

# Hypothermia and cold-related injury

(January 2017)

---

## Rationale

Hypothermia is defined as a core temperature below 35°C, and it can represent a medical emergency. Severe hypothermia is defined as a core temperature below 28°C. Frostbite is a common and potentially serious injury.

## Causal Conditions

(list not exhaustive)

- Decreased heat production (e.g., hypothyroidism)
- Increased heat loss (e.g., exposure)
- Impaired thermoregulation (e.g., neurologic, metabolic, alcohol)

## Key Objectives

Given a patient with hypothermia or a cold-related injury, the candidate will diagnose the cause, severity, and complications and will initiate an appropriate management plan. In particular, the candidate will recognize the severity of hypothermia and provide urgent therapy.

## Enabling Objectives

Given a patient with hypothermia or a cold-related injury, the candidate will

- list and interpret critical clinical findings, including
  - a. determine the severity by using appropriate methods;
  - b. determine whether concomitant illnesses or the use of alcohol or substances may have precipitated the condition;
- list and interpret critical investigations, including
  - a. investigations for underlying causes (e.g., thyrotropin [thyroid-stimulating hormone]);

- construct an effective initial management plan, including
  - a. initiating life-saving treatment in case of severe hypothermia;
  - b. understanding the advantages and disadvantages of active and passive external rewarming and active core rewarming as well as appropriate rewarming of frostbitten areas;
  - c. conducting ongoing monitoring of patient during rewarming to identify complications (e.g., arrhythmia, infection);
  - d. determine if the patient requires further specialized care;
  - e. determine if the hypothermic patient is in cardiac arrest, recognizing the need for rewarming prior to ceasing resuscitation (particularly in the case of a child).