



The Elephant on the Fire Ground: Secrets of NFPA 1584 Compliant Rehab

by Mike McEvoy, PhD, REMT-P, RN, CCRN
EMS Coordinator – Saratoga County, NY
Professor Critical Care Medicine – Albany Medical College
EMS Director – NYS Association of Fire Chiefs
Fire EMS Editor – Fire Engineering magazine
mcevoymike@aol.com ▪ (518) 383-8608

LODDs (Line of Duty Deaths)

Related to: medical condition, fitness and rehab.

NFPA 1584 www.nfpa.org (2008 version)

“Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises.” - Originally issued 2003 as a recommendation, 2008 version is a standard.

Every fire department is responsible for developing and implementing rehab SOGs.

Elements of Compliance:

1. SOGs outline how rehab will be provided at incidents and training exercises (> 1 hour)
2. Minimum BLS level transport capable EMS on scene
3. Fully integrated into IMS

Premise: Firefighters are athletes!

Hydration (firefighter baseline: often dehydrated)

- Water is best
- Prehydrate for planned events
 - 500 ml over 2 hours prior to drill
- Hydrate during events – small frequent sips
- Sports drinks after first hour intense work or 3 hours total incident duration.
 - DO NOT dilute sports drinks (leads to nausea and vomiting)
- 1 liter per hour is typical gastric capacity

NFPA 1584 Overview

1. Education on where and when to rehab
2. Supplies, shelter, equipment and medical expertise provided where and when needed
3. Safety net (for unwilling and unable)

Company Officer (can adjust times PRN)

- Assess crew every 45 minutes
- Suggest rehab after 2nd 30-min SCBA bottle
- Or single 45 or 60-min bottle
- Or 45 minutes of intense work (no SCBA)
- Crew or company level rehab (informal) is perfectly okay!

EMS Staff in Rehab

Must have authority to detain or transport when obviously unable to return to full duty.

Nine Components of Rehab:

1. Relief from climatic conditions
 - Area removed from scene but not too far
 - Vestibule to remove PPE (off-gassing)
2. Rest and Recovery
 - 10 minutes or as long as needed
 - Chairs or seating for all members
3. Cooling or Rewarming
 - May need spare clothes (t-shirts...)
 - Active cooling with Cold Towels best
4. Rehydration
 - Potable fluids to satisfy thirst
5. Calorie and electrolyte replacement
 - Long duration events (>3 hours)
 - Hand washing required (gels okay)
 - Energy bars, fruits (not high fat/sugar)
6. Medical Monitoring in Rehab
 - Medical Monitoring distinct from Emergency Medical Care & Treatment
 - Screen at door for acute distress/injury
 - Vitals (optional and contextual)

Temp (oral or tympanic) core = 98.6 to 100.6°F
Oral = 1° and tympanic = 2° below core

Pulse NL = 60 to 80 (pulse ox most accurate)
Further eval if > 100 after 20 minutes rest/rehab

Resp NL = 12 to 20, should return to normal

BP least understood, huge potential for error, must decon between each use. SBP > 160 or DBP > 100 should not be released from rehab.

Pulse Ox NL = 95 to 100%, do not release from rehab if < 92%. Most oximeters cannot read CO

Carbon Monoxide must assess in any exposed or symptomatic person. Use exhaled CO meter or CO-Oximeter (www.masimo.com). Non-smoker 0 to 5%, smoker 5 to 10%, anyone > 15% needs high flow O₂. Between 10-15%, assess for s/s, treat if needed. Do not release from rehab until normal %.

Cyanide always consider & carry an antidote kit

7. EMS treatment according to local protocols
 - Day to day protocols (differ from rehab)
8. Member Accountability
 - Log in and out of rehab – part of IMS
9. Release
 - EMS must confirm member able to perform full duty prior to release
 - Record of rehab kept with fire report

JUST DO IT!