



## Cold Exposure

Exposure to cold conditions can lead to hypothermia (generalised cooling of the body) or frostbite (localised cold injury).

**Hypothermia:** is a condition where the body temperature drops below 35°C

- Hypothermia can be mistaken for drunkenness, stroke or drug abuse.
- Suspect hypothermia when conditions are cold, wet and windy, especially in the young and elderly or individuals under the influence of alcohol or drugs.
- As the core body temperature drops, so does the metabolic rate which means the cells require less oxygen. Hypothermia protects the brain from the effects of hypoxia so resuscitation should be continued until the casualty can be rewarmed in hospital.

### SEVERE Hypothermia

<30°C

- Unconscious
- Cardiac arrhythmias
- Pupils fixed and dilated
- Appears dead
- Cardiac arrest

### MODERATE Hypothermia

33°–30°C

- Shivering ceases
- Muscle rigidity increases
- Consciousness clouded to detect
- Slow breathing
- Slow pulse

### MILD Hypothermia

35°–34°C

- Maximum shivering
- Pale, cool skin, blue lips
- Poor coordination
- Slurred speech
- Apathy and slow thinking
- Irritable or confused
- Memory loss

- DO NOT re-warm too quickly - can cause heart arrhythmias.
- DO NOT use radiant heat (eg fire or electric heater) - re-heats too quickly.
- DO NOT rub or massage extremities - dilates blood vessels in skin so body heat is lost.
- DO NOT give alcohol - dilates blood vessels in skin and impairs shivering.
- DO NOT put casualty in hot bath as monitoring and resuscitation if needed may be difficult.

**Frostbite:** is the freezing of body

issues and occurs in parts exposed to the cold.

## SIGNS & SYMPTOMS • White, waxy skin • Skin feels hard • Pain or numbness

### FIRST AID

- Seek shelter • Treat hypothermia before frostbite • Gently remove clothing from affected area • Rewarm affected area with body heat - place in armpit (rewarming can be very painful) • DO NOT rub or massage affected area - tiny ice crystals in tissue may cause more damage • DO NOT use radiant heat • DO NOT break blisters • NEVER thaw a part if there is any chance of it being re-frozen. Thawing and refreezing results in far more tissue damage than leaving tissue frozen for a few hours.

### FIRST AID

- Call • Seek shelter - protect from wind chill.
- Handle gently to avoid heart arrhythmias.
- Keep horizontal to avoid changes in blood supply to brain.
- Replace wet clothing with dry.
- Wrap in blankets/sleeping bag or space blanket and cover head.
- Give warm, sweet drinks if conscious.
- IF NOT SHIVERING:
- Apply heat packs to groins, armpits, trunk and side of neck.
- Body-to-body contact can be used.
- IF UNCONSCIOUS:
- DRSABCD (pg 3) - Check breathing/pulse for 30-45 secs as hypothermia slows down everything.
- If no signs of life - commence CPR while re-warming casually.