



COLD CASUALTY

ARGYLL OUTDOOR NAVIGATION

Cold Wet Killer



Mountain Hypothermia Exhaustion Exposure

is a frequent and potentially dangerous problem faced by hill walkers and climbers in the hills of Scotland at any time of the year, most often when the temperature is well above freezing point. It's amazing how many have experienced the early warning symptoms and have escaped more serious consequences and have never realised how close they had come to tragedy.

Exhaustion exposure is a result of the combined effects of cold, wet and wind and is always associated with exhaustion and low morale caused by walking too far, too fast, and carrying too much weight, also when hungry and wearing poor clothing protection from the wind and rain.

In these conditions the walker is being chilled so quickly that his body is losing heat faster than the body can produce from food or through muscle exercise. In the early stages this heat loss affects only the body's outer shell i.e. face and limbs. The face, hands and legs will soon become as cold as the surrounding air. This is not a sign of hypothermia, but does mean that heat is being drawn away from the vital body core. The body core temperature has to fall from its normal 37 deg C by only 2 deg C to cause real problems. This temperature will continue to drop to the life threatening level of 28 deg C unless it is recognised quickly and action is taken to rectify and prevent further heat loss.

The time from initial onset of hypothermia to death can be less than two hours.

1. It shouldn't happen anyway

Hypothermia is 100% preventable in fit healthy walkers providing you follow these simple rules:

- Eat enough energy producing food before and during the walk, make regular stops at least once every hour to eat and drink.
- Wear proper wind and waterproof clothing giving protection from head to feet, use insulating layers.
- Attempt only what you can achieve.
- Stop or turn back if you think you've tried too much, stick to realistic goals.

2. However it could happen

- If you were to get lost or caught out overnight.
- If you are injured or ill.
- Others at risk include children, the elderly, and diabetics, walkers with heart conditions or need regular medication.

There are four stages of treatment depending on how quick you recognise the problem and severity of the casualty's coldness

The Stages Are:

Preventable, Reversible, Rescuable and Critical

1 Stage 1 Preventable

Most effective way of combating the cold exposure environment is to eat and drink sufficient energy giving food and drink. Wearing proper protective wind and waterproof clothing. Not wasting energy by attempting too much or fighting strong head winds. Knowing when to stop and turn back.

2 Stage 2 Reversible

Feeling cold and unhappy. Importance of recognising early warning signs cannot be over emphasised so that action can be taken to reverse the effects.

Aim to:

- Prevent further body heat loss.
- Stop and shelter from the wind and rain.
- Top up the body's fuel from fast acting hot sweet drink and food.
- Take ten minutes rest sitting, but not on the ground i.e. backpack/mat, put on extra clothing especially for the head and hands. Think about what to do next, either continue or return.

3 Stage 3 Rescuable

Feeling extremely cold, but is still conscious can think and talk sense.

Aim:

- Prevent further heat loss, protect from the weather.
- Lay down on insulating mats in a sleeping bag or wrapped in spare clothing, or survival bag (space blankets are useless in a hypothermia situation). Best thing to have is a survival bivvy. If no other protection available you may have to get other members of the group to lie down on either side of the casualty.
- Effective re-warming comes only from the inside the casualty. Give warm sweet drink and glucose based food if able to swallow; this will help to build up the body's heat.
- Put a scarf or something similar loosely round the casualty's mouth and nose this will warm up the air as they breathe.
- After 20 minutes decide either to evacuate the casualty, or if rescue is required, if in a shelter, assist casualty to remove heavy wet outer clothing and replace with warm dry clothing.

4 Stage 4 Critical

Deeply cold “body feels cold like marble”. Armpits are really cold, confused lapsing in and out of unconsciousness.

Aim:

- Shelter protection. No unnecessary movement.
- Place casualty on side in recovery position, head low to maintain airway, on insulating mats and in a sleeping bag within survival or bivvy bag. Send for rescue asap.
- Keep close check on airway, breathing and circulation. Feel for a full minute when checking pulse. If breathing stops turn casualty onto back and blow air into mouth. One breath every six seconds, until breathing starts. Remember to keep the head well back. If heart stops begin CPR.

5 Never presume death of cold casualty

Signs and effects of exhaustion exposure are insidious and the early warning signs are often unnoticed by other members of the party. At least 90% of hill walkers have had the early symptoms but have never realised it.

All hill walkers must be aware of the problem and know what to look for.

Early Signs:

- Feeling cold and unhappy
- Complaining and grumbling.
- Slowing down or lagging behind.
- Difficulty crossing rough ground.
- Slowing mentally and physically.
- Slurring of speech.
- Poor coordination.
- Spells of shivering when resting.
- Cramp in the legs.

More Serious Signs:

- Feeling bitterly cold.
- Stumbling, shambling movement.
- Disregard for the cold (loosening or taking clothes off).
- Vision impaired.
- Judgement affected, confused.
- Having problems getting up after a rest.
- Shivering when on the move.
- Drowsy.

Danger Signs:

- Shivering stops (Real Danger Sign).
- Slow jerky movements.
- Falling down.
- Collapse.
- Lapsing in and out of consciousness.
- Hallucinating
- Slow breathing and pulse.

TREATMENT ON THE HILL

BODY SIGNS/SYMPTOMS TEMP (RECTAL)

37.5°C NORMAL

36 FEEL COLD

Seek dry shelter, replace wet clothing with dry including socks, gloves, hat, cover neck, insulate whole body including HEAD from cold. Exercise but avoid sweating. External warmth (bath, fire) ONLY if CORE TEMP. above 35°C. Warm sweet drinks and food (high calories).

35 SHIVERING

BODY CORE TEMPERATURE BELOW 35C=HYPOTHERMIA=HOSPITAL

34 IRRATIONAL
CONFUSED
(may appear drunk)

NO EXERCISE, HANDLE GENTLY, REST.
NO EXTERNAL WARMTH (except to chest, trunk, eg. Hieberl Jacket).
Warm sweet drinks and calories.
Internal warming via warm moist air (exhaled air, steam) or warm moist oxygen (40 - 42°C at mask).

33 MUSCLE STIFFNESS

Monitor pulse, breathing. Restrict all activity, lie down with feet slightly raised.

SHIVERING STOPS, COLLAPSE, TRANSFER TO HOSPITAL. URGENT

31 SEMI CONSCIOUS
30 UNCONSCIOUS
No response to painful stimuli

Nothing by mouth. Check airway remains open. May tolerate plastic airway, put in recovery position, check airway, turn every 2 hours to protect skin, monitor pulse and breathing.

29 SLOW PULSE AND BREATHING

Slow mouth-to-mouth breathing, at victim's own rate (may be very slow).

28 CARDIAC ARREST
No obvious pulse or breathing
Pupils dilated

Check airway. CPR, with mouth-to-mouth breathing. Aim for normal CPR rates of 12-15 breaths/min. and 80-100 compressions/min. but slower rates of 6-12 breaths/min. and 40-60 compressions/min. may be adequate. Continue for as long as you can.

BELOW 28C, NO VITAL SIGNS, COLD DO NOT GIVE UP TREATMENT

NOTE: NOT DEAD UNTIL WARM AND DEAD!

Avoid rapid rewarming and **HANDLE GENTLY AT ALL TIMES.**

Core temperature may lag behind skin temperature and continue to drop, so keep monitoring.



