

# SUBLIMITY FIRE DISTRICT

## Operational Guide

**SUBJECT:** Firefighter Rehabilitation

O.G. NUMBER:

**PURPOSE:** To describe Firefighter Rehabilitation procedures

Original Date: 5/10/98

Revision Date:

### "Medical Evaluation Of Firefighters, EMS And Rescue Personnel During Fire, Emergency and Disaster Incidents"

Simply stated Firefighter Rehab is designed to ensure that the physical and mental well being of members operating at the scene of an emergency (or a training exercise) don't deteriorate to the point where it affects the safety of any other members.

Back in 1993, the US Coast Guard conducted a study dealing with the effects of interior firefighting on the human body. The results of the study are posted in the Coast Guard's Firefighting Initiative, but in short, researchers noted that our body core temperature (even for short exposures), often reaches 104 degrees (F) during the firefight.

#### **(1) Primary Mission:**

The primary mission for fire rehab is to identify, examine and evaluate the physical and mental status of fire-rescue personnel who have been working during the emergency incident or a training exercise. Following a proper survey (see below), it should be determined what additional treatment, if any, may be required.

According to FEMA, "Any activity/incident that is large in size, long in duration, and/or labor intensive will rapidly deplete the energy and strength of personnel and there merits consideration for rehabilitation."

#### **(2). Launching The Rehab Operation**

A specially designated Rehab Area, (or Group) remote from the fire or emergency incident, should be established at the discretion of the Incident Commander in consult with the senior Safety Officer. If the Incident Commander determines that Rehab is necessary, qualified EMTs (assigned to the first alarm response) should be assigned to manage the Rehab Sector under the command of a fire or EMS officer or supervisor.

Anticipate Rehab needs early in the incident. During large-scale operations, Incident Command should consider augmenting existing resources by requesting additional EMS personnel or even another engine company or squad, to assist in the operation of the Rehab Sector.

#### **(3) Locating the Rehab Sector:**

It is crucial for Command to establish The Rehab Sector away from any environmental hazards, or by-products of the fire, such as smoke, gases or fumes. During hot months, the ideal location might include a shady, cool area distant from the incident. In winter, a warm, dry area is preferred. Regardless of the season,

the area should be readily accessible to EMS-Rescue personnel and their equipment, so they may restock the sector with supplies, or in the event that emergency transport is required.

Rehab sites can also be established in the lobbies of nearby buildings, parking facilities, or even inside municipal buses.

Misting/cooling systems, heating systems, SCBA refilling and canteen service should be stationed in or around this area as well. During large-scale incidents, like multi-alarm fires, Command should consider establishing Multiple Rehab Areas as the situation warrants.

#### **(4) Coordination and Manning:**

Command of the Rehab Area should be assigned to a chief or company level officer, who is designated as the Rehab Officer under most Incident Command structures. The incident itself will determine just how many people you'll need to do the job, however a minimum of two trained EMS personnel should initially be assigned to monitor and assist firefighters in the Rehab Sector. Utilize volunteer canteen or auxiliary members to assist EMS personnel in making "working" members as comfortable as possible.

#### **(5) Evaluation of Fire-Rescue Personnel:**

It is important for command and company level officers to continually monitor personnel for telltale signs of exhaustion, stress, and or physical injury. Individual members are encouraged to report to the Rehab Sector at any time that he or she feels the need to do so. Symptoms may include weakness, dizziness, chest pain, muscle cramps, nausea, altered mental status, difficulty breathing, and others.

Regardless of physical well being, all fireground personnel should report to the Rehab Sector immediately following:

- (a) Strenuous Activity - Forcible Entry, Advancing Hoselines, Ventilation, etc.
- (b) The use and depletion of two SCBA bottles
- (c) Thirty (30) minutes of operation within a hazardous/dangerous environment
- (d) Failure of SCBA

#### **(6) Examination of Arriving Personnel**

Arriving personnel should be examined by qualified EMS, who should check and evaluate vital signs, and make proper disposition, i.e. return to duty, continued rehabilitation, or transport to medical facility for treatment. The workup should include:

- (a) Scoring for Glasgow coma trauma scale.
- (b) Checking Pupils
- (c) Checking Vital Signs, such as blood pressure, pulse, breathing rate,
- (d) Checking lung sounds
- (e) Administration of a 2-lead EKG, when chest pain or irregular heartbeat is presented
- (f) Skin condition and color
- (g) Body core temperature

Heart rate should be measured as early as possible in the rest period. If the firefighter's heart rate exceeds 110 beats per minute, it is recommended that an oral temperature be taken. If body core temperature exceeds 100.6F, the firefighter should not be permitted to wear protective equipment or re-enter the active work environment, until temperature has been reduced and heart rate decreased.

It is recommended that re-examination occur at ten minute intervals. Using standing orders or existing protocol, Rehab Team Members should record examination results on medical evaluation forms as indicated by the local jurisdiction.

### **(7) Treatment During Rehab:**

Upon completing the physical examination, the following steps should be taken to minimize further risk to fire-rescue personnel:

Turnout gear, helmets, masks and hoods should be removed immediately. Prior to ingesting anything orally, fluid or solid, it is recommended that the firefighter clean his/her hands and face with water and a cleaning agent, as provided by Rehab Sector personnel.

- (a) The firefighter should rehydrate
- (b) Oral rehydration and nutrition is recommended in the form of 1-2 quarts of fluids over a span of 15 minutes.
- (c) Body core temperature should be reduced by cooling the body.
- (d) Cool body temperatures gradually using misting systems, fans, etc.
- (e) Individuals should be offered Oxygen therapy via nasal cannula or O2 mask. (humidified or Nebulized).
- (f) Standing rest before reporting for further assignments
- (g) The firefighter will only report to manpower staging when presentation is deemed normal by the attending EMS personnel.

Note: According to FEMA, Water is the best rehydration agent, however some agencies suggest a rehydration solution of 50 / 50 mixture of water and a commercially prepared activity beverage administered at about 40F. Avoid cooling the body using ice packs or hosestreams. Cooling should be gradual, limiting further shock to the body.

In the event that presentation appears abnormal, the Firefighter should immediately receive additional treatment, especially if conditions persist following fifteen minutes of rest. As is appropriate in most locales, those complaining of chest pain, difficulty breathing and altered mental status must receive immediate ALS treatment and transport to definitive health care. Follow your local jurisdiction's ALS protocols in this event.

### **(8). Accountability.**

Members reporting to the Rehab Sector / Group should enter and exit the Area as a team. Their company designation, number of personnel, and the times of entry to and exit from the Rehab Area should be documented. This can be done either by the Rehab Officer or his / her designee on a Company Check-In / Out Sheet. Keep crews together, and don't allow overanxious members to freelance the event.

### **(9). The Vital Importance Of Firefighter Rehab**

Very few firefighters who wear the badge are athletes. But, from the moment the alarm is sounded, and that first surge of adrenaline reaches the heart, we're asking our bodies to work triple overtime. Couple that with 55 pounds of business suit, 1200 degree temperatures and another 50 pounds of hand tools and equipment, and the importance of effective rehabilitation at the fire scene becomes crystal clear.