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Safety in the Mountain



Cofinanziato nell'ambito dell'iniziativa comunitaria Interreg III A
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Cod. VEN332053









Provincia di Belluno





1

HOW SHOULD I PREPARE FOR A TRIP OR A HIKE? HOW SHOULD I BEHAVE?


-  Never underestimate in any way the dangers and risks related to any kind of activity in the mountains, at altitude or in hostile and impervious environments in general.
-  You must be in good physical and psychological shape and adequately trained from a technical point of view to tackle the route chosen.
-  Avoid tackling routes which are beyond your level of training and your physical and psychological limitations. Think calmly and carefully whether you are adequately prepared for the task. Knowing when to give up is nothing to be ashamed of, quite the contrary.
-  Never go walking in caves or in the mountains alone. If possible, request the presence and/or the advice of specialists (Mountain Guides, CAI (Italian Alpine Club) and CNSAS Stations). For all other activities in the mountains, at altitude or in hostile environments, follow the indications given (level of difficulty, possible risks, whether or not Mountain and Speleological Rescue and medical services are available, insurance, etc.).
-  Gather sufficient information on the characteristics and the difficulty of the route and on the more general characteristics of the area. Study in advance the relevant guides and topographical maps for all kinds of useful information on the destination and route chosen and on alternative routes.


 Always leave clear, written indications with family, friends or acquaintances regarding where you are headed and the route you intend to take, using where appropriate the guestbooks in the refuges and bivouacs.

 Find out in advance about the weather conditions, paying particular attention to the local forecast, as it is more accurate and reliable than the national forecast. The weather can have a significant influence on the activity you are about to undertake.

 In a hostile, mountain environment you should:

- always follow the paths and routes indicated;
- on the more challenging or difficult routes, always stay close to adults or accompanying guides;
- make frequent stops when necessary for any physical (tiredness, hunger, thirst, etc.) or psychological (fear, insecurity, etc.) reasons;
- never light fires or play with matches or lighters;
- never shout or make unnecessary noise;
- never dislodge rocks for fun or out of carelessness;
- always respect nature: take your own rubbish and any you find down to the valley and dispose of it;
- never disturb or frighten animals of any kind;
- never pick or pull up mushrooms, flowers and herbs without good reason; they may be poisonous, and in any case you risk causing unnecessary damage to the ecosystem;


 Never assume that your cellphone, GPS or other technology will be able to solve all potential problems and difficulties: your own safety and that of others depends above all on your being aware of your limitations and willing to admit them.

 Inform your hiking companions and other people who enjoy spending time in the mountains of the rules and indications set out in this guide.





2


WHAT SHOULD I WEAR, EAT AND DRINK ...AND WHAT SHOULD I PUT IN MY RUCKSACK?


 Appropriate clothing and footwear:


Avoid training shoes, boots and in general shoes with smooth or leather soles; prefer hiking shoes with the sole in vibram or similar material; take with you warm clothes (sweater, fleece or similar), a wind jacket in water-resistant, breathable fabric, a hat, gloves and a change of underwear. Sometimes a headscarf, sun cream and sunglasses are useful, depending on the weather

 Take a long-lasting headlamp with you, energy-giving food (if possible light and easily assimilated by the body) and extra liquids (preferably water with perhaps some added saline integrators).

 Take a small first aid kit (plasters, disinfectant, sterile gauzes and bandages, elastic bandages).

 Take a space blanket (a plastic-lined foil blanket) to protect and insulate the body from both cold and heat.

 You can take other small, lightweight articles with you, such as a lighter, a knife, a pen and paper, to be used for emergencies only and not merely for entertainment.

 Check your insurance is valid and consider requesting the CAI and/or Dolomiti Emergency membership card.



3

THE WEATHER FORECAST



WIND AND COLD:

Wind and cold are always possible, both at high and mid-altitude. They depend on both objective (e.g. the air temperature and the strength of the wind) and subjective (e.g. tiredness and/or fatigue) factors. Sudden drops in temperature are always possible, whatever the setting or the destination chosen. Wind causes the body to lose

heat rapidly: this phenomenon is exacerbated when clothing is wet and/or very tight-fitting, or when the subject in question is injured.



FOG:

Fog can be found in the mountains and in hilly areas in all seasons. It may cause you to lose your sense of direction in any circumstances and on any type of ground. It is therefore important to have an excellent knowledge of the area in which you are walking, and keep with you the appropriate map/s. Should you lose your sense of direction you

should always call for help, in order to avoid unnecessary and potentially serious risks.



RAIN, SNOW AND HAIL:

These phenomena can catch anyone unawares, in any circumstances, and may cause serious difficulties. Proper training, both physical and psychological, and suitable clothing and footwear are of fundamental importance. In these circumstances it is vital to pay close attention to paths with earth or grass or smooth rocks underfoot, as they generally become slippery. It is

also important to be on the alert for falling rocks or the sudden swelling of streams and torrents.



LIGHTNING:

Typical of summer storms, you may come across lightning also in spring and in autumn. Lightning is always dangerous, and you should move immediately away from any areas close to trees, rock spikes or isolated pinnacles, areas near ridges and peaks; where possible, keep to flat, level ground. Get rid of iron and metal equipment. If you seek shelter in a grotto or a cave, you must check they

are not running with water, as this could act as a conductor for electrical discharges. In any case, do not lean on the walls or lie down on the ground.





3

OBJECTIVE DANGERS

NATURAL PHENOMENA

CAUSED BY...

SUN

- sunstroke
- eye problems
- avalanches and ledges of snow falling away
- falling rocks



CAN BE PREVENTED WITH / BY...

- Knowledge of the area and phenomena characteristic to it
- Appropriate clothing and accessories
- going hiking at times appropriate to the characteristics of the surrounding environment.

CAUSED BY...

COLD

- freezing
- frostbite
- general loss of concentration, sensitivity and clear-headedness



CAN BE PREVENTED WITH / BY...

- appropriate clothing and accessories
- proper physical and psychological training

CAUSED BY...

WIND

- congestion
- avalanches and falling stones
- drop in external and therefore body temperature
- obstacles to movement
- breathing difficulties
- sharp rise in sensitivity to cold



CAN BE PREVENTED WITH / BY...

- appropriate clothing and accessories
- re-evaluation of the route to be followed
- proper physical and psychological training

CAUSED BY...

ADVERSE WEATHER CONDITIONS

- freezing and frostbite
- lightning
- falling rocks
- variations characteristic of the area
- poor visibility and loss of sense of direction
- loss of concentration, sensitivity and clear-headedness



CAN BE PREVENTED WITH / BY...

- attention to the weather report
- appropriate clothing and accessories
- re-evaluation of the route to be followed
- in the event of lightning, avoid peaks, ridges, grottos, rock faces running with water; get rid of metal equipment
- proper physical and psychological training

CAUSED BY...



PRESENCE OF OTHER PEOPLE AND ANIMALS

- falling rocks
- avalanches

CAN BE PREVENTED WITH / BY...

- mark your presence
- obtaining information before setting out and avoiding crowded routes.

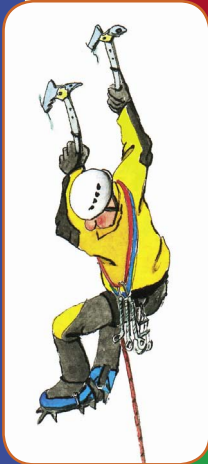
3

SUBJECTIVE DANGERS

CAUSED BY...

PSYCHO-PHYSICAL LIMITATIONS

- natural
- caused by illness and/or accidents
- lack of training and an appropriate attitude
- lack of physical fitness and specific training
- shock from an accident
- excessive self-assurance
- fear and vertigo



CAN BE PREVENTED WITH / BY...

- awareness of your physical and psychological conditions
- frequenting the particular environment you are interested in
- gradual training to cope with the technical and environmental difficulties adequate physical and psychological training

CAUSED BY...

TECHNICAL LIMITATIONS

- incorrect manoeuvres
- incorrect choice of material and equipment
- incorrect choice of clothing and footwear
- incorrect judgement of the route and the time it should take to complete



CAN BE PREVENTED WITH / BY...

- suitable technical training
- methodical revision of notions already acquired
- frequenting the particular environment you are interested in

CAUSED BY...

LIMITATIONS OF EXPERIENCE

- unsuitable choice of walking companions
- insufficient information about the area chosen and the routes identified
- disinterest in alternative routes, escape routes and descents
- lack of knowledge or underestimation of your physical and psychological limitations
- uncontrolled psychological relaxation



CAN BE PREVENTED WITH / BY...

- consistently frequenting the area you are interested in, tackling any particular difficulties gradually
- obtaining appropriate information on the logistics and technical requirements of the route, as well as the weather conditions
- being prepared to abandon goals set, if necessary

CAUSED BY...

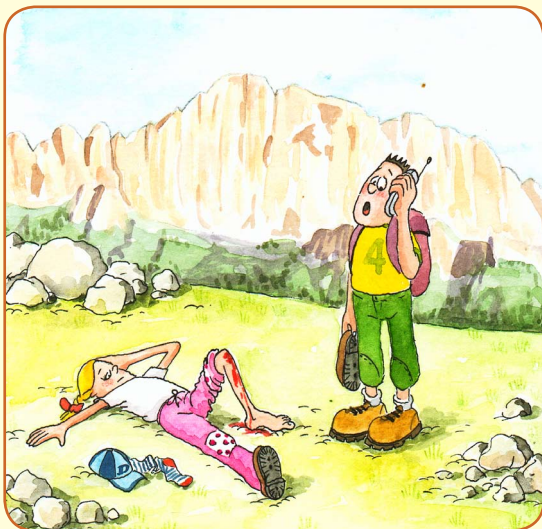
CARELESSNESS AND/OR SUPERFICIALITY

- stress caused by fatigue
- stress caused by relaxation



CAN BE PREVENTED WITH / BY...

- choosing routes which are suitable for your technical, emotional, physical and psychological abilities
- being prepared to abandon goals set, if necessary



5

SOME FIRST AID RULES FOR MINOR ACCIDENTS!

While hiking some minor accidents can happen: you should not panic; learn to recognise potential or actual problems and how to treat them with what you have available. You should above all learn how to prevent them.

Never leave a sick or injured person alone: always stop and help him or her.

If you stay calm you will help others to do so.

If a more serious accident happens, or if you are in doubt...

DO NOT HESITATE:

to request any medical or other help (e.g. search for missing persons) and contact the Veneto Region Mountain and Speleological Rescue, you must **ALWAYS** and **ONLY** call the **118 SUEM number everywhere in the region.**

In Tirol you must ALWAYS and ONLY call the 140 Alpin-Notruf

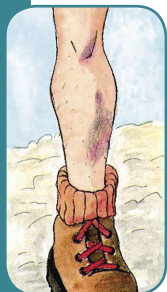
Below are some examples of minor accidents which can happen when hiking:

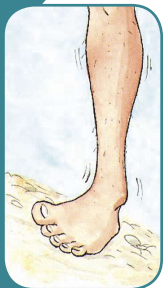
CONTUSIONS

How to recognise them: pain, swelling, bluish colour.

What to do: cold compresses with water or snow if available; never tire the affected part of the body. **How**

to prevent them: be careful where you step (holes, rocks, soft ground, etc.); do not run, especially on steep ground or gravel. Avoid dangerous areas.



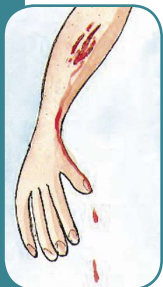


SPRAINS

How to recognise them: joint injuries caused by abrupt or exaggerated movements; severe pain, obvious swelling, bluish colour, particular difficulty moving the arm or leg.

What to do: cold compresses with water or snow if available; immobilize the joint and, if possible, avoid using it; get the sprain checked out by a doctor.

How to prevent them: be careful where you step (holes, rocks, soft ground, etc.); do not run, especially on steep ground or gravel. Avoid dangerous areas.



CUTS AND GRAZES

How to recognise them: broken, bleeding skin with underlying tissue visible.

What to do: if the abrasion is not serious, disinfect it and, if possible, wash it with clean running water, then cover it with a sterile gauze, or, if this is not possible, protect it with some other kind of clean fabric.

How to prevent them: be careful where you step (holes, rocks, soft ground, etc.); do not run, especially on steep ground or gravel. Avoid dangerous areas.



HEAT EXHAUSTION

How to recognise it: weakness, vertigo, nausea and lack of appetite, pupils dilated.

What to do: immediately look for a place in the shade, cool and ventilated; use the space blanket for protection; gradually give the patient non-alcoholic drinks at room temperature; in case of fainting, raise the patient's legs in order to help the blood

flow to the brain.

How to prevent it: avoid prolonged physical effort in excessively high temperatures, drink continuously and copiously, protect your head and any other exposed parts from the sun.



SUNBURN AND OPHTHALMIA

(sore, stinging eyes)

How to recognise them: redness and a burning sensation of the skin and eyes as a result of excessive exposition to the sun's rays or the prolonged reflection of the sun's rays on snow and ice.

What to do: cold compresses with water or snow if available; eyewash; protect the skin with a sterile gauze, or, if this is not possible, with some other kind of fabric.

How to prevent them: use appropriate clothing to protect the skin, apply sun cream and UV protection sunglasses.

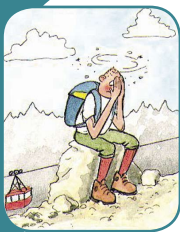


COLD-RELATED INJURIES (FROSTBITE)

How to recognise them: frostbite can affect particular areas, especially hands, feet, nose and ears, which initially appear pale, then cold, then turn blue, are often swollen and painful; or it can affect the whole organism, with a sharp fall in body temperature and symptoms of sleepiness and exhaustion.

What to do: move the patient to an area which is sheltered from the cold, slowly warm the affected body parts, also by lightly massaging them; remove any wet clothing or footwear, and if possible replace with warm, insulating clothing; loosen any laces and very gradually give rigorously non-alcoholic hot drinks.

How to prevent them: wear appropriate clothing, change wet or sweaty clothes, and pay careful attention to diet and training.



ALTITUDE SICKNESS

How to recognise it: it can appear beyond a certain altitude (rarely below 2,500 mt.) and causes headaches, nausea, fatigue, shortage of breath and sometimes symptoms of excitation.

What to do: descend gradually.

How to prevent it: train gradually to cope with increasingly high altitude; be careful with sharp gradients (e.g.

cableway).



STINGS FROM HYMENOPTERA

(bees, wasps, hornets, etc.)

How to recognise them: small mark on the skin with redness and swelling, pain and itchiness.

What to do: remove the sting if present, disinfect the affected area or, if this is impossible, wash it with clean

running water, apply compresses and apply an antihistamine cream at home.

How to prevent them: carefully observe the surrounding environment and the route followed, avoid insects' nests and do not disturb them.



TICKS

How to recognise them: they are small, about 2-4 millimetres (adult), brownish to dark grey-black in colour.

What to do: at the end of an excursion, carefully examine (with the aid of another person if possible) your whole body for signs of ticks; should you find one, do not attempt to pull it out; remove it as soon as possible with the help of an adult. Creams, oil or alcohol can help you to extract the tick, using tweezers: grasp

the tick as close to the skin as possible and remove it carefully with an anti-clockwise motion. Any fragments of the parasite left behind do not present an immediate problem and can be removed later by a doctor. You should keep an eye on the affected area for a few weeks: should there appear a red blotch which becomes increasingly wide, see your doctor.

How to prevent them: find out about the environment in which you intend to go hiking and avoid areas which are known to be infested; wear long socks and long, tight fitting trousers and long-sleeved sweaters; do not lean on the ground and avoid walking through thick vegetation or long grass. Ask your pharmacist for specific protective sticks and sprays to apply to the skin or clothing before you set out.

BITES FROM AN ADDER

How to recognise them: adders have a triangular, heart-shaped head, vertical, slitty eyes and a squat tail.

Their bite is characterised by two small holes about one centimetre apart, seeping a clear or bloody liquid and causing severe swelling and intense pain; after a few minutes the victim will begin to experience vertigo, nausea, tachycardia and breathing difficulties.

What to do: lie the victim down and try to help him or her remain calm, remove any clothing or other items which restrain the extremities or the torso, apply a tourniquet (using a piece of string, strap of the rucksack, handkerchief, etc.) above the bite, help the blood to flow out by pressing strongly on the affected area; do not make any incisions or attempt to suck out the poison, do not give the victim anything to drink. Get the patient to the nearest hospital as quickly as possible, because a bite from an adder can have severe consequences, and can even cause heart failure. It must therefore be treated as a medical emergency, especially if the victim is elderly, a child or suffers from any chronic illnesses.

How to prevent them: study the route carefully, use appropriate footwear and long, tight-fitting trousers, beat the ground with sticks or step heavily (thus increasing the range and intensity of the vibrations, which can be felt by the snake – remember the adder has no sense of hearing), be careful when you sit down on the ground or on stones.





Subjects covered in this section:

- Safe hiking in the Veneto and in Tyrol
- Number to call for Mountain and Speleological Rescue in Veneto - 118
- Mountain Rescue number for the Tyrol - 140
- Mountain Rescue Signals
- Sure footing in the mountains



Useful advice for safe hiking speleological and mountain rescue – Veneto & Tyrol

SAFE HIKING!

Walking in the mountains is the only sport that can be enjoyed well into old age, as well as one of the few activities which allows you to experience unique emotions in beautiful natural surroundings. Hiking in the mountains is ideal for combating stress, relaxing and recharging your batteries. Everyone can enjoy the marvels of nature, depending on how physically and mentally fit they are. Below is some advice which we hope will help you to enjoy your hike in the mountains to the full.



Correct technique will allow you to make the most of a splendid adventure in the midst of nature!

The numbers to call for mountain rescue are: 118 (Veneto) and 140 (Tyrol)

In the Veneto all accidents should be notified by calling the Mountain Rescue number 118, whilst throughout the Tyrol region the number is 140. Another number which may be important in the mountains is 112 (European Emergency Number). 112 is used where there is insufficient network coverage for 140 or 118. In this case, you must switch off your cellphone and then, instead of inserting your PIN Code, dial 112. In this way your cellphone will automatically search for the telephone network which offers the best coverage in the area. The European Emergency Number 112 function in all countries and is free. Calls to this number always have absolute priority on all networks.

Should it not be possible to communicate using your cellphone, there are other signalling methods that can be used. You should, however, give absolute priority to 118 (Veneto) and 140 (Tyrol).

International Mountain Rescue Signals

Repeat the signal used (acoustic, optical, smoke, etc.) six times
Pause for one minute and repeat the same signal. The rescue operators will reply with a signal repeated three times in a minute.



Sure footing in the mountains

- Dangers in mountain areas caused by inappropriate behaviour during descent and ascent
- Subjective dangers

In natural surroundings you should always be careful!

Errors made when descending:



Not paying enough attention to the ground on which you are walking

Keeping your bust straight or leaning backwards



Taking long steps, with your weight balanced unequally

Other errors in descent:



Barycentre

Too little pressure on the leg carrying your weight - risk of slipping!



Example of a correct descent:



Look down to the ground on which you are walking

Your bust should be leaning slightly forwards –this allows a balanced distribution of your weight on both legs

Start out from a safe position and take small steps

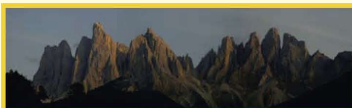
Example of a correct descent:



Use telescopic hiking poles

Take small steps, starting out from a safe position

Use shoes with Vibram soles



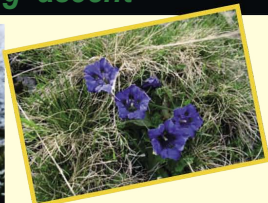
Be careful in case of steep snowfields or on hard or frozen snow!



Always try to avoid such snowfields, which should only be tackled by expert mountaineers with ice-axes, crampons and appropriate footwear.



Errors during ascent



Long steps, excessive effort and waste of energy.
Unstable balance

The leg bearing your weight slips



Errors during ascent



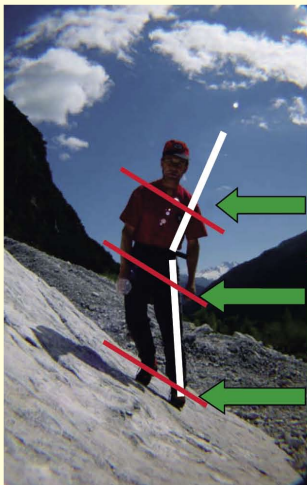
Bust leaning upwards

Hips turned downwards

Excessively long steps



Example of correct ascent:



Heels on the ground
– otherwise you risk slipping.

Bust leaning downwards

Shoulders, hips and ankles form a single axis

Small steps

Example of a correct ascent:



Lean slightly forward

Use telescopic hiking poles

Small steps



Stop

These tips are dangerous!



OK

Walking stick with Vidia tip



Walking in the mountains:

Right:

- Climb up diagonally to the mountain
- Use the natural support points on the ground
- Don't take excessively long steps

Walking in the mountains:

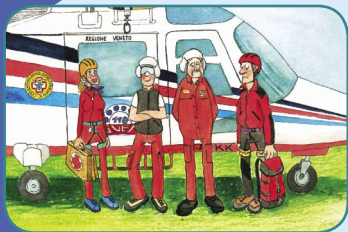
Wrong:

- Bend downwards
- Stand up too straight
- Excessively long steps
- Inappropriate equipment (training shoes)

Happy hiking in
the mountains!







THE HELIAMBULANCE: WHO ARE THE CREW MEMBERS ABOARD?

The helicopter crew is normally composed as follows: the pilot, the aeronautical technician, the reanimation doctor, the Mountain Rescue helicopter rescue technician.

The helicopter and its crew form a miniature reanimation unit, with all the surgical instruments and bio-medical equipment necessary to provide the patient with the best treatment possible.



WHAT ARE THE MOUNTAIN AND SPELEOLOGICAL RESCUE STATIONS?

The Mountain and Speleological Rescue Stations, together with the SUEM 118 Emergency Service, form the heart of this organization: they are present in all our alpine and pre-alpine valleys and are formed by the Head and Assistant Head of the Station and numerous volunteers with formal training in

mountain and speleological rescue and medical help techniques. These volunteer technicians also have a superb knowledge of their local area and are ready to come into action day and night, all year round and in all weather conditions. Rigorous on-going practical and theoretical training means they are able to carry out rescue operations in any situation.

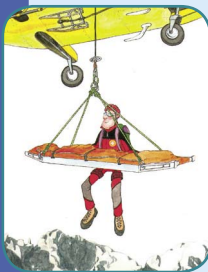
The stations all have communication equipment of various kinds





WHAT DO THE HELIAMBULANCES AND THE MOUNTAIN AND SPELEOLOGICAL RESCUE STATIONS DO?

The helicopter rescue technician is a professional who is required to be familiar not only with the entire organizational structure of the Mountain and Speleological Rescue, but also with the most sophisticated climbing and rescue techniques. He liaises with the head of the rescue station to decide on how to intervene in case of necessity, and then consults the pilot and the aeronautical technician in order to decide the recovery manoeuvre to be carried out with the helicopter.



IN WHICH WAYS CAN THE HELIAMBULANCE INTERVENE?

The heliambulance can intervene in the following ways:

- Skids to ground: the helicopter lands and embarks or disembarks the rescue operators and the people in need of help.
- Hovering: the helicopter remains still a few metres above the ground and embarks or disembarks the rescue operators and the people in need of help.
- Winch: the helicopter hovers above the scene and uses a steel cable to drop down or pull up the rescue operators and the people in need of help.
- Barycentric hook: the helicopter hovers above the scene and uses ropes of varying length hooked onto the centre of the stomach to recover the rescue operators and the people in need of help.



WHAT DOES THE REANIMATION DOCTOR DO?

Once a victim has been recovered by the heliambulance or the Mountain and Speleological Rescue team, the reanimation doctor carries out a careful examination *in loco* and, depending on how seriously injured the patient is, provides appropriate treatment. After a diagnosis has been made (the patient may be unhurt, slightly injured, seriously injured or occasionally deceased), a decision is taken regarding whether hospitalisation is necessary. If so, the patient is flown by helicopter as quickly as possible to the best-equipped and most appropriate medical centre available for treatment.





REGIONE DEL VENETO



Comitato d'Intesa
dei Volontari
della provincia di Belluno



Dolomiti Emergency

www.dolomitiemergency.it

