



**Contra
Costa
County**

To: Contra Costa County Fire Protection District Board of Directors
 From: Jeff Carman, Chief, Contra Costa County Fire Protection District
 Date: March 12, 2019

Subject: Contract for Employee Physical Examinations

RECOMMENDATION(S):

APPROVE and AUTHORIZE the Fire Chief, or designee, to execute a contract with Life Extension Clinics, Inc., doing business as Life Scan Wellness Centers, in an amount not to exceed \$1,500,000, to provide annual medical evaluations for Contra Costa County Fire Protection District personnel for the term April 1, 2019, through March 31, 2023.

FISCAL IMPACT:

Budgeted; 100% CCCFPD General Operating Fund

BACKGROUND:

The Contra Costa County Fire Protection District (District) has provided annual medical evaluations for firefighters to ensure that they are medically fit for duty for nearly 20 years. During the past two decades, the assault on North American firefighters' health and wellness has evolved dramatically. As we, the District, continued our research into how to best protect our most important asset, the firefighters, we found that we needed to take a more proactive approach. The key to reducing the mortality rate of firefighters is continual health and wellness education and providing resources for early detection of disease processes that kill our nations' first responders at double the rate of the normal population.

☒ APPROVE

☐ OTHER

☒ RECOMMENDATION OF CNTY
ADMINISTRATOR

☐ RECOMMENDATION OF BOARD
COMMITTEE

Action of Board On: **03/12/2019** ☒ APPROVED AS RECOMMENDED ☐ OTHER

Clerks Notes:

VOTE OF SUPERVISORS

AYE: John Gioia, Director
 Candace Andersen, Director
 Diane Burgis, Director
 Karen Mitchoff, Director
 Federal D. Glover, Director

I hereby certify that this is a true and correct copy of an action taken and entered on the minutes of the Board of Supervisors on the date shown.

ATTESTED: March 12, 2019

David Twa, County Administrator and Clerk of the Board of Supervisors

Contact: Robert Lutzow, Safety
 Chief 925-941-3300

By: June McHuen, Deputy

cc:

One of the most effective indicators of the health and wellness of the Districts' firefighters can be found during a comprehensive medical evaluation. These evaluations include a health risk assessment, a medical history review to determine any health conditions that would prevent, or could be aggravated by, performing the duties of the position, including but not limited to, the ability to carry equipment, wear protective equipment/clothing, and meet the physical and psychological demands of the firefighter position.

Firefighters are often the first to arrive at the scene of some of the most disturbing and devastating events that occur in our county. Contra Costa County Fire Protection District is an all hazards emergency response organization and thus, the firefighters we employ can be subjected to a wide range of working conditions on a daily basis. These events can range from responding to incidents involving the death of a child, to homicide, suicide, rape, child abuse, family violence, fatal car accidents and even acts of terrorism. Also, firefighters often enter structurally compromised buildings under hot and smoky conditions while wearing heavy and restrictive clothing and carrying awkward equipment. In recent years, these fires have become more dangerous as they burn at higher temperatures and produce a toxic atmosphere similar to that of a Hazardous Materials incident. Benzene, formaldehyde and hydrogen cyanide are just a few of the chemicals firefighters are exposed to while fighting fire on a daily basis. As more and more toxic materials are used to create the items we have

in our homes, the toxic soup firefighters work in will only become more dangerous.

These high levels of stress, physical demands and long-term exposure to chemicals and infectious disease can take a toll on the health of firefighters and especially to their cardiovascular system. These intense work 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,” (

BACKGROUND: (CONT'D)

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. Occupational cancer is yet another increasing risk 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 (53%), malignant melanoma, non-Hodgkin's lymphoma (51%), prostate (28%), skin (39%), brain (32%), rectum, pharynx, stomach (22%), colon (21%), and leukemia. The University of Cincinnati conducted a study in 2009 where further research revealed that firefighters developed 10 types of cancers more frequently than any other occupation; the most virulent of these was testicular cancer. Firefighters also face a 53% greater risk of a deadly cancer that attacks bone marrow: multiple myeloma, a cancer that occurs when a firefighter sweats due to the open pores on the skin allowing numerous carcinogens to enter the bloodstream at an alarming rate. In fact, according to the Firefighter Cancer Support Network (FFCSN) Fact Sheet, 61% of firefighter line of duty deaths between 2002 and 2016 were attributed to cancer.

Due to 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 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, thus showing that proper prevention and rehabilitation are 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 patients long term effects of the working environment, including exposure to chemical and biological agents and disease patterns that may indicate work-related health concerns.

Therefore, it would be of the utmost importance for the Contra Costa County Fire Protection District to have this comprehensive NFPA 1582 yearly Medical Exam in conjunction with a Behavioral Health Evaluation, as firefighters are exposed to scenes and situations that are beyond the complexities of reasoning. These exams will be performed by a company that specializes in and has vast knowledge of NFPA 1582 physicals that include the following procedures: Head to toe physical exam (per NFPA 1582), vital signs, skin cancer screening, visual acuity test, hearing exam, breast exam, personal consultation with a review of testing results at physical appointment, recommendations for medical intervention and behavioral modification changes, cardiac assessment to include: echocardiogram, resting EKG, cardiac treadmill stress test, with V02 max calculation, carotid arteries ultrasound, aortic aneurysm ultrasound. Cancer and disease assessment to include: thyroid ultrasound, liver, pancreas, gall bladder, spleen, kidney and 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 test, pulmonary function test, urinalysis with chem strip, complete blood count (hemoglobin 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 clearance screening, Hep B Antigen (titer), Hep C screening, and TB test (interferon).

While comparing our previous annual physical and a Lifescan physical, it was determined that a Lifescan physical can be performed in a more efficient and comprehensive manner, with an eventual cost savings to the District by reducing long term health care costs. Lifescan will come to a District worksite and perform a comprehensive NFPA 1582 physical and Behavioral Health Evaluation at a rate of nine firefighters a day, allowing firefighter physicals to be completed in a two-month time period rather than the 8-9 month timeline we currently have. Lifescan will deliver the most competent exams available.

CONSEQUENCE OF NEGATIVE ACTION:

The District will not be able to increase the efficiency and quality of firefighter annual physical examinations.