

Mountain Hazards

Categories: *Human* *Climatic* *Topographic*

Human:

Being in the mountains:

- Physical frailty.
- Fear.
- Environmental damage.

Actions in the mountains:

- Poor navigation.
- Lack/loss of equipment.
- Creating rock falls.
- Taking inappropriate risks.

Pre-existing hazards:

- Lack of Fitness.
- Poor Health.
- Low energy (lack of food).
- Dehydration.
- Lack of Preparation.
- Insufficient training & technical 'know how'.

Avoiding human hazards:

- Planning your activity.
- Researching where you are going.
- Self-assessment - Group assessment.
- General Preparation.
- Seasonal or other specific training.
- Work on developing fitness/health, techniques/proficiency and resources.

Rate yourself:

| | Where am I at? | Where I need to be? | What I need to do? |
|---------------|----------------|---------------------|--------------------|
| Fitness | | | |
| Health | | | |
| Techniques | | | |
| Proficiencies | | | |
| Resources | | | |

Climatic:

Weather patterns:

- Changeability of weather can leave mountaineer unprepared.
 - Gaining good advance weather forecasting.
 - Interpreting the likely conditions on the mountain.
 - Planning your route/activity accordingly.
 - Carrying appropriate equipment to cope.

Wind:

- On average, wind speeds on the mountains are X2 that at sea level.
- Strong Winds may become a hazard to mountaineers as they can literally blow people off balance leading to falls.
- Strong wind can cause a 2nd hazard through wind-chill.
- The faster the flow of air across the skin the greater the cooling effect.
 - Gain experience progressively in tougher conditions.
 - Learn to listen for approaching Gusts.
 - Choose appropriate routes for days when strong winds are forecast.
 - Develop and practice a system for communicating with your associates when winds are high.

Humidity:

- Humidity has two main features in Mountain Hazards:
 - Low visibility:
 - Caused by fog, mist or low cloud.
 - Leads to difficulty navigating.
 - Makes topographical hazards less obvious.
 - Increases sense of isolation
 - Makes search & rescue more difficult.
 - Increased chilling effect:
 - Moist air is colder in the mountains than dry air.
 - Clothing and rainwear are generally less efficient in humid conditions.
 - Wind-chill is increased.
 - Rime ice may form on clothing eyelashes and equipment through sublimation.

Precipitation:

- Increased chance of chilling.
- Reduces visibility.
- Makes rocks and terrain slippery.
- Swells rivers to a dangerous degree.
- May fall as snow leading to further hazards.

Temperature:

- The air in the Mountains is colder than at sea level.
- Temperature reduces as we ascend at a rate known as the LAPSE RATE.
- 1 degree C for every 100 M ascended DRY.
- 1/2 degree C for every 100 ascended WET.

Lightning

- Not the most common hazard on the hills but a significant one.
- At least one death per year in the hills in Britain.
- Key factor - knowing the direction of approach of the storm/ strikes.
- You may not be able to eliminate the danger but you should be able to minimise the risk.
 - Get to a lower altitude A.S.A.P.
 - Go down on the lee slope.
 - If you cannot get all the way to the valley stop below the highest point to minimise the chances of a strike.
 - Sit on your rucksack or anything dry you may have.
 - Avoid spark gaps.

Avoiding climatic hazards:

- Preplanning.
- Keeping energy levels up.
- Good general fitness.
- Appropriate clothing.
- Maintain group control – stay close together.
- Practice navigation.

Topographic:

- Steep slopes.
- Rock fall.
- Rugged terrain including:
 - Boulder strewn ground.
 - Peat hags.
 - Craggs and outcrops.
 - Boggy ground & bog holes.
 - Undulating slopes (up & down):
 - Cause of twisted ankles and other injury.
 - Can make travel in the mountains slow and tiring.
 - Can make navigation difficult resulting in people getting lost or benighted.

Coping with rugged terrain:

- Appropriate level of fitness.
- Suitable attire.
- Develop good route-planning skills.
- Suitable equipment basic equip. - boots & emergency equip. - walking rope.
- Develop skills to cope with unforeseen injury.

Water:

- People have drowned in Ireland while hillwalking.
- Even small streams swell enormously when there is heavy rainfall.
- The prime site for mountain rescues in Wicklow is Glenmacnass Waterfall.
- In Kerry it is the Hags Glen below Carrauntoohil.

Coping with water hazards:

- Good route planning avoids dangerous river crossings.
- Learn appropriate techniques for crossing swollen streams.
- Carry suitable equipment for emergency crossings

Remoteness:

- Hillwalking areas may be many miles from the roadside.
- Travelling into the hills, a person needs to carry suitable resources for the sustenance of life.
- In the event of an accident or illness, there may be difficulty in accessing help for a casualty.

Coping with remoteness:

- Carrying appropriate equipment.
- Having a means of summoning help and communicating.
- Having knowledge of techniques required for emergency evacuation from the hillside.