

LESSON FOUR

FIREFIGHTER

Health and Wellness for The Fire Service: Behavioral Health

DOMAIN: COGNITIVE

LEVEL OF LEARNING: COMPREHENSION

MATERIALS

IFSTA Essentials of Fire Fighting 6th Edition; Jones and Bartlett Fundamentals of Fire Fighter Skills, 3rd Edition; IFSTA Essentials of Firefighting, 6th Edition; International Association of Fire Chiefs, The Effects of Sleep Deprivation on Fire Fighters and EMS Responders, June 2007.

NFPA 1001, JPR 2013 Edition

5.1.1 The significance of physical fitness and a healthy lifestyle

Junior Member Statement:

Junior Member training activities should be supervised by qualified instructors to assure that the cognitive and psychomotor skills are completed in a safe and non-evasive manner. While it is critical that instructors be constantly aware of the capabilities of all students both mentally and physically to complete certain tasks safely and successfully, the instructor should take every opportunity to discuss with departmental leaders and students the maturity and job awareness each participant has for the hazards associated with fire and rescue training.

TERMINAL OBJECTIVE

The Firefighter Candidate shall identify and describe in writing, the effects of stress and sleep deprivation on health and job performance, as well as methods of mitigating the effects of chronic stress.

ENABLING OBJECTIVES

1. The Firefighter Candidate shall identify and describe the impacts of emotional and mental stress on the emergency responder.
2. The Firefighter Candidate shall list the methods of mitigating stress and the importance of stress management in relation to job performance and personal relationships.
3. The Firefighter Candidate shall identify and describe the causes and impact of sleep deprivation in emergency responders, as well as describe methods of achieving adequate sleep.

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Health and Wellness for the Fire Service: Behavioral Health

MOTIVATION

The fire service is known as a profession that requires a great deal of physical and emotional energy from its members. We often tend to focus on the physical energy required of firefighting more than we do the emotional energy. This is an area of health that must be addressed and cared for in order to ever attain the high levels of wellness needed to be considered a truly health conscious and safety promoting industry. Our members can have the best exercise equipment, eat the most nutritious meals, and look like Olympic athletes; however, if they are not caring for their mental and emotional health, serious complications will develop. It is essential for every member of the fire service to understand the impact stress will have on their wellbeing throughout the course of a career. More importantly, firefighters should make every effort to learn and practice various methods of stress management and mitigation.

PRESENTATION

ENABLING OBJECTIVE #1

The Firefighter Candidate shall identify and describe the impacts of emotional and mental stress on the emergency responder.

1. An essential part of overall wellness includes maintaining mental health.
2. In order for firefighters to perform safely and efficiently on the job and enjoy life outside of work, it is vital for

them to balance the mental, physical, and emotional stresses associated with firefighting.

3. Physical and emotional stress refers to the body's reaction to a stressor.
4. Discuss the various stressors faced day to day by emergency responders.
5. Emergency responders commonly deal with two types of stress:
 - a) Chronic Stress: the response to emotional pressure suffered for a prolonged period over which an individual perceives he or she has no control.
 - b) Acute Stress: an immediate psychological reaction to serious trauma or extraordinary events.
6. Studies have shown that heart rates of firefighters can reach near maximal levels just upon hearing an initial alarm. Adrenaline begins to rush throughout the body and continues to be produced until the conclusion of an incident. Over time, various internal body systems can become damaged by repeated exposure to such stress. This is an example of how repeated exposures to acute stressors evolve into chronic stress.
7. If a firefighter's ability to cope with stress becomes compromised, he or she may suffer from higher risks of injury, illness, and depression.
8. Stress can cause physical symptoms such as:
 - a) Nausea.
 - b) Frequent colds (suppressed immune system).
 - c) Pain in the chest, shoulders, neck, lower back.
 - d) Abdominal pain.
 - e) Inability to sleep or excessive sleep.
 - f) Loss of energy.
9. Stress can cause emotional symptoms such as:
 - a) Moodiness.
 - b) Irritability.
 - c) Feeling lonely or isolated.
 - d) Agitation, inability to relax.
 - e) Depression.

10. Stress can cause cognitive symptoms such as:
 - a) Memory problems.
 - b) Inability to focus or concentrate.
 - c) Poor judgment.
 - d) Dwelling on the negative.
 - e) Constant worry and anxiety.

11. Stress can cause behavioral symptoms such as:
 - a) Overeating.
 - b) Isolation from others.
 - c) Chronic procrastination.
 - d) Using alcohol or nicotine to relax.
 - e) Nervous habits.
 - f) Being easily confused.
 - g) Negative self-talk.
 - h) Difficulty making decisions.
 - i) Emotional outbursts.
 - j) Lack of sense of humor.

12. Chronic stress can affect the body's ability to regulate certain hormones and neurotransmitters that regulate mood and wellbeing. This can lead to mild or clinical depression.

13. Depression is increasingly becoming a concern for emergency responders. Discuss the common signs and symptoms of depression.
 - a) Difficulty concentrating.
 - b) Fatigue and decreased energy.
 - c) Feelings of guilt or worthlessness.
 - d) Feelings of hopelessness or pessimism.
 - e) Insomnia, early morning wakefulness.
 - f) Irritability.
 - g) Loss of interest in activities or hobbies.
 - h) Overeating or under eating.
 - i) Persistent aches or pains.
 - j) Persistent sad or anxious thoughts.
 - k) Thoughts of suicide.

14. Provide resources to the class for assistance with depression.
 - a) WebMD Depression Health Center
http://www.webmd.com/depression/guide/depression_support_resources

References:

IFSTA Essentials of Firefighting, 6th Edition: pages 52- 53.
Jones and Bartlett Fundamentals of Fire Fighter Skills, 3rd
Edition, page 29-30.

PRESENTATION

ENABLING OBJECTIVE #2

The Firefighter Candidate shall list the methods of mitigating stress and the importance of stress management in relation to job performance and personal relationships.

1. Lead a group discussion on how job stress can interfere with personal life, as well as how personal stress can interfere with job performance.
2. Discuss how an emotionally unfit firefighter may jeopardize the safety of themselves and other firefighters while on the job.
3. Visit the Firefighter Behavioral Health website and discuss the latest statistics on firefighter suicide. Lead a group discussion on recognizing warning signs of someone who may be considering such drastic action.
<http://www.ffbha.org>
4. Point out that maintaining optimum physical fitness can enable the body and mind to mitigate stress more efficiently than someone who isn't physically fit.
5. Exercise is one of the most effective ways to combat mental and emotional stress. It reduces stress hormones, such as adrenaline and cortisol, while elevating the body's production of endorphins (feel good hormones).
6. Using relaxation techniques are very effective ways to personally mitigate stress. Discuss the following types of relaxation techniques that are easy to learn and can be performed almost anywhere:
 - a) Deep breathing.
 - b) Meditation.
 - c) Progressive relaxation.
 - d) Yoga.
 - e) Listening to music.

7. Emergency service workers are notorious for working long hours and continuing to push themselves past points of extreme exhaustion. Discuss how important it is for responders to listen to their bodies and slow down or take breaks when needed. This goes for incident response activities, as well as balancing everyday life obligations.
8. Getting adequate sleep each day is essential to mitigating the effects of stress.
9. Discuss Employee Assistance Programs and how they can assist firefighters with obtaining counseling, support, or other assistance in dealing with physical, financial, emotional, or substance abuse problems.

NOTE: Instructors are encouraged to visit <http://flsi13.everyonegoeshome.com> for resources related to behavioral health of emergency responders.

References:

Jones and Bartlett Fundamentals of Fire Fighter Skills, 3rd Edition, pages 28-30.

IFSTA Essentials of Firefighting, 6th Edition, pages 52-54.

PRESENTATION

ENABLING OBJECTIVE #3

The Firefighter Candidate shall identify and describe the causes and impact of sleep deprivation in emergency responders, as well as describe methods of achieving adequate sleep.

1. Discuss why emergency services must provide 24/7 availability to the citizens we serve.
2. Discuss how changes in society through technology, culture, and work hours have negatively influenced the amount of sleep Americans receive each day.
3. Point out the fact that humans are naturally diurnal (day oriented) as opposed to nocturnal (night oriented); which means our physiological functions are geared towards daytime activity and nighttime rest.

4. The average adult requires 6-10 hours of sleep each day for optimal functioning.
5. Point out that a person can suffer from acute sleep deprivation if he or she receives less than 4-6 hours of sleep in a 24-hour period.
6. Chronic sleep deprivation occurs when individuals repeatedly do not get a quality night's sleep for several consecutive days. Research indicates that decreasing sleep time by one hour a night for seven days is similar to staying awake for 24 hours one day a week.
7. Discuss how sleep deprivation leads to increased levels of fatigue.
8. Discuss the differences and similarities between the amount of quality sleep individuals receive based on their status as a volunteer or career firefighter.
9. Fatigue can present safety concerns to first responders operating on incidents. Several side effects of fatigue that could affect safety include:
 - a) Slowed reaction time.
 - b) Poor judgment.
 - c) Reduced cognitive functioning.
 - d) Reduced physical endurance.
10. Chronic sleep loss can result in further conditions that creates problems for first responders:
 - a) Inability to think clearly.
 - b) Inability to handle complex mental tasks.
 - c) Inability to form new memories.
 - d) Inability to solve problems.
11. In addition to physical and cognitive functioning, chronic sleep loss can also lead to feelings of depression, irritability, and increased stress.
12. Studies have shown that shift workers or those who work long hours each week (over 50 hours) tend to experience the following physiological effects:
 - a) Increased risk of cardiovascular disease.
 - b) Hypertension.
 - c) Peptic ulcers.
 - d) Indigestion and diarrhea.

- e) Obesity.
 - f) Diabetes.
 - g) Obstructive sleep apnea.
 - h) Decreased immune system.
13. Discuss how fatigue among firefighters may relate to the disproportionately higher fire ground injury rates observed for the early morning hours.
 14. Ask the class for examples of incidents or occasions where sleep deprivation has impacted their safety or decision-making on emergency incidents.
 15. Point out that while sleep deprivation causes its own stress, chronic lack of sleep can impair the body's ability to manage stress hormone levels, specifically the regulation of cortisol.
 16. Inefficient sleep can also disrupt the body's regulation of appetite suppressing hormones, which can contribute to weight gain.
 17. Discuss the importance of giving appropriate attention to the amount of quality sleep achieved each night. Suggest that individuals keep a sleep journal, recording how many hours of sleep they receive each day, as well as noting how they feel physically and mentally.
 18. Discuss tips for achieving healthy sleep.
 - a) Try to set a consistent bedtime each day and stick to it as much as possible.
 - b) Develop a bedtime ritual that consists of at least 30 minutes of activity that promotes relaxation, such as reading, meditation, or deep breathing.
 - c) Avoid exposure to bright lights, loud noises or other stressful stimulants at least 30 minutes before bedtime.
 - d) Exercise daily, as physical activity promotes more restful and quality sleep.
 - e) Avoid alcohol, caffeine and nicotine before bedtime.
 - f) Avoid overeating and spicy meals that can create indigestion. It is good to finish eating at least 2-3 hours before bedtime.

References:

International Association of Fire Chiefs, The Effects of Sleep Deprivation on Fire Fighters and EMS Responders, June 2007, Pages 45-57.

http://www.iafc.org/files/progsSleep_SleepDeprivationReport.pdf.

SUMMARY

This lesson plan introduces the student to basic concepts of mental and emotional stress and its effects on emergency responders. In addition, the role of adequate sleep on emergency responder health is emphasized as being a part of achieving overall health and wellness.