

Lavender Ribbon Report

BEST PRACTICES

for Preventing Firefighter Cancer



11 ACTIONS TO HELP MITIGATE
THE RISK OF CANCER



THIS PAGE INTENTIONALLY LEFT BLANK

BEST PRACTICE AUTHORS

Fire Chief James P. Seavey Sr.
VCOS
Joint Cancer Committee Co-chair
Cabin John Park Volunteer Fire Department, MD
mdfire0412@aol.com

Past Fire Chief Brian McQueen
NVFC
Joint Cancer Committee Co-chair
Whitesboro Volunteer Fire Department, NY
Best Practice 1
271believe@gmail.com

Scott Beecher
President, Ward Diesel
VCOS
Lavender Ribbon Report Chair
Horseheads, NY
Best Practice 9
Scott.Beecher@WardDiesel.com

Fire Chief Robert Logan
VCOS
Spring Fire Department, TX
Best Practice 2 & 6
Robert.Logan@springfd.org

Battalion Chief Seth Barker
VCOS
Big Sky Fire Department, MT
Best Practice 3 & 5
sbarker@bigskyfire.org

Fire Chief Juan Bonilla
NVFC
Donnelly Rural Fire Protection District, ID
Best Practice 4 & 8
dfc@frontiernet.net

Fire Chief Jeff Cash
NVFC
Cherryville Fire Department, NC
Best Practice 7
jcash@cityofcherryville.com

Fire Chief Reed Bullock
VCOS
Piperton Fire Department, TN
Best Practice 10 & 11
firecapt302@gmail.com

EDIT SUBCOMMITTEE

Fire Chief James P. Seavey Sr.
VCOS
Joint Cancer Committee Co-chair
Cabin John Park Volunteer Fire Department, MD

Past Fire Chief Brian McQueen
NVFC
Joint Cancer Committee Co-chair
Whitesboro Volunteer Fire Department, NY

Scott Beecher
President, Ward Diesel
Lavender Ribbon Report Chair
Horseheads, NY

Bob Thomas
Sales & Marketing Manager, Ward Diesel
Horseheads, NY

Fire Chief Norvin Collins
VCOS Board Member, Treasurer
Sauvie Island Fire District, OR

Fire Chief John M. Buckman III (Retired)
VCOS
German Township Volunteer Fire Department, IN

Jacqueline Moline, MD, MSc
Chair, Department of Occupational Medicine,
Epidemiology and Prevention
Zucker School of Medicine at Hofstra/Northwell Health
Director, Queens World Trade Center Clinical Center
Chair, FASNY Health and Wellness Committee

Gavin Horn, PhD
Director of Research, Illinois Fire Service Institute (IFSI),
University of Illinois at Urbana-Champaign



NVFC HEALTH, SAFETY & TRAINING COMMITTEE

Kenn Fontenot (Chair)
Louisiana State Firemen's Association
kickash750@cox.net

Tom Miller
West Virginia State Firemen's Association
tomfirerescue@msn.com

Paul Acosta (Vice Chair)
Colorado State Firefighters Association
paul.acosta@brushfd.com

Judy Thill
Minnesota State Fire Department Association
jthill@invergroveheights.org

Ken Brown
Virginia State Firefighters Association
kbrownret@aol.com

Jeff Cash (NVFC Board Liaison)
North Carolina State Firefighter's Association
jcash@cityofcherryville.com

David Bullard
Georgia State Firefighters Association
dbullard@columbiacountyga.gov

Heather Schafer (Chief Executive Officer)
National Volunteer Fire Council
hschafer@nvfc.org

Joel Cerny
Nebraska State Volunteer Firefighters Association
cerny_j@hotmail.com

NVFC Cancer Focus Area

Brian McQueen (Co-chair)
Firemen's Association of the State of New York
271believe@gmail.com

Ken Desmond
Maine State Federation of Firefighters Inc.
kdesmond49@comcast.net

James P. Seavey Sr. (Co-chair)
Maryland State Firemen's Association
mdfire0412@aol.com

Rusty Dunham
Wyoming State Firemen's Association
barnunnfire@aol.com

Jeff Cash
North Carolina State Firefighter's Association
jcash@cityofcherryville.com

Sara Garcia
Alaska State Firefighters Association
sgarciafd@aol.com

Dave Yurczyk
Minnesota State Fire Department Association
dave@davescustom.com

David Lewis
Maryland State Firemen's Association
dlewis@msfa.org

Brian McQueen
Firemen's Association of the State of New York
271believe@gmail.com



IAFC'S VOLUNTEER & COMBINATION OFFICERS SECTION (VCOS) BOARD

VCOS Executive Committee:

Chair

Chief Timothy S. Wall
North Farms (CT) Volunteer Fire Department
firewallco7@sbcglobal.net

Vice Chair

Chief Charles Flynn
Suffield (CT) Fire Department
cflynn@suffieldct.gov

Secretary/Treasurer

Chief Norvin Collins
Sauvie Island (OR) Fire District
norvin.collins@me.com

International Director

Chief Donna Black
Duck (NC) Fire Department
dblack@townofduck.com

VCOS At-Large Directors:

Chief Jason Catrambone
Williston (ND) Fire Department
jasonc@ci.williston.nd.us

Chief Jim Cook
Leesburg (VA) Volunteer Fire Company
jcook@leesburgfire.org

Chief Rich Cowger
Columbus (MT) Fire Rescue
rcowger@columbusfirerescue.com

Chief Ed Rush
Hartsdale (NY) Fire District
ERush@hartdalefire.org

Chief James P. Seavey Sr.
Cabin John Park (MD) Volunteer Fire Department
mdfire0412@aol.com

Chief Fred Windisch
Ponderosa (TX) Fire Department
FWindisch@ponderosavfd.org

Slide 1 Title - Best Practices

History Presentation - how the LRR was developed

Slide 2 Title - Surviving the Job

Objectives of the course

Slide 3 Lavender Ribbon Report Cover and poster

Slide 4 Jim Seavey Dedication

Dedication

The Lavender Ribbon Report is dedicated in the memory of Chief James P. Seavey Jr.

Jim Seavey's name was synonymous with volunteerism in the fire service. He served as the Maryland State Firemen's Association National Volunteer Fire Council representative. He was on the Board of the International Association of Fire Chief Volunteer and Combination Officers Section.

He previously served as president of the IAFC's Eastern Division.

In 2009, Jim was recognized by the IAFC as the Volunteer Fire Chief of the Year. He also received the Leslie B. Thompson Award for Lifetime Achievement by the Maryland Fire Chiefs Association, its highest honor. In 2018 he received the John M. Buckman III - Leadership Award.

Chief Seavey career spanned 42 years. He served as Fire Chief for Cabin John Park Volunteer Fire Department as well as a career firefighter for the D.C. Fire and EMS Department rising to the rank of Captain. He retired from the department in January 2016.

He was a fierce advocate for the volunteer fire service, He worked tirelessly to raise awareness of the need for **preventing cancer in firefighters**. Chief Seavey co-authored the Lavender Ribbon Report: Best Practices for Preventing Firefighter Cancer, published in August 2018 by the IAFC. Chief Seavey had a servant attitude and he was dedicated, humorous, and a courageous leader.

Slide 5 Lavender Ribbon Report Authors

Scott Beecher

- VCOS Cancer Committee Sponsor Member (R & D, Marketing and Committee Strategy)
- VCOS – Assists in the coordination of all sponsors for VCOS Symposium
- VCOS West – Key Sponsor – one of the first sponsor initiating the program
- NVFC – Sponsor Member
- Lavender Ribbon Report – 11 Best Practices for Firefighter Cancer Prevention Chair, Author and Steering Committee Member
- IAFC – Current Member as a Health & Safety Products Manufacturer
- IAFC - FSTAR Health & Cancer 360 – Get Checked Campaign Key Supporter

- Metropolitan Fire Chiefs – Gold Level Sponsor
- FAMA – Current Member as a Health & Safety Products Manufacturer of equipment for emission systems within apparatus
- FAMA – Technical Committees for both Chassis and ARFF
- Fire Service Conference and Trade Event Sponsors – Participate in over 70 Fire Chief Conferences, Seminars and Trade Events annually

Robert Logan practically grew up in a fire station. He fulfilled his childhood dream when he began his firefighting career in 1995. He has previously held the ranks of Lieutenant, Captain and Fire Marshal while serving as a volunteer with the Ponderosa Fire Department. Robert joined Spring Fire Department in August of 2010 as Training District Chief. After serving as Deputy Chief over Personnel and Development, Robert is now the Assistant Fire Chief and a board member of the Spring Volunteer Fire Association. Robert is a certified paramedic with a BS in Fire Science from Columbia Southern University. He is a certified Chief Fire Officer from the Center Public Safety Excellence. He is also a graduate of the Texas A&M Mays Business School Fire Service Chief Executive Officer program, a Fire Officer IV and Master Fire Instructor. Robert is currently pursuing a Master's degree. When not serving the public, Robert enjoys quality time with his wife, Lorilyn, and their two daughters, Addison and Ellie. He enjoys all things Texan such as country music, playing his acoustic guitar and watching the Houston Astros win. Robert works hard to empower the firefighters and support team. As Assistant Fire Chief, he follows the Richard Branson method. "Employees come first. If you take care of your employees, they will take care of the clients."

Seth Barker is a Battalion Chief and Training Officer for the Big Sky Fire Department in Big Sky, MT. Chief Barker is a Logistical Coordinator for FireFighterCloseCalls.com and has contributed to the 13 Life Safety Initiatives for the National Fallen Firefighters Foundation. He sits as the Vice-Chair for the Volunteer Combination Officer Section for the International Association of Fire Chiefs Cancer Alliance Committee. Barker is one of the contributing authors for the Lavender Report issuing the 10 Best Practices of Cancer Prevention in the Fire Service. He is a featured author in Fire Rescue Magazine over the past 4 years and delivers multiple courses on preplanning your community in an all hazard discipline environment. Barker holds the Liver Fire Instructor certification and the Training Officer Credential through the International Society of Fire Service Instructors (ISFSI). He is part of the curriculum development team that produced projects funded by the American Fire Grants with partnerships with Underwriters Laboratories and ISFSI that included Principals of Modern Fire Attack, Safe Law Enforcement Fire Ground Operations, and recently Understanding and Fighting Basement Fires. Barker is a Blue Card Instructor, has served as an instructor for the Montana State Fire Service Training School, and is a Modern Fire Behavior Instructor. He serves as the 2nd Vice President for the International Society of Fire Service Instructors. Chief Barker holds the Fire Officer and Chief Training Officer Designation from the Center of Public Safety and Excellence. He recently received the Jim Blankenship Award from the Montana State Fire Chiefs Association for excellence in Fire Training.

Juan R. Bonilla, was appointed the Fire Chief for the Donnelly Rural Fire Protection District in June, 2007 and have been a member for 22 years. I am a Persian Gulf veteran (Desert Storm) who served four years in the U.S. Navy as a petty officer 3rd Class. As a submariner, I trained in fire suppression, flooding, damage control, communications, and CBRNE (Chemical, Biological, Radiological, Nuclear high yield Explosives) including explosive ordnance detail teams both conventional and nuclear. I have served the DRFPD since 1996. During my time with DRFPD, I have managed the implementation of the current fire and EMS training programs and twenty-four-hour station coverage. I am a state firefighter essentials instructor and have held the positions of Fire Captain/Training Officer and the Assistant Chief. Since being appointed, I have been active in local, state, and national government. I serve on the National Volunteer Fire Council Executive Committee Board, the EMS/R Section as Chairperson, Recruitment and Retention Vice-Chairperson, a member of the Cancer Awareness and Prevention Committee, a member of steering committee for Advocates for Fire-Based EMS, a member of the National Fire Protection Association First Responder Forum, and the Diversity and Inclusion Chairperson. I also am a co-director of the Idaho Volunteer Fire and Emergency Services Association, as a state Director with NVFC. I also hold the position of Valley County Emergency Manager. I have been an EMR, EMT, and AEMT since 1997.

Slide 6 Firefighter Cancer Support Network Report Cover and Poster

Slide 7 **Instructor Introduction**

Slide 8 **Second Instructor Introduction**

Slide 9 VCOS Mission - Vision

Instructor Notes

Mission

To provide chiefs and chief officers who manage volunteers within a volunteer or combination fire, rescue or EMS delivery system with information, education, services and representation to enhance their professionalism.

Vision

To represent the interests of all volunteer and combination fire/rescue/EMS agencies. We will be a dynamic organization, characterized by our integrity, customer focus and membership development, with value placed on people and the superior utilization of technology. We will excel by creating educational programs, through unrivaled networking, and by helping VCOS members further their success and reach their potential.

Slide 10 and Slide 11 IAFC Academy

Slide 12 NVFC Mission - Vision

Instructor Notes

Our Mission

The mission of the NVFC is to provide a unified voice for volunteer Fire/EMS organizations.

What We Do

The NVFC accomplishes its mission and provides meaningful support to fire and EMS organizations through a wide range of services and programs:

- **Representing** the interests of the volunteer fire, emergency medical, and rescue services at the U.S. Congress, federal agencies, and national standards setting committees
- Focusing on **health** and **safety**
- Helping departments recruit and retain **Fire Service** and **EMS/Rescue** personnel
- Providing training on topics that matter to you (**Fire Service** and **EMS/Rescue**)
- Assisting departments in establishing **support programs**
- Fostering the **next generation of firefighters**

Our many programs include:

- **Fire Corps**
- **Heart-Healthy Firefighter Program**
- **National Junior Firefighter Program**
- **Make Me A Firefighter volunteer recruitment program**
- **Share the Load**
- **Wildland Fire Assessment Program**

NVFC members also receive a wide range of benefits, including a \$10,000 AD&D insurance policy, access to members-only resources, discounts on training and fire service products, and much more. **Learn more about NVFC membership and join today.**

Slide 13 NVFC Online Learning

Slide 14 Epidemic Threat 1

Slide 15 Epidemic Threat 2

Instructor Notes - It's 2019 and the risk to firefighters health is increasing exponentially daily. The chemical makeup of the material that is burning from inside is more deadly today than a short time ago. Will you survive the job? You can! You must be smarter and more aware of the risks associated with being a firefighter. It is not just fires. There are chemicals that are used in our daily lives that create additional risk to firefighters.

ASK ATTENDEES IF THEY KNOW A FAMILY MEMBER WHO HAS CONTRACTED CANCER?

FIREFIGHTER? What were the results? What are some of the challenges that were faced by the family? What are some of the challenges faced by the one who had the cancer?

Slide 16 Introduction - Fire Chiefs/Officers are aware of their duty and responsibility to have appropriate policy and procedures, that are enforced to reduce firefighters exposure to carcinogens.

Instructor Notes - Do not read the notes exactly but the Instructor should be thoroughly familiar with the material in the Instructor Guide and the Lavender Ribbon Report.

Introduction

Fire Chiefs/Officers are aware of their duty and responsibility in reducing exposure to carcinogens.

Fire Chiefs/Officer understand their duty to enforce policy and procedures.

Fire Chiefs/Officer know their policy and procedures related to reducing risk to carcinogens.

Best practices for policy and procedures.

Cardiac/Cancer statistical relationship.

Define the toxins and other carcinogenic agents that are emitted during a fire incident.

Define hot zone, warm zone, cold zone.

Keep contaminated PPE out of the fire station living quarters, personal vehicles and homes.

Set the example -

Video from Megan in Florida

Video from Miami about powder on the kids

Slide 17 Occupational Cancer

Instructor Notes - Do not read the notes exactly but the Instructor should be thoroughly familiar with the material in the Instructor Guide and the Lavender Ribbon Report.

Slide 18 Cancer Studies

Instructor Notes - Do not read the notes exactly but the Instructor should be thoroughly familiar with the material in the Instructor Guide and the Lavender Ribbon Report.

Slide 19 Cancer Studies

Instructor Notes - Do not read the notes exactly but the Instructor should be thoroughly familiar with the material in the Instructor Guide and the Lavender Ribbon Report.

<https://www.nfpa.org/-/media/Files/Code-or-topic-fact-sheets/FactSheetFFLungCancer.pdf>

<https://www.firerescuemagazine.com/articles/print/volume-9/issue-12/command-and-leadership/cancer-and-the-fire-service.html>

<https://www.firstrespondercenter.org/cancer/research/>

Firefighter Cancer Support Network - Instructor Manual. Page 15

Dr. Grace LeMasters

Majority of study relied on death certificates.

20 cancers were identified - multiple myeloma, Non-Hodgkin lymphoma, prostate, testis, skin, malignant melanoma, brain, rectum, buccal cavity and pharynx, stomach, colon, leukemia, larynx, bladder, esophagus, pancreas, kidney, Hodgkin's disease, liver, and lung.

The chart indicates those cancers that are probable or significantly more likely to develop in firefighters.

Slide 20 Cardiac vs Cancer

Instructor Notes - Do not read the notes exactly but the Instructor should be thoroughly familiar with the material in the Instructor Guide and the Lavender Ribbon Report.

Firefighter Cancer Support Network - Instructor Manual. Page 10

Since 2002, 63% of the firefighters on the IAFF Fallen Fire Fighter Memorial Wall of Honor have died from cancer.

Slide 21 It's In The Smoke

Instructor Notes

Define the toxins and other carcinogenic agents that are emitted during a fire incident.

These are just a couple of chemicals that are in structural fire smoke.

Acrolein. Acrolein produces intense irritation to the eye and mucous membranes of the respiratory tract. Acute exposures may result in bronchial inflammation, resulting in bronchitis or pulmonary edema. CO is present in all fire environments as a product of incomplete combustion and decreases the oxygen transport of the blood, which results in an inadequate supply of oxygen to the tissues.

Formaldehyde. Formaldehyde is classified as a probable carcinogen and adverse health effects due to formaldehyde may occur after exposure by inhalation, ingestion or skin contact. Eye irritation can occur at concentrations of 0.01-2.0 ppm, irritation of the nose and throat at 1.0-3.0 ppm, and severe respiratory symptoms at 10-20 ppm.

Glutaraldehyde. Glutaraldehyde is a potent sensory irritant with the capability to cross-link or fix proteins.

In a report published in 2011, "A Study on Chemicals found in the Overhaul Phase of Structure Fires using Advanced Portable Air Monitoring available for Chemical

© 2019 Volunteer

Speciation,” researchers focused on direct gas readings during overhaul, measuring these gases over an extended period in comparison to CO, and compiling data to understand post-fire event airborne hazards.

<https://www.oregon.gov/osp/SFM/Documents/AirMonitoringReport.pdf>

Slide 22 Actions Reduce Carcinogen Exposure

- **Keep your mask on.**
- **Remove contaminated gear as soon as possible.**
- **Clean your neck, face, arms and groin thoroughly after each fire.**
- **Shower, scrub and change into a clean uniform/clothes.**
- **Regularly launder turnout gear and wash hood at least weekly**

Instructor Notes

A recent NIOSH study confirms more than two-thirds of firefighters develop cancer versus less than a quarter of the general population. In particular, firefighters have a higher risk of respiratory, digestive and bladder cancers.

Carcinogens abound on any active fireground, and the increased use of synthetic materials and plastics in construction and furnishings means increased exposure to harmful chemicals like benzene and formaldehyde from burning walls, insulation and furniture. These substances may be inhaled or absorbed through the skin. “In this day and age, it should be common knowledge. This shouldn’t be a secret.”

Remove contaminated gear as soon as possible.

Clean on the scene.

It’s important to note here that although a recent AFG/CDC study found that scrubbing turnout gear with soap and water can reduce PPE contamination by 85 percent, this process does not neutralize or eliminate carcinogens – it simply removes them to the wash water or runoff, which still contains the hazardous chemicals.

Also, be sure to put on fresh clothing. Whatever you were wearing under your turnout gear needs to go in the wash.

Regularly launder turnout gear and wash your fire hood at least once a week (better yet, after every fire). Make and stick to a schedule to be sure your gear is decontaminated. It’s best to have two full sets of PPE and two hoods for every firefighter so that you can rotate.

If you launder the gear in house, use a detergent that decontaminates and is tested and certified safe by NFPA standards for PPE, including fabrics, tape and liners.

Of course, healthy habits like exercise, eating veggies and lean meats and wearing sunscreen will also help. But thorough cleaning and decontamination of PPE to get rid of the contaminants known to cause cancer will go a long way to ensuring a long career and a healthy retirement.

On the Fireground

- **Keep your mask on.** Respiratory cancers are among the most common cancers among firefighters. Always wear your SCBA to avoid inhaling toxins, even when working on the edge of the fireground or during overhaul.
- If you are smelling smoke - “In this day and age, it should be common knowledge. This shouldn’t be a secret.”

- **Remove contaminated gear as soon as possible** and **store it in dedicated containers** away from the rehab area. Keep soiled PPE out of the apparatus cabin, ambulance and personal vehicles – as well as your station living quarters – to avoid contaminating these areas.
- **Clean on the scene.** Wash and decontaminate your PPE, your tools and your body as soon as possible after each fire, starting on scene. It's important to note here that although a recent AFG/CDC study found that scrubbing turnout gear with soap and water can **reduce PPE contamination** by 85 percent.
- **Clean your neck, face, arms and groin thoroughly after each fire.** These are areas with lots of blood vessels where particulates tend to collect. It was once considered a badge of honor for a firefighter to come home with a sooty face, but we know better now. Take care to remove this threat to your health as soon as possible.

At the Station

- Cleaning with soap and water on the fireground is an important first step, but it only moves the majority of the carcinogens off your gear. Get rid of the rest with a thorough decon back at the station.
- **Shower, scrub and change into a clean uniform.** Using cleansing wipes for your face, hands, etc. on scene is an important first step, but that isn't near enough to thoroughly cleanse your body of the toxins from a fire. Put on fresh clothing. Whatever you were wearing under your turnout gear needs to go in the wash.
- **Regularly launder turnout gear and wash your fire hood at least once a week** (better yet, after every fire). Make and stick to a schedule to be sure your gear is decontaminated. It's best to have two full sets of PPE and two hoods for every firefighter so that you can rotate.

Slide 23 Future Fire Chief

Instructor Notes

Don't stick your head in the sand - action is required.

Slide 24 Family Matters

Exposing yourself unnecessarily to carcinogens places your family well being at significant risk.

If you really enjoy being a firefighter then the actions you take should be to prolong this enjoyable experience.

It is not just about you!

There are many people who depend on you. Family, spouse, kids, parents, siblings, friends and acquaintances.

How cancer affects your family?

Untold ways - rest assured it is immense - time / stress / anxiety / interdependence / hospital stays / doctor visits / loss of dignity in some cases / etc.

Be a HERO - for your family!

We believe that firefighters perform heroic acts of Bravery and Courage while serving and protecting the public. Why shouldn't you take personal responsibility to perform a "heroic act" for yourself and your family.

Slide 25 Funeral

Instructor Notes

Do you really think the spouse will be happy with their life?

Why should they have to suffer because their firefighter would not take the adequate steps to protect themselves from carcinogens.

Slide 26 and Slide 27 - Have you ever heard...?

Instructor Notes

Don't give in. Don't give up your intention of eliminating undesirable conduct.

The battle to reduce carcinogenic exposures is a long term one. It will require commitment to adhere to the policies that promote reduction that include the 11 Best Practices spelled out in this report.

Someone on each department needs to become the advocate for safe fireground operations that promote long term health and survival.

We are sometimes our own worst enemies. We believe we are invincible and then when it is too late we regret our actions that got us into the trouble we are in.

One underlying problem is that there are a great many reasons why people hesitate to intervene, or to report behavior they find to be unacceptable or unlawful. Officers don't want to act as officers. Officers want to be popular.

Slide 28 - Overcoming Negativity

Instructor Notes

Review the words on the slide and discuss how to combat the negativity.

Leadership will be required.

Commitment

Perseverance

Discipline is a part of performance.

Negative experiences tend to exert greater psychological impact on us than positive experiences of the same magnitude. A moment of profound sadness, for instance, is usually more disruptive to one's day than an equal moment of happiness.

This bias explains why **traumatic experiences linger longer** and fester in our thoughts while our most gleeful moments quickly fade into distant memories. It also explains why it takes more work to get away from a bad first impression than it takes to lower a good one. But what is the point, why do we have negativity bias?

The Purpose of the Negativity Bias

Its a product of our evolution. As it turns out, the negativity bias aided our ancestors in making intelligent decisions in high-risk situations, which in turn increased the likelihood of their survival long enough to pass on their genes.

Our ancestors survived by approaching pleasant stimuli, like a carrot, and avoiding unpleasant stimuli, like an incoming stick. They eventually began to discern that avoiding a stick, and subsequent injury or death, was far more important than picking a carrot. As this **bias for negative stimuli** developed, our brain structure slowly adapted and eventually, we became wired to pay more attention to negative information.

How We Can Overcome the Negativity Bias

It may have served our ancestors to focus on the negative, however in this modern age we are not necessarily helped by finding every fault or threat in our daily environment, so how can we rid ourselves of the negativity bias?

Well, we are not be able to undo this evolutionary development, but we can restore balance in our lives by changing the way we interact with positive stimuli. Rick Hanson (2011) calls this process “taking in the good” and he recommends this three-step process, which when used habitually, can alleviate the stress and pain that come with focusing on the bad.

Slide 29 - Creating Positivity

Instructor Notes

Review the words on the slide and discuss how to combat the positivity.

Leadership will be required.

Commitment

Perseverance

Discipline is a part of performance.

3 Simple Steps to Overcome Your Negativity Bias

1. “Look for good facts, and turn them into good experiences.”

Make a conscious effort to look for positive aspects of every experience. Take active measures to notice the good in both the world and in yourself. As you do this, pay attention to any resistance you encounter within yourself and acknowledge any instinctual attempts to dismiss or deny these positive feelings, but choose not focus on them. Practicing this at least a half dozen times a day, can quickly turn it into a habit.

2. “Savor the experience.”

Attend to positive experiences. Give yourself ample time (at least twenty to thirty seconds) to fully enjoy that moment. By elongating our positive sensations, we allow more neurons to fire and wire together in response to the stimulus. This solidifies the experience in our memory. We are predisposed to collecting and clinging to negative

memories, but we can counteract this by intentionally developing a more diverse and deeply rooted base of positive memories. As we fill our memory with more positive experiences, through savoring, we become less reliant on external positive stimuli.

3. “Intend and sense that the good experience is sinking into you.”

This is where your mindfulness practice can come in handy, by becoming aware of the different ways in which a positive experience affects you. Identify the emotions involved. Visualize the positivity spreading throughout your body. Consider the brain’s plasticity as neurons fire and wire together. When we consciously interact with our positive experiences, we can strengthen their neurological presence in our brains.

In the face of fear and sadness, we should remind ourselves that our brains have evolved to prefer negative experiences and readily store negative memories for our own survival. When various stimuli trigger such emotions, we should consider their validity and make active efforts to learn about the specific ways in which we interact with them. Hanson emphasizes the importance of accepting that negativity is an inherent part of the human experience, alongside practicing his steps mentioned above. Rather than denying or bemoaning our negativity bias, he advises that we be mindful of it and always aim to better our understanding.

Slide 30 - Transformation is a process.

Slide 31 What would you do?

The purpose of each of these activities is to create discussion about the actions necessary when safety violations are observed.

The correct answer for each of these is to take immediate action to correct the situation. This action is done in a diplomatic, coaching format the first time. If there are subsequent issues in performance for the same action then appropriate disciplinary action should be taken in accordance with department policy.

Slide 32 What would you do?

The purpose of each of these activities is to create discussion about the actions necessary when safety violations are observed.

The correct answer for each of these is to take immediate action to correct the situation. This action is done in a diplomatic, coaching format the first time. If there are subsequent issues in performance for the same action then appropriate disciplinary action should be taken in accordance with department policy.

Slide 33 What would you do?

The purpose of each of these activities is to create discussion about the actions necessary when safety violations are observed.

The correct answer for each of these is to take immediate action to correct the situation. This action is done in a diplomatic, coaching format the first time. If

there are subsequent issues in performance for the same action then appropriate disciplinary action should be taken in accordance with department policy.

Slide 34 What would you do?

The purpose of each of these activities is to create discussion about the actions necessary when safety violations are observed.

The correct answer for each of these is to take immediate action to correct the situation. This action is done in a diplomatic, coaching format the first time. If there are subsequent issues in performance for the same action then appropriate disciplinary action should be taken in accordance with department policy.

Slide 35 What would you do?

Instructor Notes - The politics of safety.

The purpose of each of these activities is to create discussion about the actions necessary when safety violations are observed.

The correct answer for each of these is to take immediate action to correct the situation. This action is done in a diplomatic, coaching format the first time. If there are subsequent issues in performance for the same action then appropriate disciplinary action should be taken in accordance with department policy.

Slide 36 - Normalization of Deviance

Instructor Notes

Many of us remember the NASA shuttle Challenger orbiter mission that broke apart 73 seconds into its flight, killing all seven crew members. The spacecraft disintegrated over the Atlantic Ocean, off the coast of Cape Canaveral, Florida. The disintegration of the vehicle began after a O-ring joint in its right solid rocket booster failed at liftoff allowing pressurized burning gas from within the solid rocket motor to reach the outside and impinge upon the adjacent solid rocket booster. The Rogers Commission found NASA's organizational culture and decision-making processes had been key contributing factors to the accident, with the agency violating its own safety rules. NASA managers had known for 9 years of a potentially catastrophic flaw in the O-rings, but they had failed to address this problem properly.

Bad actions don't always come from poor procedures or inadequate training. Bad actions evolve naturally within companies/departments over time in many cases due to inadequate supervision. Many times normalization of deviance occurs without anyone noticing. Normalization of deviance is a concept developed by the American Sociologist Diane Vaughn.

She developed this theory when looking at where conflicts, mistakes and disasters find their roots. She holds that the source of these phenomena lies in the environments in

which they occur. Organizational factors are, for Vaughn the key drivers behind moments where conflicts, mistakes and other disasters arise. Cancer is a disaster to firefighters.

Slide 37 Normalization of Deviance

Instructor Notes

Cancer is a disaster to firefighters.

What are the fire service examples of normalization of deviance. There are a few on the screen but I am sure you can identify several more from your experience.

“Social normalization of deviance means that people within the organization become so much accustomed to a deviant behavior that they don’t consider it as deviant, despite the fact that they far exceed their own rules for their safety”

Communications is the key to fighting deviance behavior. Supervisors have to be diligent in their observation of behaviors to insure the right behavior is performed at the right time for the right reason. Training officers conducting in-service training drills must be vigilant in observing drills being performed are performed to the appropriate level.

Each of us have normalized deviance behavior in our mind. We have justified the shortcut in our mind. Our mind then believes that shortcut is the right thing to do and when confronted with similar situations our mind leads us down the path of inappropriate behavior.

Slide 38 - Tipping Point

Instructor Notes

If we believe that occupational cancer is occurring at epidemic proportions then immediate and aggressive actions must be taken by all involved in the protection of life and property from fire. The stakeholders are immense within each community they include the family of firefighters, firefighters, elected officials and all citizens who reside, work or visit.

In the book “Tipping Point” by Malcom Gladwell he describes the "three rules of epidemics" (or the three "agents of change") in the tipping points of epidemics.

"The Law of the Few" is "The success of any kind of social epidemic is heavily dependent on the involvement of people with a particular and rare set of social gifts”.

80/20 Principle, which is the idea that in any situation roughly 80 percent of the 'work' will be done by 20 percent of the participants”

The Stickiness Factor refers to the specific content of a message that renders its impact memorable. Popular children's television programs such as Sesame Street and

Blue's Clues pioneered the properties of the stickiness factor, thus enhancing effective retention of educational content as well as entertainment value.

We can't beat people over the head with cancer issues? We have to convince them that it is in their best interest to comply with policies and procedures.

The Power of Context

Human behavior is sensitive to and strongly influenced by its environment.

Certain types of people are key to the dissemination of information. We need strong advocates within our organization and outside our organization who will champion firefighter survival. These advocates will come from a diverse background who will speak to the issue of firefighter survival. Firefighters will have to change their attitude and actions as well. What is the risk? What is the outcome? We will have to look internally to say is there a better way to suppress this fire? Reducing exposure to carcinogens is in everyone's best interest.

Slide 39 - Tipping the Culture

Instructor Notes

Without buy-in by the department the chances of emotional health being embraced as a necessary part of overall firefighter health are slim to none.

How do you get buy in?

One theory to Tip the Culture is to have message carriers who advocate safer fireground operations. These advocates will not be sitting in a very popular situation because after all they might be asking firefighters to examine the risk they are confronting and use different strategies and tactical applications than they did in the past. Firefighters must be aggressive in applying tactical operations. What is the risk in extinguishing a fire in an unoccupied or abandoned building. Is it worth the immediate risk but is it also worth the long term risk from exposure to carcinogens. The fire service should consider increasing efforts to prevent fires before they start. An expanded public education program to reduce the frequency of fires as well as to advocate the installation of residential sprinklers.

Who needs to carry the message:

The Chief

The Officers

The Firefighters

Elected officials

General public

All of the above

Slide 40 - Command Chart

Instructor Notes

Command charts help you make the right decision on the fireground.

Reducing carcinogen exposures will require resources and benchmarks to measure the effectiveness.

Just like an incident commander needs a command chart to effectively manage an incident this command chart is offered as a checklist of actions to consider in reducing firefighters unnecessary exposure to carcinogens.

We offer this command chart to assist you in evaluating your current status, possible actions expected and other tactical application of those evaluations and actions.

There is no one way to reduce the cancer epidemic in the fire service. It will take a considerable team effort with everyone pulling the rope in the same direction. There will be times when the rope may break from the stress but it is our job as firefighters, officers and chiefs to pick up the rope and splice it back together to continue to make progress improving our firefighters personal health and wellness.