

REHABILITATION AT EMERGENCY INCIDENTS

Introduction

Rehabilitation (Rehab) should be considered during the initial planning stages of an emergency response. Climatic or environmental conditions of the emergency scene should not be the sole justification for establishing Rehab. Any activity or incident that is large in size, long in duration and/or labor intensive will rapidly deplete the energy and strength of personnel and therefore merits consideration for rehabilitation.

As an incident organization grows, a Responder Rehabilitation Manager (page 8-5) who reports to the Medical Unit Leader (page 8-5) as part of the Logistics Section (page 8-3) may assume responsibility for rehab at emergency incidents. These position checklists may be used without having Logistics established.

Responsibilities

The Incident Commander shall consider the circumstances of each incident and make adequate provisions, when necessary, for rehabilitation and other logistical support for all members operating at the scene. These provisions may include medical evaluation, treatment and monitoring, food and fluid replenishment, mental rest and relief from extreme climatic conditions and other environmental parameters of the incident. The rehabilitation may include the provision of Emergency Medical Services (EMS) at the Basic Life Support (BLS) level or higher.

All supervisors shall maintain an awareness of the condition of each member under their supervision and ensure that adequate steps are taken to provide for each member's safety and health.

During any emergency incident or training evolution, all members shall advise their supervisors when they believe that their level of fatigue or exposure to heat or cold is approaching a level that is beginning to affect themselves, their crew or the operation in which they are involved.

The chain of command shall be utilized to request relief and the reassignment of fatigued crews.

Hydration and Rest Periods

During periods of hot weather, all personnel must maintain hydration by drinking adequate water throughout the work period. All supervisors must ensure assigned personnel re-hydrate and take short rest breaks as needed to prevent injury. Supervisors must frequently evaluate the physical and mental condition of personnel engaging in strenuous work activity. During structure fires, personnel should re-hydrate with at least eight (8) ounces of cool water and be evaluated by their supervisor during the first SCBA air bottle change.

Firefighters engaged in structural firefighting or other strenuous work activity for 50 minutes or two SCBA air bottles, whichever comes first, should have a mandatory rest period of 10 minutes. Heart rate should be determined at the end of the 10-minute break and if a

firefighter's heart rate remains above 120 beats per minute (BPM), the firefighter should undergo a BLS evaluation prior to returning to work (see below).

BLS Evaluation

A BLS evaluation should be required whenever an elevated pulse rate does not return to a level below 120 BPM after a 10-minute rest.

Blood Pressure: Systolic must be between 100 and 160
 Diastolic must be greater than 60 but less than 90

Temperature: Between 97.0 and 101.0

If B/P or temperature is outside the prescribed limits, the firefighter should undergo an ALS evaluation (see below) and be treated as a casualty with appropriate medical forms. If transport is necessary appropriate insurance forms should also be completed.

If the blood pressure and temperature are within limits and the heart rate is less than 120 BPM after a second 10-minute rest period the firefighter may return to unrestricted work. If the blood pressure and temperature are within limits but the heart rate remains greater than 120 BPM the firefighter may be assigned non-strenuous work by the IC.

ALS Evaluation

ALS evaluations should also be required for the following medical reasons:

- a. Pulse irregularities.
- b. Decreased level of consciousness or orientation.
- c. Nausea.
- d. Shortness of breath or difficulty breathing or painful breathing.
- e. Chest pain, "tightness" in the chest, radiating jaw or arm pain or other symptom of cardiac related chest pain.
- f. Hypertension = Systolic greater than 160 or Diastolic greater than 90.
- g. Hypotension = Diastolic less than 60.

Personnel evaluated by ALS or who receive any ALS treatment should be treated as a casualty with appropriate medical forms. If transport is necessary appropriate insurance forms should also be completed.

Rehab Management

The IC may delegate the rehabilitation function to the Staging Manager until a Responder Rehabilitation Manager (page 8-5) is assigned.

A Rehab area should be established in an environment that benefits those personnel who are resting, re-hydrating and being evaluated. When possible, Rehab should be adjacent to the Bottle Change Area when SCBA are being utilized.

Accountability procedures should be followed in Rehab. Individuals should not leave Rehab until authorized to do so by the Responder Rehabilitation Manager.

Cool water must be available and additional beverages such as, “sports drinks” or fruit juices may be provided. During cold or inclement weather hot beverages such as soup and cocoa are encouraged. Coffee and tea should only be provided in moderation due to their diuretic properties.

Energy bars and fresh fruit may be provided. Hot soup is also recommended as a quick energy source.

Relative Humidity and Wind Chill

Relative Humidity		10%	20%	30%	40%	50%	60%	70%	80%	90%
Temperature F°	104	98	104	110	120	132				
	102	97	101	108	117	125				
	100	95	99	105	110	120	132			
	98	93	97	101	106	110	125			
	96	91	95	98	104	108	120	128		
	94	89	93	95	100	105	111	122		
	92	87	90	92	96	100	106	115	122	
	90	85	88	90	92	96	100	106	114	122
	88	82	86	87	89	93	95	100	106	115
	86	80	84	85	87	90	92	96	100	109
	84	78	81	83	85	86	89	91	95	99
	82	77	79	80	81	84	86	89	91	95
	80	75	77	78	79	81	83	85	86	89
	78	72	75	77	78	79	80	81	83	85
	76	70	72	75	76	77	77	77	78	79
	74	68	70	73	74	75	75	75	76	77

NOTE: Add 10°F when protective clothing is worn and 10°F when in direct sunlight

Temperature °F		45	40	35	30	25	20	15	10	5	0	-5	-10	-15	
Wind Speed (MPH)	5	43	37	32	27	22	16	11	6	0	-5	-10	-15	-21	
	10	34	28	22	16	10	3	-3	-9	-15	-22	-27	-34	-40	
	15	29	23	16	9	2	-5	-11	-18	-25	-31	-38	-45	-51	
	20	26	19	12	4	-3	-10	-17	-24	-31	-39	-46	-53	-60	
	25	23	16	8	1	-7	-15	-22	-29	-36	-44	-51	-59	-66	
	30	21	13	6	-2	-10	-18	-25	-33	-41	-49	-56	-64	-71	
	35	20	12	4	-4	-12	-20	-27	-35	-43	-52	-58	-67	-75	
	40	19	11	3	-5	-13	-21	-29	-37	-45	-53	-60	-69	-76	
	45	18	10	2	-6	-14	-22	-30	-38	-46	-54	-62	-70	-78	
	A						B								C

Wind Chill Temperature	Danger
A Above -25° F	Little Danger for Properly Clothed Person
B -25° F / -75° F	Increasing Danger, Flesh may Freeze
C Below -75° F	Great Danger, Flesh may Freeze in 30 Seconds

