

**REGION I EMERGENCY MEDICAL SERVICES
STANDING MEDICAL ORDERS
EMT – Basic**

SMO: Hypothermia

Overview: Core body temperature less than 95 ° F [35° C] can result from a decrease in heat production, an increase in heat loss, or a combination of the two factors. Most common cause is exposure to extreme environmental conditions. Classified as Mild (CBT of 96.8° F to a CBT of 93.2° F [36-34° C]), Moderate (CBT of 86° F [30°C]), and Severe (CBT of < 86.0° F [<30°C]).

INFORMATION NEEDED

- Length of exposure
- Air temperature, water temperature, was patient wet or dry?
- Medical history: trauma, alcohol, tranquilizers, anticonvulsants, medical problems (such as diabetes)

OBJECTIVE FINDINGS

MILD HYPOTHERMIA

- Alert to impaired judgment
- Possible slurred speech
- Shivering
- Evidence of local injury; blanching, blistering, erythema of extremities, ears, nose

MODERATE HYPOTHERMIA

All of the above PLUS

- respiratory depression
- myocardial irritability
- bradycardia
- atrial fibrillation

TREATMENT

- Routine Medical Care
- Note patient's temperature if possible
- Remove all clothing: dry patient, cover with blankets to prevent further heat loss
- Maintain warm environment
- Encourage transport for evaluation of injuries/ hypothermia

7/04

Reviewed:

Revised:

EMS/ Region1 SMOs

OBJECTIVE FINDINGS

SEVERE HYPOTHERMIA (PROBABLE CARDIAC ARREST)

- Cold skin, skin color changes
- Altered mental status
- No shivering
- Loss of deep tendon reflexes, fixed and dilated pupils
- Weak, thready pulse-- possible cardiac arrest
- Spontaneous ventricular fibrillation

TREATMENT

- Assess breathing and pulse for full 30-45 seconds
 - If not breathing and/or pulseless, start CPR
 - Attach AED (for use in children at least 1 year of age): If the patient is in Vfib or pulseless Vtach, **defibrillate** up to a **maximum** of 3 shocks
 - Ensure adequacy of CPR
 - Apply warm packs to central pulse areas (carotid, axilla, femoral). Avoid peripheral warming.
 - Rapid transport
- ** TRIPLE ZERO CANNOT BE CONFIRMED FROM THE FIELD ON THESE PATIENTS ****

Documentation of adherence to protocol:

- Passive external rewarming (clothing removed, covered with blankets)
- Mental status documented

PRECAUTIONS AND COMMENTS

- Note that infants and children are more susceptible to heat loss and special care should be taken to prevent heat loss in these patients.
- Medications known to impair thermoregulation include alcohol, antidepressants, psychiatric medications, sedatives, pain medications (Aspirin, NSAIDS, acetaminophen).
- May need prolonged palpation/observation to detect pulse and respirations.
- Bradycardia is normal and should not be treated. Even very slow rates may be sufficient for metabolic demands. CPR is indicated for confirmed pulseless patient but may not be effective until patient is rewarmed.
- Hypothermia patient should not be determined "dead" until rewarmed or determined dead by other criteria.
- Heat packs with temperature greater than 110 degrees Fahrenheit should not be used to rewarm patient because of risk of burning skin.
- Excessive movement of the patient may precipitate ventricular fibrillation: **Gentle movement is important.**
- Frost bite: Do NOT rub or apply hot packs in the field situation. Avoid thaw and refreeze.

7/04

Reviewed:

Revised:

EMS/ Region1 SMOs

**REGION I EMERGENCY MEDICAL SERVICES
STANDING MEDICAL ORDERS
EMT – Paramedic**

SMO: Hypothermia

Overview: Core body temperature less than 95 ° F [35° C] can result from a decrease in heat production, an increase in heat loss, or a combination of the two factors. Most common cause is exposure to extreme environmental conditions. Classified as Mild (CBT of 96.8° F to a CBT of 93.2° F [36-34° C]), Moderate (CBT of 86° F [30°C]), and Severe (CBT of < 86.0° F [<30°C]).

INFORMATION NEEDED

- Length of exposure
- Air temperature, water temperature, was patient wet or dry?
- Medical history: trauma, alcohol, tranquilizers, anticonvulsants, medical problems (such as diabetes)

OBJECTIVE FINDINGS

MILD HYPOTHERMIA

- Alert to impaired judgment
- Possible slurred speech
- Shivering
- Evidence of local injury; blanching, blistering, erythema of extremities, ears, nose

MODERATE HYPOTHERMIA

All of the above PLUS

- respiratory depression
- myocardial irritability
- bradycardia
- atrial fibrillation

TREATMENT

- Routine Medical Care
- Note patient's temperature if possible
- Remove all clothing: dry patient, cover with blankets to prevent further heat loss
- Maintain warm environment
- IV access
- Encourage transport for evaluation of injuries/ hypothermia

OBJECTIVE FINDINGS

SEVERE HYPOTHERMIA (PROBABLE CARDIAC ARREST)

- Cold skin, skin color changes
- Altered mental status
- No shivering
- Loss of deep tendon reflexes, fixed and dilated pupils
- Weak, thready pulse-- possible cardiac arrest
- Spontaneous ventricular fibrillation

TREATMENT

- Assess breathing and pulse for full 30-45 seconds
 - If not breathing and/ or pulseless, start CPR
 - Place on cardiac monitor: If the patient is in Vfib or pulseless Vtach, **defibrillate** per defibrillation protocol up to a **maximum** of 3 shocks
 - Ensure adequacy of CPR. Follow appropriate ACLS protocol—Medications usually not effective with temperature < 89° F. For temperatures > 89° F medications should be given at standard doses but longer intervals between doses. This prevents toxic accumulation of the drug. Contact medical control for further assistance in medication administration in these patients.
 - Obtain IV access—administer warmed IV fluid
 - Apply warm packs to central pulse areas (carotid, axilla, femoral). Avoid peripheral warming.
 - Rapid transport
- ** TRIPLE ZERO CANNOT BE CONFIRMED FROM THE FIELD ON THESE PATIENTS ****

Documentation of adherence to protocol:

- Passive external rewarming (clothing removed, covered with blankets)
- If not breathing and/or pulseless CPR initiated.
- If patient noted to be in V-fib or pulseless V-tach, defibrillation of up to 3 times performed.
- Mental status documented; if Altered Mental Status, IV initiated

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