Safety 101 . . .Lesson-116

Cancer Presumption Law . . . Actions Required by Fire Departments

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As noted in an earlier Safety 101 article, there are two requirements for fire departments to implement. In the event a member is diagnosed with cancer and files a claim, the failure to have these two procedures in place will jeopardize the likelihood of success in demonstrating the cancer was job related.

The first item to discuss is:

The firefighter must have passed a physical exam before their service that did not reveal the presentence of cancer.

This should begin before the member is even actively involved in fire service activities. The physician conducting the exam plays a critical role in helping to prevent the incidence of cancer and heart disease in firefighters. The chronic exposure firefighters face to smoke, vehicle exhaust, heat, and all of the contaminants within burning materials becomes inhaled, absorbed, adsorbed and ingested in the firefighters' body. In addition the failure to clean equipment and protective clothing creates the exposure. Thus an initial medical monitoring and annual follow-up exams becomes a key personal safety factor as well as opportunity to diagnose any cancers or other developing conditions.

The Firefighter Cancer Support Network and Last Call Foundation have developed a set of recommended Firefighter Physical Exam and Screening Tests.[1]

Annual Exam Recommendations for Firefighters

- Blood pressure
- Pulse
- Respiratory Rate
- Temperature
- Oxygen Saturation
- Weight and body-fat index
- Thorough skin exam
- Eye exam and hearing testing
- Oral exam
- Heart and lung exam
- Abdominal and testicular exam
- Prostate and rectal exam
- Fecal occult blood testing
- Pelvic and Pap for females
- Vascular and neurological exams
- Mental status exam
- Musculoskeletal exam

Annual Lab and Screening Tests

- Comprehensive metabolic and chemistry panel
- Liver function tests
- Hepatitis profile
- Complete blood count
- Thyroid panel
- Hemoglobin A 1 c (for diabetes monitoring)
- Fasting lipid profile and blood glucose
- Urinalysis and urine biomarkers
- EKG
- PSA (beginning at age 40 for prostate cancer)
- Pulmonary function test every three years
- Low-dose helical chest CT scanning (begin at age 50)
- Colonoscopy (begin age 40 and every five years)
- Exercise stress echocardiogram test (begin age 40 and every three years)
- Mammograms for females (Begin age 35)

The second item to discuss is:

Volunteer firefighters must participate in PennFIRS reporting.

This is simple, or at least it should be. Document your incidents and report the incidents in to the PennFIRS system. If you do not have the software program to accomplish this, then obtain it and use it. Document who responded to the call, the nature of the call and the exposures to any materials as indicated in the carcinogen list, or at least that the person(s) were exposed to smoke, fumes, etc. and the nature of activity at the occupancy or within the vehicle. Record as much as you can. It is better to over document on this situation.

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The Act goes on to further state that "the cancer suffered by a firefighter which is caused by a known carcinogen which is recognized as a Group 1 carcinogen by the International Agency for Research on Cancer." For those who do not know what Group 1 carcinogens are, they are as follows.

[1] Hamrock,m Michael G. MD, "Firefighter Cancer Awareness and Prevention Program", FCSN & LCF, 2017

Group 1 carcinogens[3] by the International Agency for Research on Cancer."

Substances

- 2-Naphthylamine
- Acetaldehyde (associated with consumption of alcoholic beverages)
- 4-Aminobiphenyl
- Aflatoxins
- Aristolochic acids, (and plants containing them)
- Arsenic and inorganic arsenic compounds[1]
- Asbestos
- Azathioprine
- Benzene
- Benzidine, and dyes metabolized to
- Benzo[a]pyrene
- Beryllium and beryllium compounds[2]
- Chlornapazine (N,N-Bis(2-chloroethyl)-2-naphthylamine)
- Bis(chloromethyl)ether
- Chloromethyl methyl ether
- 1,3-Butadiene 1,4-Butanediol dimethanesulfonate (Busulphan, Myleran)
- Cadmium and cadmium compounds[2]
- Chlorambucil
- Methyl-CCNU (1-(2-Chloroethyl)-3-(4-methylcyclohexyl)-1-nitrosourea; Semustine)
- Chromium(VI) compounds
- Ciclosporin
- Clonorchis sinensis (infection with)
- Cyclophosphamide
- 1,2-Dichloropropane
- Diethylstilboestrol
- Epstein-Barr virus
- Estrogen therapy, postmenopausal
- Ethanol in alcoholic beverages
- Erionite
- Ethylene oxide
- Etoposide alone, and in combination with cisplatin and bleomycin
- Fluoro-edenite fibrous amphibole
- Formaldehyde
- Gallium arsenide
- Helicobacter pylori (infection with)
- Hepatitis B virus (chronic infection with)
- Hepatitis C virus (chronic infection with)
- Human herpesvirus 8 (Kaposi sarcoma-associated herpesvirus)
- Human immunodeficiency virus type 1 (infection with)
- Human papillomavirus type 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59 and 66
- Human T-cell lymphotropic virus type 1 (HTLV-I)
- Lindane
- Melphalan
- Methoxsalen (8-Methoxypsoralen) plus ultraviolet A radiation
- 4,4'-Methylenebis(2-chloroaniline) (MOCA)
- MOPP and other combined chemotherapy including alkylating agents
- Mustard gas (Sulfur mustard)
- 2-Naphthylamine
- Neutron radiation
- Nickel compounds[2]
- 4-(N-Nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK)
- N-Nitrosonornicotine (NNN)
- Opisthorchis viverrini (infection with)
- Outdoor air pollution
- Particulate matter in outdoor air pollution
- 2,3,4,7,8-Pentachlorodibenzofuran
- 3,4,5,3',4'-Pentachlorobiphenyl(PCB-126)
- Phosphorus-32, as phosphate
- Plutonium
- Radioiodines, short-lived isotopes, including iodine-131, from atomic reactor accidents and nuclear weapons detonation (exposure during childhood)
- Radionuclides- a particle-emitting, internally deposited
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- Radium-224 and its decay products
- Radium-226 and its decay products
- Radium-228 and its decay products
- Radon-222 and its decay products
- Schistosoma haematobium (infection with)
- Silica dust, crystalline (inhaled in the form of quartz or cristobalite from occupational sources)
- Talc containing asbestiform fibres

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- Tamoxifen[6]
- 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
- Thiotepa (1,1',1"-Phosphinothioylidynetrisaziridine)
- Thorium-232 and its decay products, administered intravenously as a colloidal dispersion of thorium-232 dioxide
- Treosulfan
- Trichloroethylene
- o-Toluidine
- Vinyl chloride

Radiations

- Ionizing radiation (all types)
- Ultraviolet radiation including solar radiation
- X-Radiation and gamma radiation

Mixtures

- Aflatoxins (naturally occurring mixtures of)
- Alcoholic beverages
- Areca nut
- Betel quid with tobacco
- Betel quid without tobacco
- Coal-tar pitches
- Coal-tars
- Coal, indoor emissions from household combustion of
- Engine exhaust, diesel
- Estrogen-progestogen menopausal therapy, (combined)
- Estrogen-progestogen oral contraceptives (combined)
- Fission products, including Strontium-90
- Leather dust
- Mineral oils, untreated and mildly treated
- Paints containing benzene
- Phenacetin, analgesic mixtures containing
- Plants containing aristolochic acid
- Polychlorinated biphenyls, dioxin-like
- Processed meats, consumption of[3]
- Salted fish (Chinese-style)
- Shale-oils
- Soot (as found in occupational exposure of chimney sweeps)
- Wood dust

Exposure circumstances

- Acheson process, occupational exposure associated with
- Acid mists, strong inorganic
- Aluminium production
- Auramine production
- Boot and shoe manufacture and repair (see leather Dust and benzene)
- Chimney sweeping (see Soot)
- Coal gasification
- Coal tar distillation
- Coke (fuel) production
- Processed meats
- Furniture and cabinet making (see wood dust)
- Haematite mining (underground) with exposure to radon
- Iron and steel founding (occupational exposure to)
- Isopropanol manufacture (strong-acid process)
- Glass, making of
- Magenta dyes, manufacture of
- Painting (see benzene)
- Paving and roofing with coal tar pitch
- Rubber manufacturing industry
- Sandblasting (see silica dust)
- Smokeless tobacco
- Tobacco smoke, second hand
- Tobacco smoking
- Ultraviolet-emitting tanning devices

[3] Wikipedia, "Class 1 Carcinogens", https://en.wikipedia.org/wiki/List_of_IARC_Group_1_carcinogens

LESSON #116:

"The obligation of the fire department and firefighter are significant in documenting your health status, as well as exposure to potential carcinogens."

Safety 101 –

A safety awareness series from the technical and administrative perspective, designed to help you reduce emergency responder injuries, illnesses, property loss and death!

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