

HYPOTHERMIA



Hypothermia is a state of low body temperature. When the core temperature of the body drops below 95°F (35°C), an individual is considered to be hypothermic.

Mild Hypothermia = A core temperature \geq 90°F (32°C).

Severe Hypothermia = A core temperature $<$ 90°F (32°C).

Hypothermia can be attributed to inadequate thermogenesis, excessive cold stress, or a combination of both. Cardiac arrhythmias, including ventricular fibrillation, become more probable as the body's core temperature falls. The severely hypothermic patient requires assessment of pulse and respirations for at least 30 seconds every 1 to 2 minutes.



1. Remove wet garments.
2. Protect against heat loss and wind chill by using blankets, insulating materials, and moisture barriers. Remember to cover the head.
3. Maintain horizontal position. Do not elevate the extremities.
Hypothermic patients should be handled gently at all times, because tactile stimulation may precipitate arrhythmias and/or cause tissue damage.
4. Obtain and monitor core temperature.
5. Monitor cardiac rhythm.
6. Allow a low HR, RR and BP associated with lowered metabolic rate.
7. Intubate, if unresponsive, in arrest, severe dysrhythmias, or BP $<$ 70.
8. Ventilate to keep EtCO₂ near 40. **DO NOT** hyperventilate. Normal respiratory rate may be hyperventilation for hypothermic patient.
9. Administer O₂ to 100% oxygenation, warmed if possible.
10. Start re-warming measures:
 - ✓ Heat packs to neck, armpits, and groin.

11. Turn the transport vehicle's heat to high.
12. Establish 2 large-bore IVs and infuse 500cc bolus of warmed NS (42° to 44° C). Repeat 500cc boluses until a BP \geq 80 is achieved. Consider IO placement, if unable to establish IVs.
13. Monitor for CHF due to sluggish myocardial contractility.
14. Re-warm by 1°C (2°F) per hour.
15. Unconscious Patient:
 - I. Perform **blood glucose test**. If blood glucose is $<$ 60, obtain blood sample. Administer 50 ml of **50% dextrose**, IV/IO.
 - II. Administer 2 mg of **naloxone (Narcan®)**, IV/IO.*
16. Pulseless Patient
 - A. Core temperature $<$ 30C (86F):
 - I. Perform CPR.
 - II. Withhold IV medications until temperature is $>$ 30°C (86°F).
 - III. Limit to 1 shock for VF/ VT.
 - IV. Transport patient to hospital.
 - B. Core temperature $>$ 30°C (86°F):
 - I. Perform CPR.
 - II. Administer IV medications as indicated, but at increased intervals between doses.
 - III. Repeat defibrillation for VF/ VT as core temperature rises.
17. If patient arrests, re-warming to 35°C (95°F) is essential before resuscitative efforts may be terminated. If patient is hypothermic and in arrest for an unknown or prolonged period of time prior to arrival consider contacting medical control for advice on how to proceed.
18. When deciding your destination, consider availability of cardiac bypass for re-warming in patients with PEA. Contact medical control for advice if uncertain.

*Narcan® may be given via IM, IO or Mucosal Atomization Device (MAD) if regular IV access cannot be established.