

FIREFIGHTER CANCER CONSULTANTS

The 25



Jim Burneka

Dayton Ohio Firefighter/Paramedic 2001 – Present



Firefighter Cancer Support Network(FCSN) 2006-2014



- State Director, Vice President, Interim President

Firefighter Cancer Consultants, LLC 2014 - Present



What can
we do to
reduce the
risk of being
diagnosed
with
cancer?

THE “25”

- ☐ 1. Wear SCBA's and full PPE on all structure, car, and trash fires.
- ☐ 2. Engineers and Command staff should wear SCBA's and full PPE in proximity to the fire.
- ☐ 3. Wear SCBA's and full PPE throughout the duration of overhaul.
- ☐ 4. Investigators and Command should wear SCBA's and full PPE while inside the structure.
- ☐ 5. Use Wipes on scene to remove contaminants on the skin.
- ☐ 6. Wash hands before ingesting food or liquids while on scene.
- ☐ 7. Gross Decon PPE while on scene.
- ☐ 8. Transport PPE, SCBA's, and tools outside of the cab if possible.
- ☐ 9. Clean contaminated SCBA's, tools, and hose back at the fire station.
- ☐ 10. Shower ASAP, ideally out of service.
- ☐ 11. Change and wash contaminated clothing at the fire station.
- ☐ 12. Wash PPE ASAP including your helmet, hood, gloves, and boots.
- ☐ 13. Switch into backup set of PPE ASAP.
- ☐ 14. Upgrade PPE with new particulate blocking technology.
- ☐ 15. Keep PPE in totes if transporting in personal or department vehicles.
- ☐ 16. PPE should never go inside the fire stations' living quarters.
- ☐ 17. Avoid storing PPE in the apparatus bay.
- ☐ 18. Use Diesel Exhaust systems as recommended.
- ☐ 19. Avoid storing frequently used items in compartments directly over the diesel exhaust tip.
- ☐ 20. Keep living quarters doors shut.
- ☐ 21. Conduct annual medical and skin exams.
- ☐ 22. Exercise and eat healthy.
- ☐ 23. Use sunscreen and wear a hat.
- ☐ 24. Keep documentation of exposures from fire calls.
- ☐ 25. Avoid all tobacco products.



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Firefighter Cancer Consultants, LLC 2018

Risk Management Policy

- (a) Activities that present a significant risk to the safety of members shall be limited to situations where there is a potential to save endangered lives. [L]
[SEP]
- (b) Activities that are routinely employed to protect property shall be recognized as inherent risks to the safety of members, and actions shall be taken to reduce or avoid these risks. [L]
[SEP]
- (c) No risk to the safety of members shall be acceptable when there is no possibility to save lives or property. [L]
[SEP]

Wear SCBA's and
Full PPE on all
structure, car
and trash fires.



Car Fire

Evaluation of chemical and Particle Exposures during Vehicle Fire Suppression Training NIOSH & CDC July 2010

	Startup	Knockdown	Overhaul
1	Benzene	Toluene	Toluene
2	Acrylonitrile	Styrene	Styrene
3	Propene	m,p-Xylenes	Benzene
4	Acrolein	Acetone	m,p-xylenes
5	Acetonitrile	n-Hexane	n-Hexane
6	Styrene	Benzene	Acetone
7	Acetone	Propene	n-heptane

All items in red are carcinogens



Trash Fires



Trash Fires

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2

Engineers and
Command staff
should wear SCBA's
and full PPE in
proximity to the fire.



Exposures on the Outside

Wear SCBA's and
full PPE
throughout the
duration of
overhaul.



Modern Fire Atmosphere

CARCINOGEN	CANCER
Arsenic	kidney, liver, prostate
Asbestos	lung, mesothelioma
Benzene	multiple myeloma, non-Hodgkin's lymphoma
Benzo[a]pyrene	lung, skin, bladder
Diesel Exhaust	lung, bladder, esophageal
Formaldehyde	nasopharynx, leukemia
Polychlorinated biphenyls	non-Hodgkin's lymphoma, lung, soft tissue sarcoma
Polychlorinated dibenzo-p-dioxins	non-Hodgkin's lymphoma, lung, soft tissue sarcoma
Vinyl Chloride	liver
1,3-butadiene	non-Hodgkin's lymphoma, leukemia



Atmospheric Monitoring

CARCINOGEN	CANCER
Arsenic	kidney, liver, prostate
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Benzene	multiple myeloma, non-Hodgkin's lymphoma
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Atmospheric Monitoring

IDLH

EDLH

Flame Retardants

May 2012: Chicago Tribune Investigative series is published

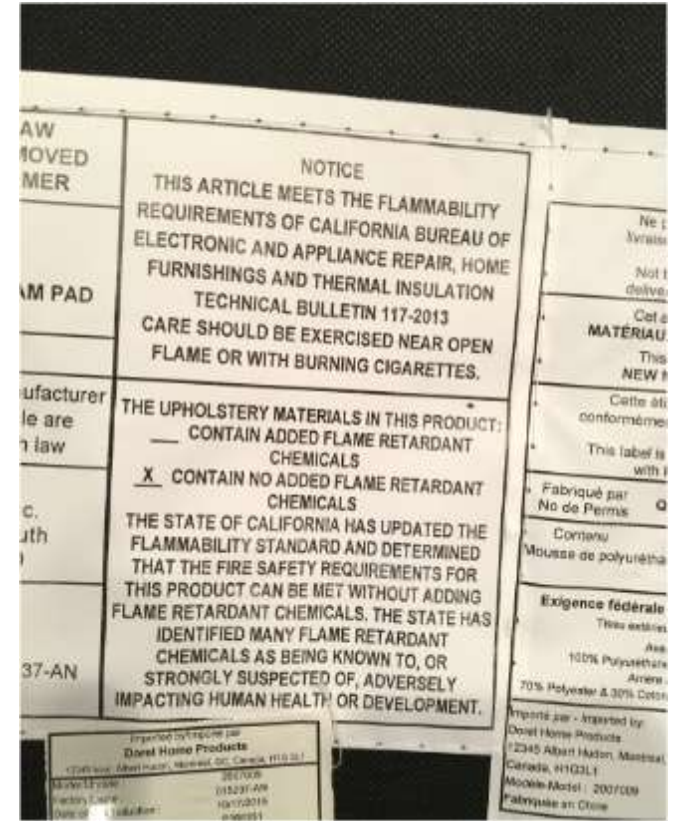
September 2013: NFPA issues upholstered furniture flammability white paper – Fire retardant foams “did not offer a practically significantly greater level of open-flame safety as did the untreated foams”.

October 2013: Toxic Hot Seat is released by HBO



Flame Retardants





Flame Retardants

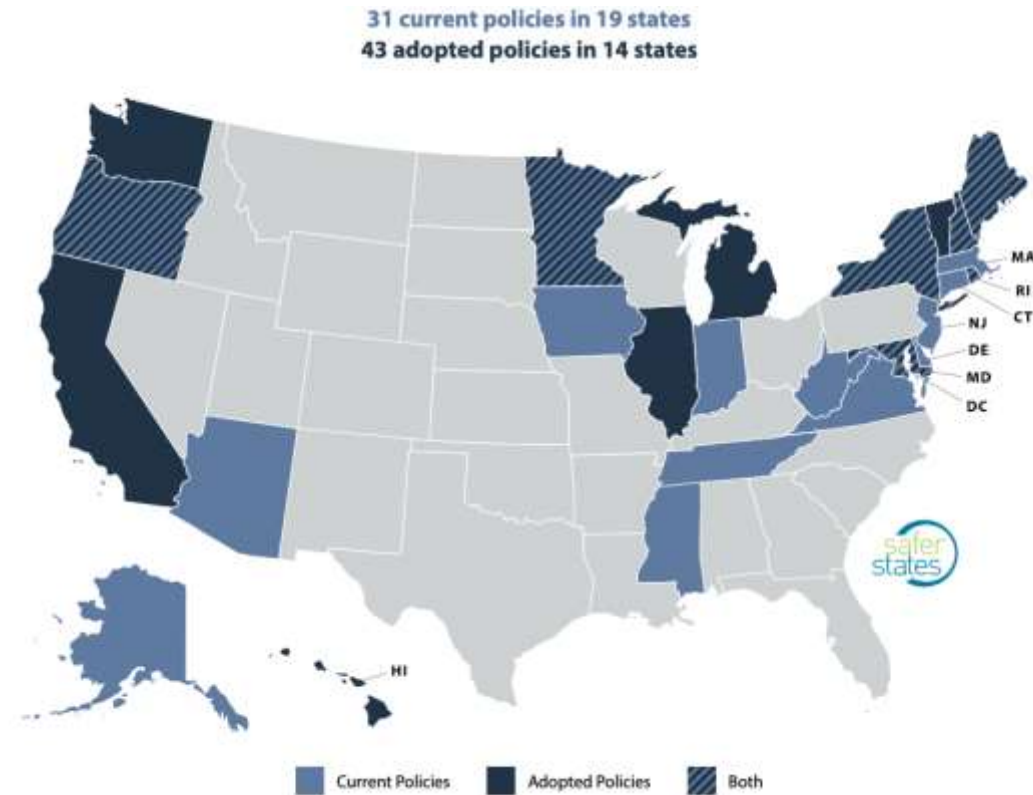


Carpet or Mattress Store Fire

A government-sponsored study in the United Kingdom did set out to assess FR agents in a risk/benefit context.³⁰ The authors of that study concluded that “the benefits of many flame retardants in reducing the risk from fire far outweigh the risks to human health.” But they too pointed out that FR agents need to be studied individually (or by chemical families)—it is clearly impossible to make a general statement about any and all chemicals proposed for use in a certain application.

Excerpt from NFPA Handbook

Current Fight





Types of Masks Available

Modern Fire
Atmosphere

The only thing
natural in the
modern fire is
you!



The logistical difficulties of wearing SCBA's during overhaul





Manpower

Extra Cylinders



Rehab





Station Fill-ins



Different Approach to Overhaul

Different approach to overhaul





Different
approach to
overhaul



Logistics will vary from department to department

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4

Investigators and
Command should
wear SCBA's and full
PPE throughout the
duration of overhaul

Command/Fire Investigators





Industrial SCBA
pack

Use Wipes on scene to remove contaminants on the skin.



Use Wet Wipes on scene of a fire

According to Illinois Fire Service Institute:

Generic Baby wipes can take off 54% of contaminants from the skin.

Fire specific wipes are currently being tested

Wash hands
before ingesting
foods or liquids
while on scene.



IFSI Research

@IFSIRESEARCH

Follow



Exact same smoke exposure and work assignments ... but one FF took of his own gloves, while the other had his removed by decon staff.



6:36 PM - 21 Sep 2017

Washing hands
on scene



Washing hands on scene

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7

Gross Decon PPE
while on scene

Preliminary Exposure Reduction



Dish Soap – 85%

Water – 42%

Dry Brush – 23%

Fan – 1.9%



Preliminary Exposure Reduction Video

HEALTHY IN,
HEALTHY OUT



Warm Water Decon

A simple diverter valve connected to the heat exchanger to the pump panel can create a warm water outlet.

Old apparatus can be retrofitted.

Option on new apparatus

Cold Weather
Decon

Portable
Heated
Tents



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8

Transport PPE,
SCBA's, and tools
outside of the cab if
possible.



Clean Cab

Car seat cover



Clean
contaminated
SCBA's, tools,
and hose back at
the fire station

Mask/SCBA cleaning



Cleanup



Washing your hands

**WASH
YOUR
HANDS**



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10

Shower ASAP,
ideally out of
service.



Take a shower ASAP after a fire

Showering after a Fire

- Ideally out of service.
- Start off uncomfortable cold.
- After rinsing, turn the water up as hot as possible.

Change and wash
contaminated
clothing at the fire
station.

Washing your
uniforms



Wash PPE ASAP
including your
helmet, hood,
gloves, and
boots.

Washing your Gear



Washing Liners/Hoods Separate from Outer Shells & Gloves



Washing your
Helmet & Inside
Liner

Also don't forget
your boots





Tours

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13

Switch into
backup set of
PPE ASAP.

Backup set of PPE



Upgrade PPE
with new
particulate
blocking
technology.

Particulate Blocking Hoods



Keep PPE in totes if
transporting in
personal or
department
vehicles.



Transporting
your gear



Transporting your gear

PPE should never go inside the fire stations' living quarters.



Keep your Bunker Gear Outside of Living Quarters



EMS Rooms

Avoid storing PPE
in apparatus bay.

Fire Gear Storage



Dry

Well Ventilated

Away from UV light

Hung

Out of the apparatus
bay





Not the ideal gear storage



Before



After

Use Diesel
Exhaust systems
as recommended

Diesel Exhaust

On June 12th, 2012, the International Agency for Research on Cancer (IARC) classified diesel engine exhaust as a Group 1 carcinogen.





Diesel Exhaust Systems: Closed Source

Diesel Exhaust
Systems

Closed Source



Diesel Exhaust
Systems

Open Source



Diesel Exhaust Systems

Direct Capture



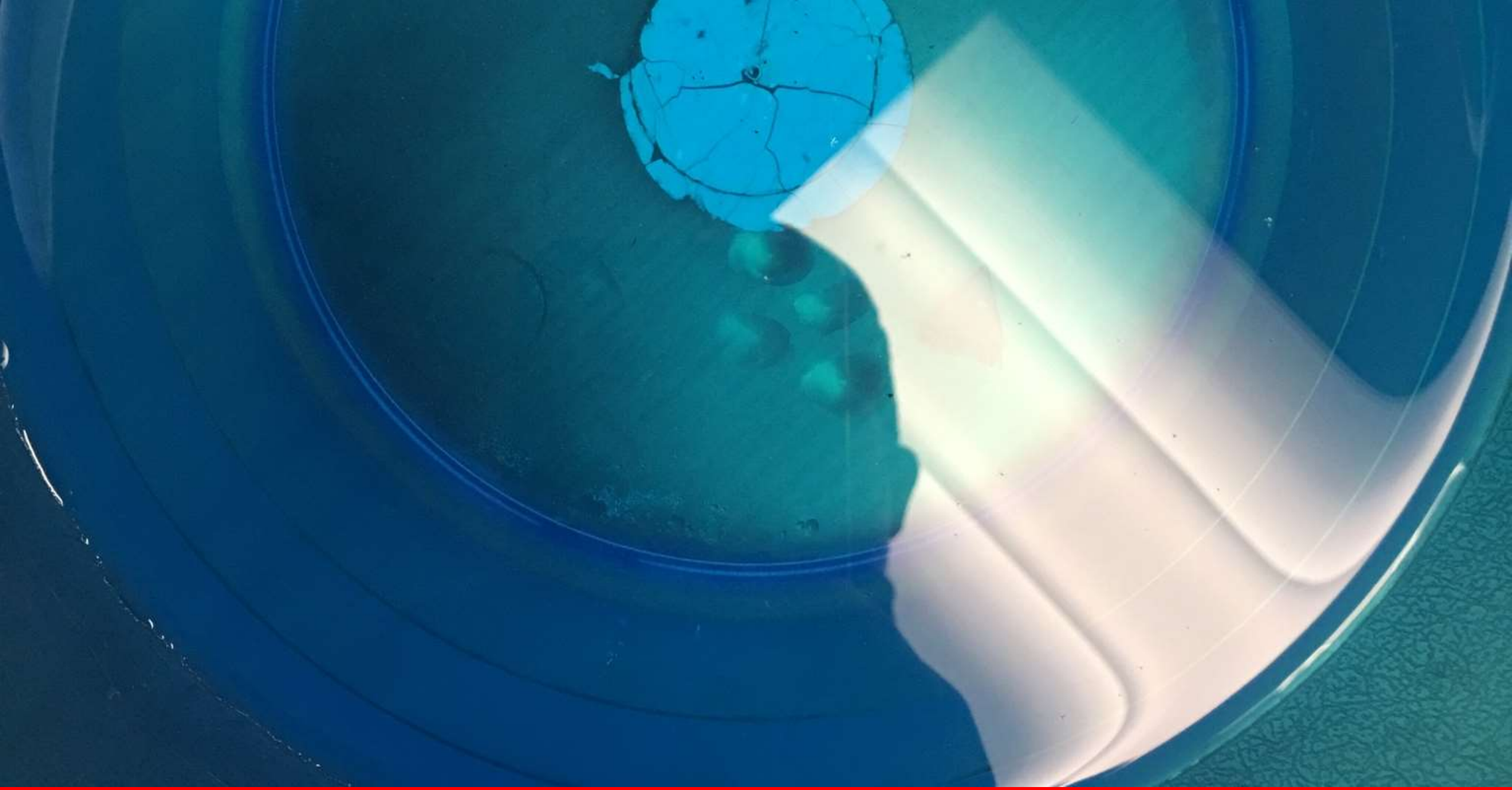


Ice Machines

Pop Machines

Drinking
Fountains





Apparatus Checks





Diesel Exhaust
on the Scene

Avoid storing
frequently used
items in
compartments
directly over the
diesel exhaust tip

Equipment in Compartments over Exhaust



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20

Keep living
quarters doors
shut.



Good Door Seal



Bad door seal



Propping doors open

Conduct
annual medical
and skin exams



Annual Wellness Exams

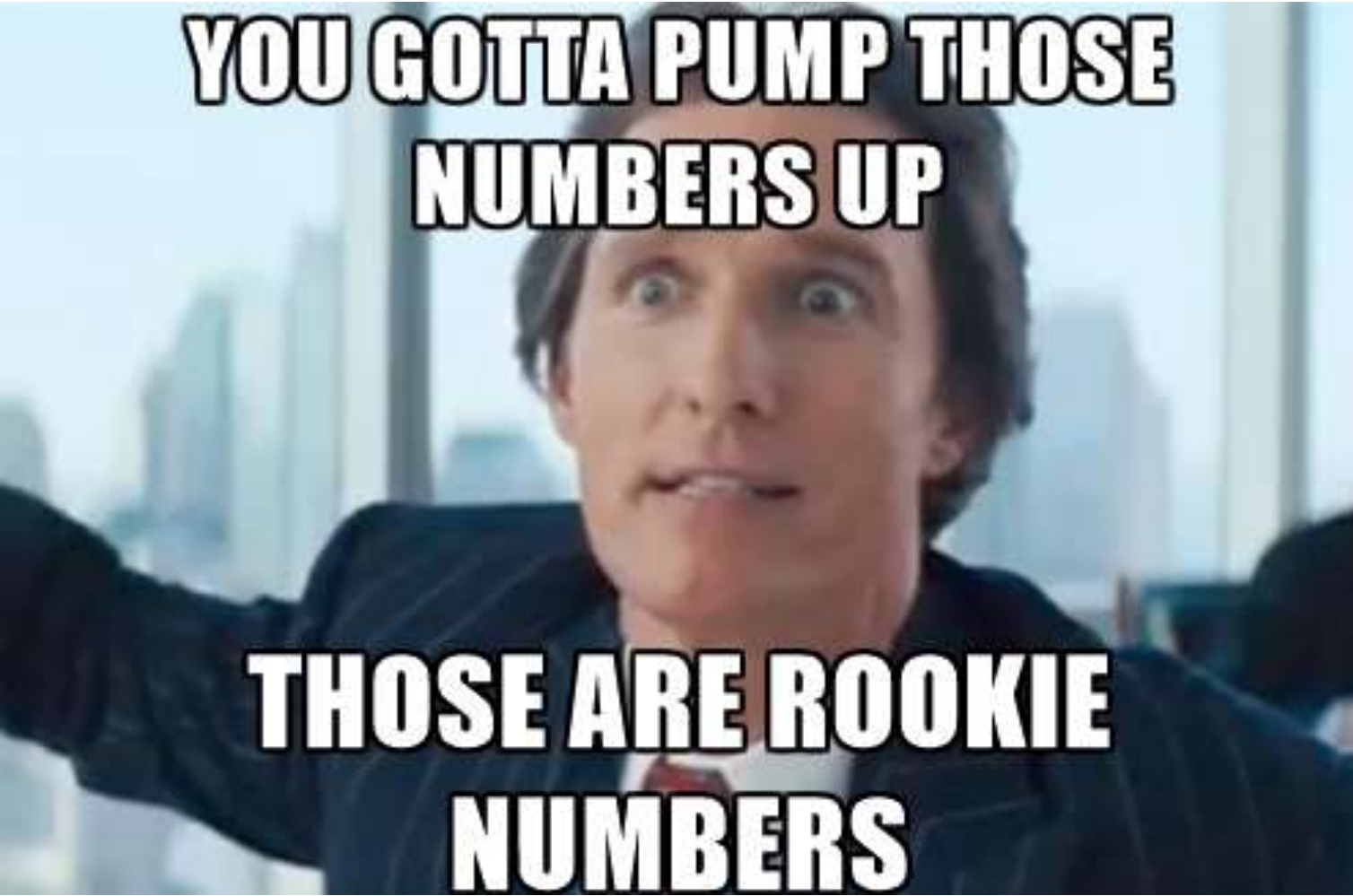
#HELPMARK

THE CAMPAIGN FOR SKNLUV

SKN
I ❤️ V



Skin Exams

A meme featuring a close-up of actor Matthew McConaughey. He has a wide-eyed, open-mouthed expression of surprise or awe. The background is a blurred cityscape seen through a window. The text is in a bold, white, sans-serif font with a black outline.

**YOU GOTTA PUMP THOSE
NUMBERS UP**

**THOSE ARE ROOKIE
NUMBERS**

Skin Exams

Use sunscreen
and wear a hat



Protect yourself
from the sun



Protect yourself
from the sun

Exercise and
eat healthy

Exercise



Nutrition

Make sure you are eating a well balanced diet

Eat foods which are high in fiber and antioxidants

Antioxidants have been found to be beneficial in the prevention of certain cancers



Nutrition

Food Pyramid

- More fruits, vegetables, and whole grains
- Less red meat, fried & fatty foods
- Avoid calorie dense, nutrient poor foods

- Portion control

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24

Avoid all
tobacco
products



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www.ArtStudioSeven.com

Tobacco Use
(photo courtesy
of Paul Combs)

Keep
documentation
of exposures
from fire calls

Exposure Reporting

Aggressively documenting your exposures may help you down the road fight for coverage if you are diagnosed with cancer

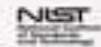
- Station Exposure Forms
- Web Based/Mobile Forms

Exposure Reporting

www.nfors.org



Remember: NFORS



URBAN
INSTITUTE

- Available for implementation – No Cost
- Schedule 1 hour Conference call with Chief (or designee) IT expert, CAD Manager, Others as appropriate
- Data exchange established regardless of system type
 - CAD
 - RMS
 - Data Warehouse

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In Closing



It's not all doom & gloom

Cancer is no longer a death sentence

In the early 1970's the five year survival rate for all invasive cancers was a dismal 43%

Today the five year survival rate for all cancers is 67%

“Cancer: More Americans are Surviving.”





The Big Picture

**The choices
you make in
this career will
have an impact
on you and
your family in
the future**





Remember....

Cancer does not discriminate

Protect yourself,

Protect **your family**

Shameless plugs

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[ABOUT US](#)[WHY THIS MATTERS](#)[PODCAST](#)[RESOURCES](#)[CONTACT](#)

AWARENESS. PREVENTION. SUPPORT.

WHO WE ARE

The Firefighter Cancer Consultants, LLC was established in late 2014. We have assisted Fire Departments throughout the country with their Firefighter Cancer Awareness, Prevention, and Support programs. The Firefighter Cancer Consultants, LLC specialize in evaluating Fire Departments through interviews, policy/procedure review, and station inspections. The information obtained is used to



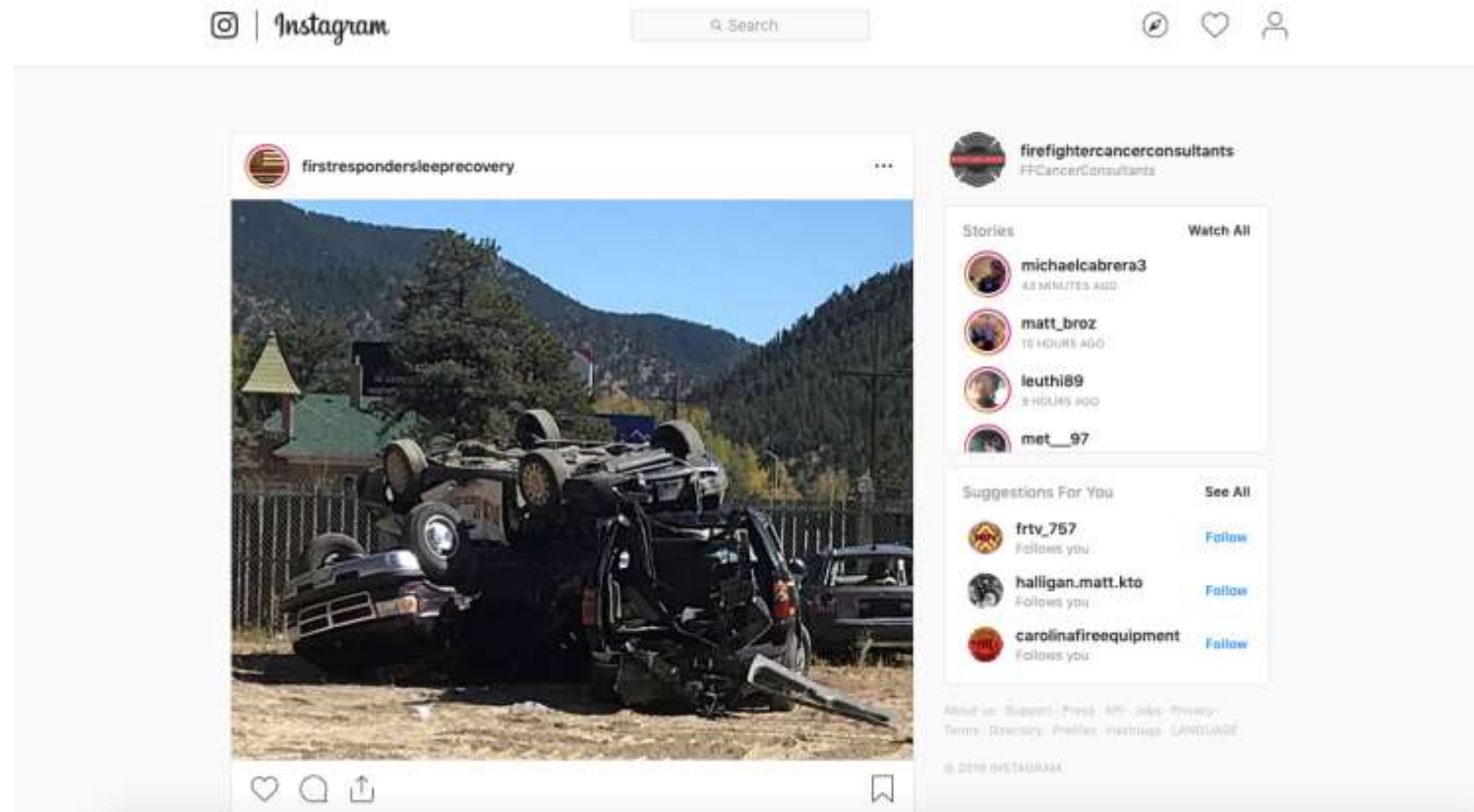
Facebook



Twitter



Instagram



Linkedin

The screenshot shows the LinkedIn profile of Firefighter Cancer Consultants, LLC. The page header includes the LinkedIn logo, a search bar, and navigation links for Home, My Network, Jobs, Messaging, Notifications, and Me. The profile banner is a red and black graphic with the text "FIREFIGHTER CANCER CONSULTANTS". The profile picture is a fire department emblem. The company name is "Firefighter Cancer Consultants, LLC", and the location is "Health, Wellness & Fitness · Beavercreek, Ohio · 36 followers". The bio states: "We assist Fire Departments with their Firefighter Cancer Awareness, Prevention, & Support initiatives." Below the bio are buttons for "+ Follow" and "Visit website". The left sidebar shows analytics for the last 30 days: 7 Unique visitors (+133%), 13 New followers (+225%), and 472 Post impressions (+2,384%). The main content area has a "Start a post" button and a section for "Updates" showing a post by Jim Burneka Jr. from 10/1/2019. The right sidebar has a "Community Hashtags" section and a "Messaging" button at the bottom.

in Q Search Home My Network Jobs Messaging Notifications Me Work Premium for free

Firefighter Cancer Consultants, LLC Admin view View as member

Page Content Suggestions Analytics Activity Admin tools

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Firefighter Cancer Consultants, LLC
Health, Wellness & Fitness · Beavercreek, Ohio · 36 followers

We assist Fire Departments with their Firefighter Cancer Awareness, Prevention, & Support initiatives.

+ Follow Visit website

Analytics
Last 30 day activity

Metric	Value	Change
Unique visitors	7	+133%
New followers	13	+225%
Post impressions	472	+2,384%

Start a post

Updates
Filter by: Page updates

Posted by Jim Burneka Jr. · 10/1/2019 · Boost

Firefighter Cancer Consultants, LLC
36 followers

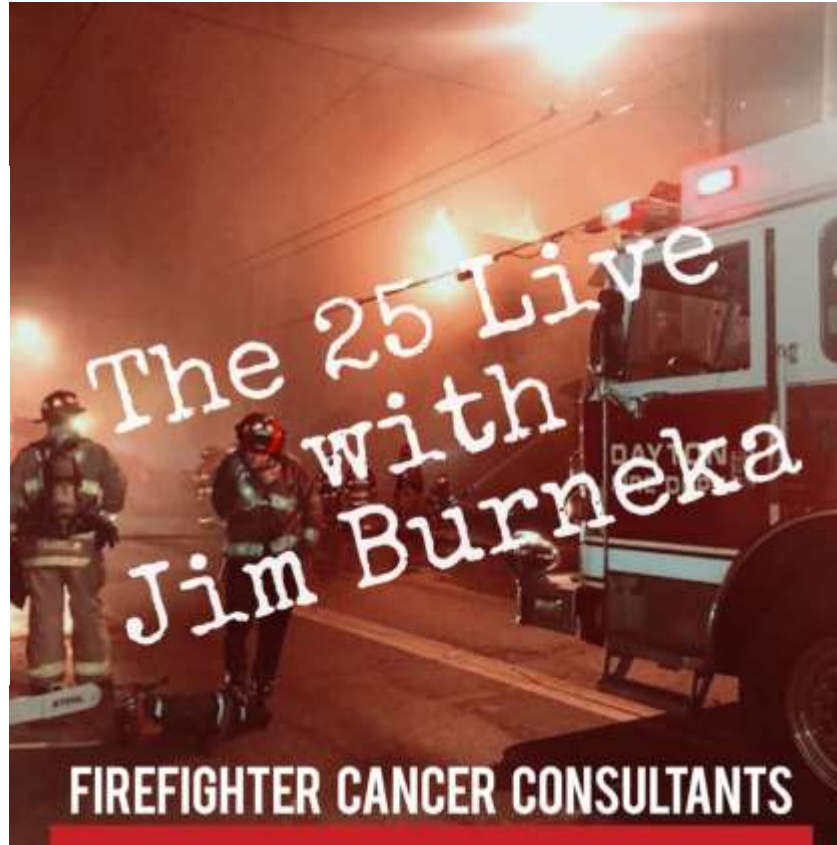
Community Hashtags

Add hashtags to like, comment and reshare on your feed.

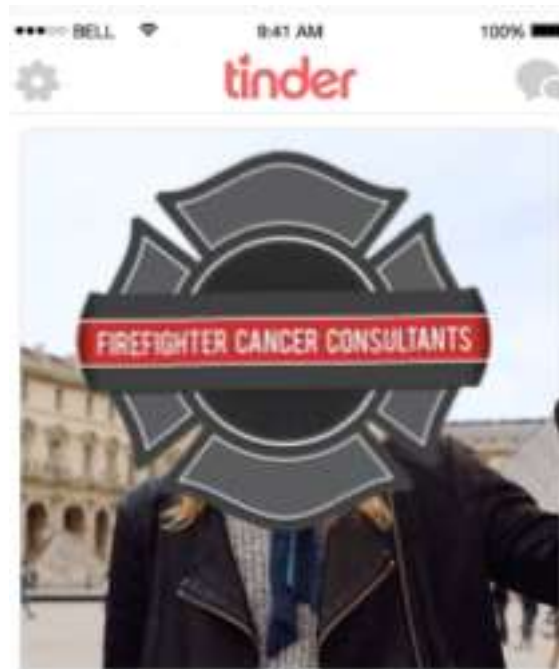
See what people are saying about Firefighter Cancer Consultants, LLC

Messaging

Podcast: “The 25 Live”



Tinder



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Thanks



www.FirefighterCancerConsultants.com

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