

**FIRE CHIEFS ASSOCIATION OF DELAWARE COUNTY, OHIO
STANDARD OPERATING GUIDELINE**

SUBJECT: Incident Rehabilitation	EFFECTIVE DATE	RESCINDS N/A
REFERENCE NUMBER DCFC-012		NUMBER

PURPOSE:

A Rehab Group will be utilized to prevent, assist, and evaluate personnel who may be suffering from the effects of sustained physical or mental exertion during emergency or training operations. The Rehab Group will provide a specific area where personnel will assemble to receive:

1. A primary / secondary physical assessment and treatment of injuries
2. Revitalization (rest, hydration and refreshments)
3. Continual monitoring of physical condition
4. Transportation for those requiring treatment at a medical facility

RESPONSIBILITY:

During a 2nd alarm of fire, MCI level three, or a Hazmat level 3 a rehab sector shall be establish. However, the Incident Commander (IC) shall be responsible for evaluating the conditions of an incident and determining the need to establish a Rehab Group. If the IC feels the conditions will in any way inhibit the safe and efficient performance of the incident personnel, a Rehab Group shall be established.

GUIDELINE:

NFPA 1584 6.1.4 states “members shall undergo rehabilitation following the use of a second 30 minute self-contained breathing apparatus (SCBA) cylinder, a single 45 minute or 60 minute SCBA cylinder, or 40 minutes of intense work without SCBA. A supervisor shall be permitted to adjust the time frames depending upon work or environmental conditions.”

STAFFING:

The Rehab Group will consist of the following Rehab Team:

1. The Advance Life Support (ALS) Medic Unit shall be dispatched on a “working” fire assignment. During the initial dispatch is preferable.
2. Upon establishing the need for a Rehab Group a second ALS Medic Unit shall be dispatched. Unless actively committed to providing emergency patient care, the initial Medic crew’s Company Officer shall be designated the Rehab Group Supervisor, and the crew will establish the Rehab Group at the direction of Incident Command. The second arriving Medic unit will be designated as the primary EMS / Transport vehicle for the fire ground.
3. If and when the EMS/transport medic is committed, another Medic crew shall be requested by Incident Command to replace it.

In order to maintain the appropriate span of control during major or complex operations, additional Paramedics and Advance Life Support (ALS) equipment may be required to adequately staff the Rehab Group, or create additional Rehab Groups, due to incident size or geographic barriers.

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SITE LOCATION:

If not already established by Incident Command, the Rehab Group Supervisor shall be responsible for establishing a Rehab Area, and communicating that location to Incident Command.

REHAB SITE CHARACTERISTICS:

The Location should be:

- Easily identifiable to all personnel and stationed in an environmentally protected area, up wind, away from adverse weather conditions and free from apparatus exhaust emissions, however, out of the direct line of sight of the incident to prevent responders from “migrating” back into the work zone prematurely.
- Located safely away from the incident where crews can remove their protective clothing and have their vital signs monitored while receiving fluids and rest. The interior of an ambulance or similar vehicle may be used for this purpose.
- Large enough to accommodate the needs of the incident.
- Easily accessible by ingress and egress for transportation and re-supply.
 - In an area to allow for prompt re-entry to the emergency operations without possible interference of operations.

PHASES OF REHAB:

TRIAGE: Entry into rehab area. This is where medical monitoring begins. Personnel will remove all protective clothing (weather permitting) and begin to rehydrate while medical monitoring is initiated with a RAD57 or Pulse Oximeter. Each individual’s name, truck assignment, heart rate, SpO2%, SpCO% and time in/out should be entered on the Rehab Group Check Sheet. If an individual enters REHAB exhibiting signs/symptoms (i.e. dizziness, chest pain, shortness of breath, etc.) he/she will be moved directly to MEDICAL REHAB. All other personnel will proceed to REHAB.

REHAB: Rest, rehydration, and medical monitoring. External cooling will begin along with rest and rehydration. Personnel will remain in REHAB a minimum of 10-20 mins. After ten minutes in REHAB, a second set of vital signs, with a RAD57 or Pulse Oximeter, SHALL be taken and recorded. If the V/S are not within normal limits (per V/S Parameters) after 10 mins, then a third set of V/S will be taken after 20 mins. of REHAB. If V/S are not within normal limits after 20 mins, then the individual(s) WILL be moved to MEDICAL REHAB. V/S must meet the V/S PARAMETERS before any personnel are permitted to leave REHAB and re-enter the incident for reassignment.

MEDICAL REHAB: If any personnel present with signs or symptoms, vital signs are not within normal limits (per V/S Parameters) after 20 mins. in REHAB or report an injury or chief complaint they SHALL be moved to MEDICAL REHAB and treated as a patient with assessment of all V/S including B/P, temperature and 12 lead EKG if necessary.

Here the patient SHALL be reassessed and treated for their injury and/or chief complaint. The individual(s) should be transported to the nearest appropriate Emergency Department if deemed necessary by the Rehab Group. The Rehab Group Supervisor will notify Incident Command of the patient’s status, and whether they will be transported for further care. If at any point the individual(s) refuses further assessment or treatment, a Refusal of Treatment form must be signed and the Rehab Group Supervisor will notify Incident Command.

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REHAB OPERATIONS:

The Rehab Group Supervisor shall have the responsibility of securing all necessary resources required to adequately staff and supply the Rehab Group. A list of supplies should include:

1. Fluids: Water, activity beverage, oral electrolyte solutions, and ice (avoid fluids high in salts and sugars).
2. Food: Soup, broth, stew, fruit (avoid salty or fatty foods)
3. Medical: BP cuffs, stethoscopes, oxygen administration devices, cardiac monitors, RAD 57, IV solutions and thermometers.
4. Minor cooling equipment: Towels, blankets, tubs for arm submersion (Good for personnel that are on the borderline of needing evasive cooling).
5. Items needed for large scale incident: Awnings, fans, tarps or salvage covers, smoke ejectors, dry clothing, extra equipment, portable lighting, traffic cones and fire-line tape (to identify the entrance and exit of Rehab).

All emergency personnel involved in operations should be routinely evaluated at Rehab (including all group and command officers). Company Officers, Group / Division Officers, Safety Officers, and the Incident Command shall determine when crews are to be rotated through the Rehab Group. In most cases this shall occur at thirty to forty-five minute intervals. During extreme weather or strenuous working conditions, this shall occur at twenty to thirty-minute intervals, or more often if deemed necessary. Crews shall report to Rehab Group utilizing the Passport Accountability system.

Once in Rehab, crews shall immediately begin to hydrate. (Hydration shall consist of water or a 50/50 water/sports drink mix). Crews reporting to rehab will remove their SCBA, helmet/hood, face piece, gloves, and jacket and open their bunker pants. The Rehab Group will immediately begin monitoring the V/S, with a RAD57 or Pulse Oximeter, of each member entering the Rehab Area.

V/S will be checked and recorded. At least two sets of vital signs shall be taken on all personnel. The Rehab Group shall report complaints, observe skin conditions, evaluate respirations, heart rate, SpO2% and SpCO%. Medical monitoring should begin as soon as possible. After 10-20 minutes of rest and a satisfactory evaluation, the crews shall be released by the Rehab Officer to return to the personnel staging area unless immediately needed for the incident. Individual companies and crews are responsible for letting Incident Command know when they are available for reassignment.

Any person complaining of chest pain or shortness of breath, or found to have abnormal V/S, after twenty minutes in REHAB (see V/S Parameters), or any other emergent condition SHALL be removed from active duty for further evaluation. In these cases treatment shall be initiated and EMS guidelines shall be followed per local protocol. Incident Command and Safety Officer shall be immediately notified.

NFPA 1584 6.1.3 states “emergency medical services (EMS) staff in rehabilitation shall have the authority, as delegated from the incident commander, to use their professional judgment to keep members in rehabilitation or to transport them for further medical evaluation or treatment.”

The Rehab Group Supervisor shall ensure that at least one ALS medic unit is always dedicated to the Rehab Group for transport of personnel. Additionally, the Rehab Group Supervisor shall contact DELCOMM for current weather conditions when necessary. Updates should be obtained every four (4) hours, or as needed.

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DOCUMENTATION:

All documentation, once completed shall be provided to the jurisdiction holding authority. The names of all personnel passing through Rehab, as well as all pertinent data, shall be recorded on the Rehab Group Check Sheet. This document shall become part of the permanent record of the incident. For all situations where medical treatment beyond normal Rehab was initiated, the appropriate EMS report(s) shall be utilized following EMS Guidelines. For those situations when a responder or officer fails to meet the criteria for release from Rehab, yet returns to duty on the incident scene, notification shall be made to his/her immediate supervisor and Incident Command. Should anyone involved in the incident refuse Rehab and/or treatment, that person's immediate supervisor and Incident Command shall immediately be notified of their disposition. Anyone refusing Rehab and/or treatment shall not be permitted to continue working at the incident. Incident Command shall document this situation and provide formal notification to that person's Chief after the Incident.

POINTS TO REMEMBER:

1. Companies shall be cycled through Rehab on a regular basis.
2. Assigned companies shall stay together.
3. Crews at Rehab shall receive fluids, medical evaluation, and rest.
4. Use of ANY tobacco products in Rehab shall be STRICTLY PROHIBITED. This includes use by the Rehab Group crews.
5. All officers/groups shall maintain an ongoing awareness of the condition of their personnel and use Rehab to combat excessive fatigue and exhaustion.
6. Rehab Group crews must never forget to rehab themselves.
7. Personnel not directly involved in the incident still need to be evaluated on a regular basis as deemed necessary by Incident Command or the Safety Officer.
8. Individuals are to drink 8 ounces of fluids for every 20 to 30 minute period of heavy or moderate work. Fluid should be water or a water/sports drink mix. Fluids with sugar and/or salt tablets are not to be used.
9. The Rehab Group Supervisor will update command throughout the operation as to the identity of companies in Rehab. Companies reporting to Rehab shall first report to the Rehab Group Supervisor and present their passports.

Rehab V/S Parameters: (for release from rehab)

1. Heart Rate < 110 bpm
2. SpO₂ > 92% on room air.
3. SpCO ≤ 5%
4. No symptoms: confusion, headache, chest pain, abdominal pain, dizziness, blurred vision, etc.
5. Personnel must have received appropriate hydration

If these parameters are not met after twenty minutes in REHAB then the individual shall be taken to MEDICAL REHAB for treatment and/or transport according to local protocol.

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Medical Rehab V/S Guideline:

A complete set of vital signs, including temperature and 12 lead EKG if needed, shall be obtained on personnel sent to MEDICAL REHAB. The following criteria shall serve as a guideline for transportation of personnel to a hospital for further evaluation:

1. Hypertension/ hypotension after 20 mins. of rest and fluids.
2. Any symptomatic patient regardless of blood pressure
3. Heart rate > 110 or < 60 with accompanied hypotension after 20 mins. of REHAB
4. If heart rate > 110 bpm after 20 mins. of REHAB, it is recommended oral or tympanic temperature be taken. If body temperature is > 100.6° F, the firefighter should not be permitted to wear protective equipment or re-enter the active work environment until his/her temperature and heart rate has decreased. If his/her temp is > 101.0° F the individual will not be permitted to return to duty for the remainder of the incident and should be considered for transport to the closest Emergency Department.
5. Measure Carboxyhemoglobin if not already measured in REHAB. Consider transport if the individual(s) shows signs/symptom or levels indicate CO poisoning.
6. Visual observations should be made of the following:

Skin Condition

- May be somewhat flushed on arrival
- Should be improved within 5 min. of arrival
- If skin remains flushed, check temperature

Mental Status

- Should be alert & oriented on arrival
- If any alteration of mental status, TRANSPORT

History / Meds

- Antihistamines (Actifed, Benadryl, etc.) may impair the body's ability to sweat.
- Beta blockers and Calcium Channel blockers impair the body to compensate overheating.
- History of cardiac, respiratory, or hypertension problems should be considered when evaluating personnel.

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Carboxyhemoglobin Levels (Rad57)

SpCO%	Clinical Manifestations
0-4%	None - Normal
5-9%	Minor Headache
10-19%	Headache, Shortness of Breath
20-29%	Headache, Nausea, Dizziness, Fatigue
30-39%	Severe Headache, Vomiting, Vertigo, ALOC
40-49%	Confusion, Syncope, Tachycardia
50-59%	Seizures, Shock, Apnea, Coma
60% - Up	Coma, Death