



Hypothermia? (Exposure)

The human body is a machine which works at 37°C. The outer parts (extremities) can get much colder but the vital organs in the 'core' must stay at this constant temperature. In cold, wet, windy conditions the 'core' may start to cool, unless checked, this quickly leads to:

- mental deterioration
- loss of co-ordination
- unconsciousness
- failure of breathing and circulation
- death

What causes hypothermia?

This loss of body heat is caused by:

- **COLD** - remember temperature drops with altitude
- **WIND**-will drag out heat from the body.
- **WET CLOTHING** - spoils insulation.

Contributory factors are:

- **LACK OF FOOD** - not enough, often enough, or the wrong sort
- **FATIGUE** - lack of fitness, too difficult a trip, or too heavy a load
- **INJURY** and **ANXIETY**
- **RECENT ILLNESS**, especially the 'flu'.

Assume any accident victim in the mountains is, or soon will be, suffering from hypothermia.

Signs and symptoms of hypothermia

Watch for the early warning signs:

- Feeling cold, shivering
- Tiredness or exhaustion
- Anxiety, lack of interest, lethargy
- Clumsiness, stumbling or falling
- Slurred speech; difficulty in seeing
- Sense of unreality
- Irrational behaviour

The later signs, indicating a serious medical emergency are:

- Obvious distress
- Shivering stops, despite the cold
- Collapse and unconsciousness
- Coma

The progress of hypothermia can be very fast, with as little as 30 minutes from the first symptoms to unconsciousness.

THE VICTIM WILL OFTEN NOT COMPLAIN

Is it exhaustion or hypothermia?

ONLY A LOW READING THERMOMETER CAN TELL FOR SURE. Take temperature under the tongue for three minutes:

- **MORE THAN 35°C**

Hypothermia is unlikely i.e. the person is probably suffering from exhaustion. Keep them moving as 70% of heat production can be generated by muscle activity. Movement will keep an exhausted person warm and prevent hypothermia.

- **LESS THAN 35°C**

Check by taking the rectal temperature using a low reading thermometer, then treat as hypothermia.

What to do

Signs of hypothermia are a medical emergency, you MUST NOT ignore them. Immediate action is needed:

- **PREVENT FURTHER HEAT LOSS**
- **ASSIST REWARMING**
- **WATCH FOR UNCONSCIOUSNESS**

'Pushing on' can cause rapid onset of hypothermia.

- **STOP AND FIND SHELTER**

or make shelter (tent, snow cave, branches etc.). Get out of the wind.

- **GET VICTIM INTO DRY CLOTHES**

and into a sleeping bag. A companion can provide some warmth.

- **WARM SWEET DRINKS**

are valuable, but NOT for an unconscious person. These help to warm from the inside.

- **KEEP VICTIM IN HORIZONTAL RECOVERY POSITION**
- **NO ALCOHOL**
- **NO RUBBING OR RAPID REHEATING**
- **IF BREATHING STOPS**

check airway, start resuscitation.

With warmth and shelter, victims often appear to recover quickly however don't press on again or collapse is likely. Full recovery can take up to two days.



How to prevent hypothermia

Prevention is easier than cure.

- **GOOD CLOTHING**

However fine the weather, be prepared for it to get worse. Have waterproof and windproof clothing and over trousers. Wear wool or synthetic clothing e.g. polypropylene, fibre pile, polar fleece. Layers are best as they trap warm air. A woollen hat and gloves are equally important because of the high heat loss from head, neck and extremities. Avoid cotton clothing e.g. jeans.

- **FOOD**

A good breakfast is essential to provide energy for the day. Take a combination of nourishing foods such as cheese, bread, peanut butter, muesli bars etc. as well as high energy snacks such as chocolate, barley sugars,

snack bars. Eat frequently and have food easily to hand.

- **PLAN YOUR TRIP**

Don't attempt too much. Allow time for breaks. Don't get too hot on the move but put on extra clothing during rest breaks.

- **DRINK LIQUIDS**

This will help to prevent exhaustion. A thermos of hot liquid is ideal but a fast brew on a hiking stove is also effective.

- **MODERATE LOADS**

Don't try to carry too heavy a load. (This is especially important for young people).

The combination of WET, WIND AND COLD can be lethal.

Consider turning back or seeking shelter if you encounter these conditions.

Check all party members regularly for any signs of hypothermia.

Remember

- **HYPOTHERMIA CAN KILL** - even the fit and healthy. Young and old are at risk.
- The symptoms can look like simple fatigue, even the victim may not realise the problem.
- People have died of hypothermia without once complaining of the cold.
- If one person has symptoms, others in the party may also have hypothermia.
- It's best to have four or more people in your party so one can stay with the victim while two go for help.

For more information about mountain skills training contact:

South African Mountaineering Development & Training Trust

www.mdt.za.org
info@mdt.za.org

or

Any of the trainers listed on the MDT website

Errors, corrections or suggestions for improvements for this training sheet may be forwarded to:



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