

## 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 - parka and overtrousers. Wear wool or synthetic clothing e.g. polypropylene, fibrepile, polarfleece.

Layers are best as they trap warm air. A woollen or fleece hat and mittens (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, scroggin, muesli bars etc. as well as high energy snacks such as chocolate, barley sugars, snack bars.

### PLAN YOUR TRIP

- Check the weather forecast before you go
- Don't attempt too much
- Allow time for breaks
- Don't get too hot on the move
- 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 primus 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

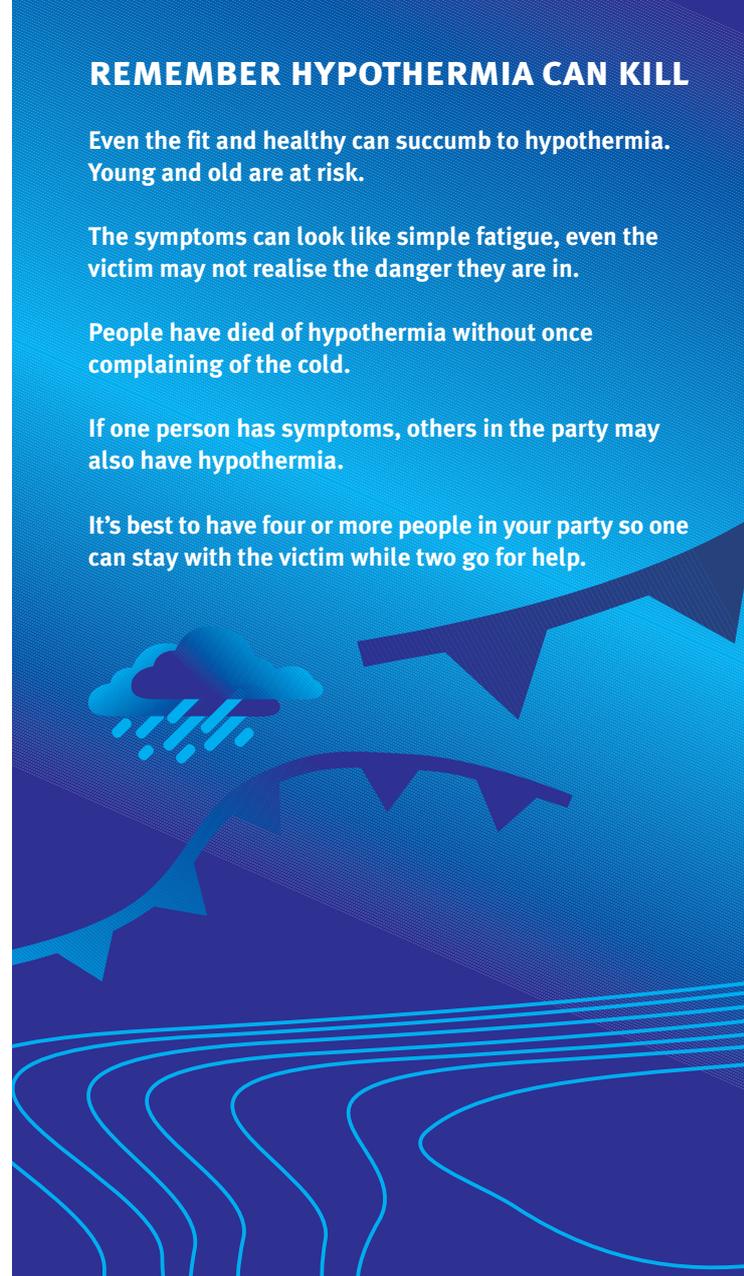
Even the fit and healthy can succumb to hypothermia. Young and old are at risk.

The symptoms can look like simple fatigue, even the victim may not realise the danger they are in.

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.

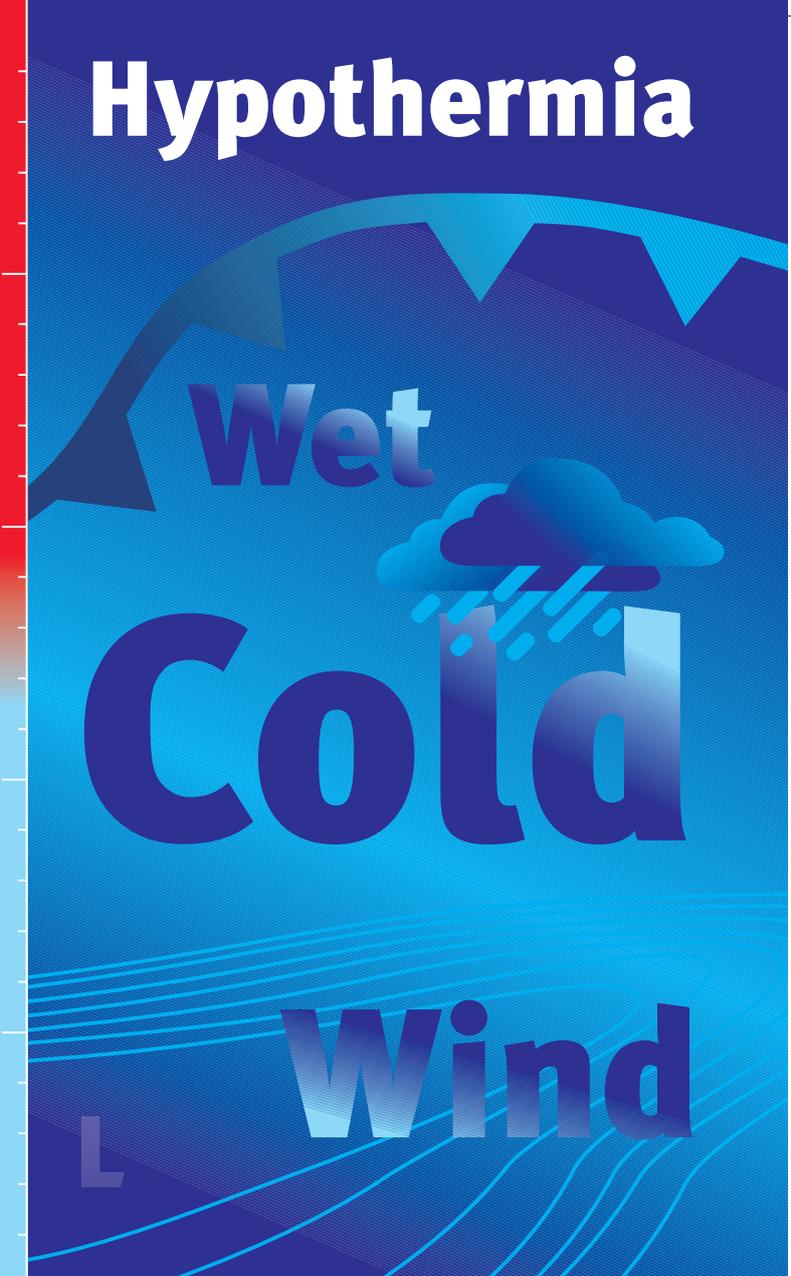


# Hypothermia

Wet

Cold

Wind



For resources and further information contact:



**NEW ZEALAND MOUNTAIN SAFETY COUNCIL**

PO Box 6027 Wellington

Tel 04 385 7162, Fax 04 385 7366

Email: [info@mountainsafety.org.nz](mailto:info@mountainsafety.org.nz)

Website: [www.mountainsafety.org.nz](http://www.mountainsafety.org.nz)





#### **NORMAL BODY CORE TEMPERATURE**



#### **FEEL COLD**

Still alert and able to help oneself  
Numbness in legs and arms



#### **MILD HYPOTHERMIA**

Shivering, clumsy, irrational, confused or  
– may appear drunk  
– slurred speech  
– denies problem



#### **MODERATE HYPOTHERMIA**

Muscle stiffness



#### **SEVERE HYPOTHERMIA**

Shivering stops  
Collapse  
Semi-conscious  
The victim may remove clothing



#### **CRITICAL HYPOTHERMIA**

Unconscious  
No response to pain  
Slow pulse breathing that may be difficult to detect  
Skin cold  
– may be blue/grey in colour but may be pink



#### **CARDIAC ARREST**

No obvious pulse or breathing  
– Pupils dilated  
– May appear dead

## **WHAT IS HYPOTHERMIA?**

The human body is a machine which works at 37°C. The outer parts can get much colder but the vital organs in the 'core' must stay at this constant temperature.

Hypothermia occurs when the body cannot make up for the amount of heat lost. The 'core' temperature drops to a level where normal brain and muscle function is impaired – usually at or below 35°C. When the body cannot cope, it goes into survival mode, shutting down non-essential functions.

Unless checked, this quickly leads to:

- Loss of co-ordination
- Mental deterioration
- Unconsciousness
- Failure of breathing and circulation
- Death

## **HYPOTHERMIA OR COLD SHOCK?**

Only a low reading thermometer will tell you whether a patient is suffering from hypothermia or cold shock/exhaustion.

If the patient's temperature is above 35°C, it is unlikely that they have hypothermia. Keep them moving as 70% of heat production is generated by muscle activity.

If the patient's temperature is less than 35°C then they should be treated as a hypothermic patient.

Take the temperature in the armpit or under the tongue for at least 3 minutes. If the temperature is less than 35°C, take a rectal temperature which will give a better assessment of the severity.

## **WHAT CAUSES HYPOTHERMIA?**

This loss of body heat is caused by:

- WET CLOTHING** – ruins insulating properties of clothing.
- WIND** – will drag out the heat.
- COLD** – remember temperature drops with increased altitude.

Hypothermia is not just caused by environmental factors. Other factors that may hinder the body's ability to maintain it's core temperature are:

**LACK OF FOOD** – not enough, not often enough, or the wrong sort.

**FATIGUE** – lack of fitness, too hard a trip, or too heavy a load.

**INJURY** and/or **ANXIETY**.

**RECENT ILLNESS** – especially 'flu'.

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

## **WHAT TO DO**

Signs of hypothermia are a medical emergency.

**DO NOT** ignore them.

Immediate action is needed to prevent further heat loss and assist re-warming. Continuing on without addressing the problem can cause rapid onset of hypothermia.

## **YOU MUST:**

**STOP!**

**FIND SHELTER** – look for or make a shelter (tent, snow cave, branches etc). Get out of the wind and/or rain.

**GET VICTIM INTO A SLEEPING BAG** – place drink bottles filled with warm water or a companion inside the patient's sleeping bag to warm the patient.

**WARM SWEET DRINKS** – are valuable as they help to warm from the inside. **Do not** give liquid to an unconscious person.

**PLACE** – victim in horizontal recovery position.

**HANDLE** – an unconscious victim with extreme care and only move them when absolutely necessary.

**MONITOR** – for changes in level of consciousness and temperature.

**CHECK AIRWAY** – start resuscitation if breathing stops.

## **NEVER:**

**Give alcohol**

**Rub the victim**

**Use rapid reheating**

*NOTE: With warmth and shelter, victims often appear to recover quickly. However don't press on as the victim may collapse again. Full recovery can take up to two days.*