

HEAT/COLD ILLNESS

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HEAT ILLNESS

Heat exposure may produce many different types of medical problems. Heat stroke and heat exhaustion are the most important of the heat related syndromes to the paramedic, because their courses may be improved by proper pre-hospital care. Their presentations may be confused with a variety of the other medical problems, so the context of heat exposure is important. Additionally, certain patients, including those who are elderly, obese, dehydrated or on atropine-like medication which limit sweating, are predisposed to heat related illnesses.

HEAT CRAMPS

MOVE TO COOL ENVIRONMENT

1. Maintain airway, breathing and circulation.
2. Pulse Oximetry, high flow oxygen.
3. 12-Lead EKG/Cardiac Monitor
4. IV Normal Saline TKO rate, blood draws.
5. Transport.
6. Monitor ABC's.

HEAT EXHAUSTION

Heat exhaustion is characterized by flu-like symptoms. Usually patients exhibit signs of tachycardia and the patient may have orthostatic hypotension, thirst and dryness of the mouth. Usually, the patient has a normal mental status.

MOVE TO COOL ENVIRONMENT

1. Maintain airway, breathing and circulation.
2. Pulse Oximetry, high flow oxygen.
3. Cool patient rapidly.
 - a. Undress patient, cover with cool, wet sheet and use fan or any available means to maximize air flow about the patient.
 - b. Apply as many cold packs as available to body.
4. 12-Lead EKG/Cardiac Monitor (if dysrhythmias, begin ACLS protocols).
5. IV Normal Saline Wide Open rate then TKO after 500 cc infused, blood draws.
6. Check Glucose
7. Transport.
8. Monitor ABC's.

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HEAT STROKE

Heat stroke is characterized by brain dysfunction, displayed as bizarre behavior, confusion, seizures or even coma. The temperature is quite elevated (usually 40 degrees C or more). The patient is tachycardic and tachypneic and may be hypotensive. The most important aspect of pre-hospital care is the unbundling and cooling of the patient.

MOVE TO COOL ENVIRONMENT

1. Maintain airway, breathing and circulation.
2. Pulse Oximetry, high flow oxygen.
3. Cool patient rapidly.
 - a. Undress patient, cover with cool, wet sheet or any available means to maximize air flow about the patient.
 - b. Apply as many cold packs as available to body.
4. 12-Lead EKG/Cardiac Monitor (if dysrhythmias, begin ACLS protocols).
5. IV Normal Saline 500cc Bolus, blood draws.
6. Transport.
7. Monitor ABC's.

FOLLOW SEIZURE PROTOCOL

COLD ILLNESS / FROSTBITE

REMOVE PATIENT FROM COLD ENVIRONMENT

1. Maintain airway, breathing and circulation.
2. Pulse Oximetry, high flow oxygen.
3. 12-Lead EKG/Cardiac Monitor
4. Gently and carefully remove coverings.
5. Rapid Transport.
6. Immersion in warm water (if long transport and no possibility of freezing).
7. Monitor ABC's.
8. Consider heat packs
8. Consider pain management

•DO NOT APPLY TIGHT BANDAGES

•DO NOT ALLOW PATIENT TO SMOKE

•DO NOT USE SNOW OR RADIANT HEAT

•DO NOT RUB, MASSAGE OR ALLOW TO REFREEZE

•DO NOT RUPTURE BLISTERS OR APPLY OINTMENTS

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HYPOTHERMIA

“No one is dead until they are warm and dead!” Patients who may be hypothermic are assumed viable unless and until they fail resuscitation after re-warming. This is true even though they may appear, at first, to be dead. Even so, re-warming attempts in the field are dangerous and patients should be rapidly and gently transported. The removal of wet clothing is helpful if it can be done quickly and atraumatically. Any physical manipulation of a hypothermia victim may precipitate ventricular fibrillation, so all maneuvers must be very carefully considered. Further cold exposure must be prevented.

A full minute may be required in hypothermic victims to palpate the pulse. It may be too difficult to start IV's on some hypothermic patients, so make no more than two attempts. Defibrillation and anti-arrhythmic drugs may take longer to act or require higher dosages to obtain an effect. They may be totally ineffective until after re-warming. Since any of the causes of altered mental status may be involved in the subsequent hypothermia, all other routine altered mental status guidelines apply.

It is not always clear in a cold environment if a victim became hypothermic before or after cardiac arrest. For the purposes of field management, unless there is incontrovertible evidence to the contrary, it shall be assumed that hypothermia is a factor in the cardiac arrest. However, the best possible history should be obtained so that the physician in the emergency department can make the most accurate independent judgment.

1. Maintain airway, breathing and circulation.
2. Pulse Oximetry, high flow oxygen.
3. 12-Lead EKG/Cardiac Monitor (if dysrhythmias, begin ACLS protocols)
4. IV Normal Saline TKO rate, blood draws.
5. Remove wet clothing, LIMIT PATIENT MOVEMENT.
6. Rapid transport.
7. Monitor ABC's.
8. Consider heat packs

WATCH FOR VENTRICULAR FIBRILLATION
KEEP PATIENT FROM FURTHER COLD EXPOSURES
“NO ONE IS DEAD UNTIL THEY ARE WARM AND DEAD”