STANISLAUS CONSOLIDATED FIRE PROTECTION DISTRICT
POLICIES & PROCEDURES

ARTICLE: C-74
SECTION: Operations
DATE: August 19, 2013
SUPERSEDES: New
SUBJECT: Rehabilitation Process for Emergency Operations and Training Exercises

PURPOSE: To establish a policy/procedure to ensure that personnel who may be suffering from the ill effects of sustained physical exertion or injury receive rapid treatment, re-hydration and medical monitoring during emergency operations or training exercises.

POLICY: This policy/procedure shall apply to all emergency personnel involved in on-scene emergency operations and training exercises where there is a potential for injury, strenuous physical activity or prolonged exposure to heat or cold.

There are two levels of rehabilitation and it will be up to the discretion of the Incident Commander to select the appropriate level for any given incident or exercise.
Formal rehabilitation: When firefighting activity at an incident or training exercise is considered to have heavy physical exertion, extended operations or elevated environmental or ambient temperatures.
Informal rehabilitation: When the firefighting activity at an incident or training exercise is not considered heavy or prolonged and is without elevated environmental or ambient temperatures.

DEFINITIONS:

1. Active Cooling: The process of using external methods or devices (hand and forearm immersion, misting fans, ice vest) to reduce elevated core body temperature.

2. Core Body Temperature: the temperature deep within a living body.

3. Medical Monitoring: the ongoing evaluation of members who are at risk of suffering adverse effects from stress or from exposure to heat, cold or hazardous environments. Evaluation includes but not limited to: blood pressure, heart rate, respiratory rate, mental status, skin signs, pupil/vision, oxygen saturation and carbon monoxide detection.

4. Passive Cooling: The process of using natural evaporative cooling (sweating, removing PPE, moving to a cool environment) to reduce elevated core body temperature.

5. Personnel Accountability System: A system that readily identifies both the location and function of all members operating at an incident scene.

6. Recovery: The process of returning a member's physiological and psychological states to normal or neutral where this person is able to perform additional emergency tasks, be re-assigned or released without any adverse effects.

7. Rehabilitation: An intervention designed to mitigate against the physical, physiological and emotional stress of fire fighting in order to sustain a member's energy, improve performance and decrease the likelihood of on-scene injury or death.

8. Sports Drink: a fluid replacement beverage that is between 45 and 8% carbohydrate and contains between 0.5g and 0.7g of sodium per liter of solution.

9. Emergency Food: The purchase of meals may be purchased for personnel, even on initial attack, when they are unable to return to the station or a food facility within a reasonable time period or their normal meal time, or when they are unable to leave their assigned work location during expanded operations to obtain meals. "Reasonable" means generally within two hours of normal meal time unless operational needs dictate otherwise. Authorization from the Incident Commander is required for the purchase of meals. Healthier food alternatives will be sought after if time and location permit.

I. RESPONSIBILITIES

A. Incident commander

1. Include rehabilitation in incident/event size up.
2. Establish a rehabilitation group to reduce adverse physical effects on fire personnel while operation during fire/emergencies/training exercises, and extreme weather conditions.
3. Designate and assign a supervisor to manage rehabilitation. This group will operate under the Safety Officer or Medical Unit Leader when a Logistics Branch has been established.
4. Ensure sufficient resources are assigned to rehabilitation.
5. Ensure EMS personnel are available for emergency medical care of fire personnel as required.
6. Ensure the rehabilitation process includes:
   a) Rest
   b) Hydration
   c) Cooling (passive or active)
   d) Warming during cold weather events
   e) Medical monitoring
   f) Emergency medical care when required
   g) Relief from extreme climate conditions (heat, cold, wind, rain)
   h) Calorie and electrolyte replacement
   i) Food purchase authorization when required
   j) Release

B. Rehabilitation Manager

1. Don the rehabilitation manager vest.
2. Location for rehabilitation with the following site characteristics:
   a) Large enough to accommodate the number of personnel expected (including EMS personnel for medical monitoring)
   b) Have a separate area for members to remove PPE
   c) Be accessible for an ambulance and EMS personnel in the event that emergency medical care and transport be required

d) Be removed from hazardous atmospheres including apparatus exhaust fumes, smoke and other toxins

e) Provide shade in summer and protection from inclement weather

f) Have access to a water supply (bottles or running) to provide for hydration and active cooling

g) Be away from spectators and media

3. Ensure personnel in rehabilitation “dress down” by removing their turn out coats, helmets, hoods and opening their turn out pants to promote cooling.

4. Provide the required resources for rehabilitation including:

   a) Drinking water for hydration

   b) Sports drinks to replace electrolytes and calories for long duration incidents (working more than 1 hour)

   c) Active cooling where required

   d) Medical monitoring equipment and chairs to rest on

   e) Food when required and a means to wash or clean hands and face prior to eating i.e. disposable wipes

   f) Work with incident commander for purchasing/Acquisition of food/meals when required

   g) Blankets and warm, dry clothing for winter months

   h) Washroom facilities where required

5. Time personnel in rehabilitation to ensure they receive at least 10 minutes to 20 minutes of rest.
6. Ensure personnel rehydrate themselves.
7. Provide means of active cooling when required (fans, misters, ice vests, etc.) 8. Provide information up the chain of command of any personnel being removed from service or transported for further medical evaluation.
9. Serve as a liaison with EMS personnel.

C. Company Officers

1. Be familiar with signs and symptoms of heat stress and/or cold stress.
2. Monitor their company members for signs of heat stress and/or cold stress.
3. Notify the IC when stressed members require relief, rotation or reassignment according to conditions.
4. Provide access to rehabilitation for company members as needed.

5. Ensure that their company is properly checked in with the rehabilitation manager and accountability officer (resource unit), and that the company remains intact.

D. Company/Crew Members

1. Be familiar with the signs and symptoms of heat and cold stress.
2. Maintain awareness of themselves and company members for signs and symptoms of heat stress and/or cold stress.
3. Promptly inform the company officer when members require rehabilitation and/or relief from assigned duties.
4. Maintain unit integrity.
5. Limit over the counter medications that would inhibit hydration, such as decongestants or allergy medication. Limit caffeine during exertion.

E. EMS Personnel

1. Report to the IC and obtain the rehabilitation requirements.
2. Coordinate with Rehabilitation Manager.
3. Identify the EMS personnel requirements.
4. Check vital signs, monitor for heat stress and signs of medical issues.
5. Document medical monitoring.
6. Provide emergency medical care and transportation to medical facilities as required.
7. Inform the IC and the Rehabilitation Manager when personnel require transportation and treatment at a medical facility.
8. Document emergency medical care provided.

II. REHABILITATION GUIDELINES

A. Informal Rehabilitation

1. All personnel shall make every attempt to report to the informal rehabilitation area as an intact company.
2. Remove heavy equipment and turnout clothing.
3. Personnel may re-hydrate with drinking fluids from on scene apparatus or from what is provided on scene.

4. Each Company should rest and relax for a minimum of 10 minutes, preferably 20 minutes.
5. The Company Officer shall notify the IC or Operations when the Company is available to be reassigned to the incident.
6. Although medical monitoring is normally not provided in the informal
7. Rehabilitation area, it shall be the responsibility of each Company Officer to monitor their crew members for signs of fatigue or other symptoms indicating adverse health effects. If medical monitoring is indicated, personnel shall be medically evaluated following the guidelines set forth in the formal medical monitoring rehabilitation protocol. Every attempt will be made to properly rehab personnel prior to being placed available on scene. Units actively engaged in an IDLH will not be made available on scene.

B. Formal Rehabilitation

1. The IC shall assign personnel to set up and staff the medical rehabilitation unit.

2. Location:

a) The medical rehab unit leader shall select a site, unless otherwise directed by the IC.

- Protected from prevailing environmental conditions
- Access for transporting to medical facilities
- Sufficient distance from effects of operation
- Free of spectators and media
- Safe removal of PPE
- Clear identification of rehab area, i.e. fire line tape

3. Staffing:

The number of personnel required to successfully operate the medical rehabilitation area will vary depending on the size of the incident. However, the following staffing matrix should be considered:

a) Optimally the medical rehab unit personnel should consist of a minimum of 3 people with at least one being a paramedic.

b) These personnel shall:

- Assist with recording and time keeping
- Assist with entrance and exit controls
- Assist with evaluation and re-hydration
- Obtain vital signs and record them on the Medical Rehabilitation Unit Log

- Observe and assess personnel for signs of fatigue, or medical emergencies.
- Advise the Medical Rehab Unit Leader when personnel have been rehabilitated and can be reassigned.

4. Criteria for Entry into the Medical Rehab Unit:
   a) Depletion of two 30 minute SCBA cylinders
   b) Depletion of one 45 or 60 minute SCBA cylinders
   c) Following 40 minutes of intense work without SCBA
   d) When signs and symptoms of fatigue or other medical issues are present
   c) Wildland firefighting, high heat day, prolonged rescue activity, Haz-Mats

5. Medical Rehab Unit Entry and Exit Procedure
   a) Remove breathing apparatus
   b) Remove PPE
   c) All personnel shall make every attempt to report to the Medical Rehab Unit as a company.
   d) Upon entry into the Formal Medical Rehab area, staff shall adhere to the following guidelines:
      - Document the company entering the rehab unit
      - Have baseline vitals taken by the medical rehab unit staff and follow up vitals after 20 minutes of rest.
      - Document all findings on the Medical Rehab Unit Log
      - Vital signs within normal limits qualify personnel for release from the Medical Rehab Unit upon completion of standard rehab.
      - Personnel experiencing vital signs that are not within normal limits will remain in the Medical Unit for further evaluation.
      - Personnel shall attempt to remain seated and relaxed for a minimum of 10 minutes while drinking fluids.
      - Document personnel exiting the rehab unit (as a company preferred)

6. Accountability
   In order to assure accountability of all personnel and to keep accurate records of all personnel seen or treated by the Medical/Rehabilitation Unit, the following procedures should be followed:
   a) The entrance and exit of the Medical Rehab Unit shall be clearly marked and staffed by Unit personnel. Personnel assigned to the entrance and exit positions will be responsible for the documentation of each company's arrival and departure time.

b) All personnel reporting to the Medical Rehab Unit shall enter and exit as a crew.
c) Crews shall not leave the Unit until authorized by the Medical Rehab Unit Leader or designee.
d) A Patient Care Report shall be completed for each member that received ALS treatment or is transported via ambulance. A copy of the PCR shall be placed in the employee’s confidential medical file.
e) The Medical Rehabilitation Log shall be kept in the department’s RMS.

Stanislaus Consolidated Fire Protection District
Medical/Rehab Unit Leader Checklist

☐ Don position ID vest

☐ Read entire checklist

☐ Obtain briefing from Operations, (if not established IC)
- Anticipated duration of incident
- Number of personnel

☐ Identify radio channel (frequency) for

- _______________ Command Net

- _______________ Tactical Net

- _______________ Coordination Net

☐ Identify site rehab area that provides the following features:
- Area to remove breathing apparatus
- Area to remove turnouts/safety equipment
- A controlled entrance and exit
- Protection from heat and cold

☐ Identify need for additional resources:
- Personnel and/or medical treatment personnel
- Additional medical supplies
- Transport ambulance
- Water/fluid replacement
- Food
- Cooling fans (misters)
- Heaters/blankets
- Sanitation

☐ Provide the Incident commander with the following information:
- Location of the Medical Unit When the Medical Unit is fully operational
- Need for additional or special resources

Article C-74, Section-Operations

EFF Date: 11-13-13

Medical Monitoring Guidelines

These parameters have been established to assist the rehab officer to determine whether a member may return to the event or continue with medical monitoring.

1. Temperature:

98.6-100.6	Considered normal
Tympanic (ear method)	2 degrees F lower than core body temperature
Oral	1 degrees F lower than core body temperature

2. Heart Rate: 70% of maximum heart rate is expected (220 minus age x 0.7)

60-100 beats/minute	Normal
>130 beats/minute	Rest
>100 beats/minute after 20 minutes of rehab	Further monitoring, if warranted, send for further medical evaluation (include orthostatic vital signs)

3. Blood Pressure: Too low, too high or fail to return to normal during rehab may indicate a medical problem.

>160 systolic	No release from rehab, continue medical monitoring
>100 diastolic	No release from rehab, continue medical monitoring

4. Respirations:

12-20 breaths per minute	Considered normal
>28 after 20 minutes in rehab	No release, continue medical monitoring

5. Carbon Monoxide monitoring:

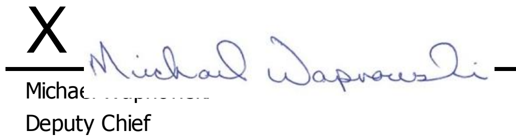
Initial

0-5%	Considered normal
5-10%	Considered normal in a smoker
>10%	Abnormal in any person-consider high flow oxygen
>15%	Significantly abnormal in any person-treatment mandated

Reassessment after 20 minutes of rehab

0-5%	Acceptable for return to firefighting activities if medically cleared
5-10%	Consider high flow oxygen until <5% regardless of symptoms
>10%	Abnormal, assess for symptoms, consider high flow oxygen
>15%	Significantly abnormal, treatment mandated, consider transport

Policy Completed by:_________________



Michae
Deputy Chief