aggressive and spreads quickly.

Cardiovascular Disease is still the leading cause of firefighter deaths today and now claims its victims younger and younger every year. Enlarged hearts as well as aortic valve damage are best measured by ultrasound and not identified by just listening with a stethoscope.

Behavioral Health: First responders are exposed to scenes and situations that are beyond comprehension. Life Scan incorporated a behavioral health/trauma screening into our physical exam.

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

NFPA and OSHA Compliant

The Life Scan public safety physical is an integrated medical approach to occupational exams that combines NFPA 1582 physicals, NFPA 1583/Wellness Fitness Initiative fitness evaluations, and OSHA 1910.134 Respirator Medical Clearance and Mask Fit Testing with advanced medical assessments for the early detection of the major diseases such as heart disease, stroke, cancer, diabetes, and aneurysms before they reach a catastrophic level. It provides your employees with a thorough assessment of their health as well as recommendations for achieving and maintaining long term health and managing medical risks.



"The people at LIFE SCAN are highly recommended. My cancer was detected so early that I can now live a normal life. Thank You to the members and staff of LIFE SCAN. Not only did you save my life, but you also helped me to live a better life."

LIFE SCAN WELLNESS PROGRAM

For Fire Rescue and Police Departments

Improved Fitness

Life Scan's WFI- Compliant Firefighter Fitness Analysis ensures firefighters are in top physical condition for better on the job performance and overall wellbeing. Our 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 allow 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.

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
- Hemocult 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

...that 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

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.

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 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.

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.

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 pelvic 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 (VO₂max) 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 FEV_1 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 $\pm 3.5\%$; whereas most other methods of determining body fat percentage, including the popularly referenced Body Mass Index (BMI), have greater than $\pm 5.0\%$ 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.

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

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

BROWARD SHERIFF FIRE RESCUE

2016-2017 SIGNIFICANT EARLY DETECTION FINDINGS

HEART & ARTERIAL DISEASE

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

AORTA

Aortic Root (Dilated >4 cm)- Currently Being Monitored	6
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CANCER & ORGAN DISEASES

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

PULMONARY/ RESPIRATORY

Pulmonary Function Test (Less Than 70%)	11
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OTHER SIGNIFICANT FINDINGS

Obesity	79
High Cholesterol/Triglycerides	42
Elevated PSA Blood Levels (Prostate)	13
Low Testosterone (< 200 mg/dl)	68
Abnormal TSH (Thyroid Function)	19
Hepatitis C	2
Complete Blood Count (CBC) Abnormality	11
Significant Thrombocytopenia	4
Aberrant Nevus (Follow Up Needed)	2
Decreased Renal Function (eGFR < 59 mL/min/1.73)	2
Severe Bilateral Hearing Loss	3
Positive Fecal Occult Stool Test (Follow Up Needed)	3

TOTAL NUMBER OF SIGNIFICANT FINDINGS:
737



Polk County Professional Firefighters - Local 3531

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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 firefighting. 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.

Associated with the International Association of Fire Fighters and Florida Professional Fire Fighters

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. Life Scan 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. Life Scan 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.

TESTIMONIALS

See what others have to say about our services.

***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



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



"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!



Christopher Thompson F.F. SP/HM 12856

Fire Rescue District 6 Port Everglades

Broward Sheriff's 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.



Kenneth Parker

Katy Fire Department

Assistant Chief-Operations

My Cancer Story

My name is Kenneth Parker and I have been a firefighter for 20 years this year. I am currently the Assistant Chief of Operations for the Katy Fire Department in Texas. We were able to go visit with Life Scan while they were performing other department's evaluations and was impressed with their operation. The Katy Fire Department contracted with Life Scan Wellness center as part of our new updated wellness initiative after researching different options and companies based on cost and services provided.

In December of 2017 after having to reschedule our exams due to hurricane Harvey we were finally able to have our assessments done. I can remember everyone was nervous about this new test myself included. Life Scan Wellness centers have this process down to a fine art. They are very organized and had all the different stations set up to maximize the time with each member. I went to each station and everything checked out good. My final station was the ultrasound. The tech was very thorough and explained every process she was doing and the results. Everything looked good until she started examining my testicles. While scanning my left testicle she stated that she has found a mass that presented itself as being vascular. She took her time and checked the rest of the area. She told me that I needed to have this checked. She printed out a bunch of pictures of the mass and placed it in my packet. I was done with my examination and went to go and get my uniform back on. As I was leaving the testing area she pulled me aside again in the hallway and grabbed my arm and made me promise her that I would go have this checked. I could tell by the look on her face this was something serious. I made an appointment with an urologist to follow up with. I went into the office with my complete packet from Life scan Wellness center and gave it to the doctor. He could not believe that my employer had done such a comprehensive physical. He kept asking questions and I had to explain to him my occupation and the risks that accompany this occupation and this is why we do such a thorough physical. He did

bloodwork to check for proteins that accompany cancer and wanted me to have another ultrasound. Once these were completed the bloodwork came back normal and the second ultrasound also showed the mass. We made the decision to have a radical orchiectomy performed to remove the left testicle so it could be tested for cancer. The procedure was performed and the specimen was sent off for testing. The next day the results were back and it was cancerous. He referred me to an oncologist during my follow up appointment. We also sat and talked about the whole Life Scan process. He told me that I was very lucky to have had this done. I had no symptoms, pain, or even any discomfort. No lumps were ever noted. He said that by time I would have had pain or symptoms that my prognosis would have been a lot different. He wanted me to have a CT of my abdomen and chest done to make sure that the cancer had not metastasized anywhere else.

During my first visit with my Oncologist he advised me that my cancer was stage 1 and it had not metastasized anywhere else. He told me I was also very fortunate to have had this Life scan Wellness Center test performed. He recommended a round of chemo to kill any additional cancer cells that may be present. He stated that this would give me the highest rate of the cancer not coming back, I agreed. I am a husband and dad to three little girls and will do anything to make sure I will always be here for them as long as I can be. I recently completed my chemo treatment and waiting for my follow-up appointment.

I can say without any doubt in my mind that if my department had not had this scan done my outcome would have been completely different. As long as I am in my position here at the Katy Fire Department I will be one of the biggest advocates for this test to be done every year. I am living proof that this works and it is a vital part of any fire department's Health and Wellness Initiative. Thank you Life Scan Wellness Center.



Scott A. Flitcraft

Division Chief of Training

LTTR 101 Co-Team Manager

Panama City Fire Department



At the time of this writing, a senior Lieutenant and US&R Instructor/ Team Leader of ours is lying in a hospital bed after having one of his kidneys removed last week. His cancer diagnosis was 95% positive as he had a tumor the size of a lemon on the left kidney. His only sign or symptom was mild back pain for months now to which he attributed to being muscular pain. His prognosis is very good after the encapsulated kidney and tumor were removed and no cancer was found to be in his lymph nodes or surrounding areas. He will likely have his gallbladder removed in a couple weeks due to surgical complications, but no cancer is present at this time in his body. The medical plan is for him to return to work in approximately six weeks with no restrictions

Our Lieutenant is the first life truly saved which is directly attributed to the work done at our Fire Department by Life Scan. When the ultrasound technician saw the left kidney, our Lieutenant was advised to see a specialist for the appropriate treatment options, which surgery was his choice due to the advancement of the tumor. Let me be clear here. He would not have sought treatment for what he believed to be mild muscle pain. Life Scan caught the tumor and his life was spared.

The rest of our 78 person-strong Team of sworn personnel tested by Life Scan, including myself, have made some necessary changes in diet, fitness, and lifestyle. Suggested appointments were made after Life Scan's professionals thoroughly evaluated us and to this date, no other cancers have been found. We were a very healthy fire department with over thirty percent of our Operations Division having less than three years on the job, many these firefighters less than 35 years old, mandatory daily workouts and an annual Fitness Challenge. We are even healthier now! We will institute cancer prevention in the form of wipes, gross de-con, clean-air areas for gear storage, and hood swaps in the very near future. Our relationship with Life Scan will continue every year and has already been approved for the 2018 fiscal year.

LIFE SCAN WAS ONE OF THE GREATEST THINGS I HAVE EVER BEEN A PART OF IN MY OVER THIRTY-THREE YEARS IN THE FIRE SERVICE.

As far as the actual Life Scan process, their Team arrived each of three mornings with three lab technicians and they completed all 78 lab draws in a total of less than eight hours of work. And they came to us!! This enabled us to save the overtime costs of sending personnel off-duty to the lab. The same goes for the physicals with all done on-duty by rotating out crews and scheduling the crew members together. The three-hour physical was simple as we provided enough space (barely!) for the Life Scan Team to perform their needed assessments in private. It was painless!!!

I cannot express what Life Scan has done for us without becoming a bit emotional. The mental and physical stress our personnel feel daily, the beating their bodies take, and the carcinogens they have been exposed to have always been thought to be part of "The Job." We understand the risks and do what we can to minimize them. Life Scan was one of the greatest things I have ever been a part of in my over thirty-three years in the fire service. We can truly help our own people by having them tested annually by Life Scan, detecting problems early on, seeking proper treatment, and hopefully returning to The Job with retirement in mind someday. A healthy retirement to be spent with their families.

Thank You, Life Scan!!!



Shelby Willis

Division Chief

Largo Fire Rescue



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.

LIFE SCAN OFFERS THE MOST COMPREHENSIVE EXAMINATION AVAILABLE TO OUR PROFESSION.

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 risks. 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 who 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 your staff are like family. Thank you again.



Jo-Ann Lorber, MPA, EFO, CFO, CEM, MIFireE

Battalion Chief/Assistant Fire Marshal
IAFC Executive Fire Officers Section - Chair
Fort Lauderdale Fire-Rescue



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,

EARLY DETECTION REDUCES HEALTH CARE COSTS AND WORKERS COMPENSATION COSTS

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.



Shawn Oke

Fire Chief; Albemarle Fire Department

At-Large Director; Safety, Health, and Survival Sec



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.

THE RESULTS OF THE PHYSICALS WERE MORE THAN I HAD EXPECTED.

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 sizable 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

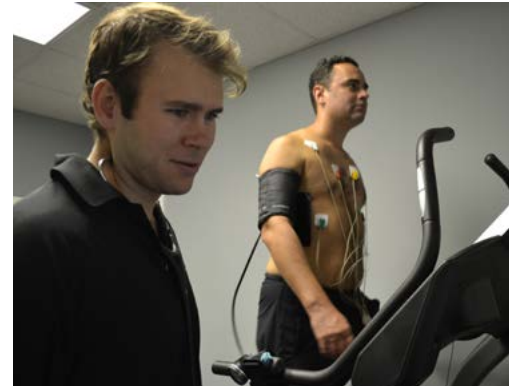


THE RESULTS FROM JUST THIS ONE PERSON MADE THE INVESTMENT OF OUR LIFE SCAN PHYSICALS PAY FOR ITSELF FOREVER IN TERMS OF UNREALIZED SAVINGS.

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?

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!

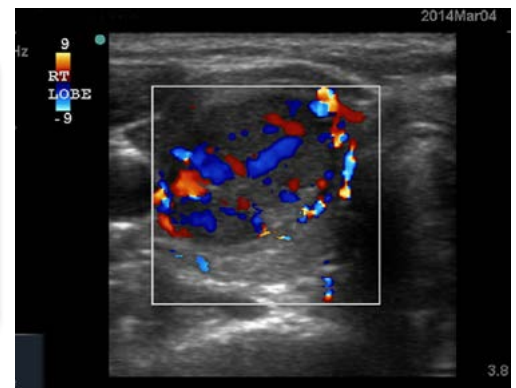
The results from just this one person made the investment of our Life Scan physicals pay for itself forever in terms of unrealized savings. If the cancer had spread in this employee how much would the lost time during cancer treatments cost our department? If the cancer had spread how much money would 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.



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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