Mountaineering

Mountaineering in the high mountains is a great way to experience nature, companionship and adventure. The aim is to conquer high altitudes and to reach the summit of a mountain, which requires a very good physical condition and a sufficient reserve of physiological strength.

1. be in good health and fit

Mountaineering takes you into high alpine regions and demands a lot of stamina. It causes your heart and circulation to work much harder, your muscles and joints have to bear a heavy load, and you need to adapt and adjust a pace that everybody can keep up with.

In addition, mountaineering in high altitude regions is in the supreme discipline of mountaineering. A lot of experience, excellent skills and very good physical fitness are preconditions to be able to cope with the variable weather, increased heart rate and high altitude. There is no risk factor! It is generally not advisable to go mountaineering on your own. Always let responsible people know where you are going, by the buddy system. In the event of an emergency, the risk is considerably increased if you are not in a small group. There is a very small chance, however, that even the smallest misstep, must be taken into account by the mountaineers in the face of a dangerous situation and must maintain their risk by appropriate escape, sheltering, treatment, and rescue."
Check the conditions

Retracting glaciers, disappearing snow and ice as well as the risk of the ice collapse and avalanches can lead to the dangers of falling rocks and thickly covered crevasses. An "alpine start" is as vital as an "alpine return". Always adapt your route to the changing circumstances.

The following example always works which doesn’t need to be modified while mountaineering in high alpine regions:

Start in the dark. Ascend at least part of the route you will have to climb in the dark period (d).

Minerals, inorganic salts and glacial approach. Watch out for icy snow or snow blowing, especially when crossing glacier runners (e).

Due to the increase in water flow during the day, glacial streams can often be difficult to cross in the evening.

Before stepping onto the glacier, judge as conservatively and early as possible whether you will need crampons or not. While moving, keep the right amount of tension in the rope to keep it slack-free. If you can’t see your own crevasse underneath, the rope must stay extended and slack-free (a).

Dangerous rocks, the risks of slipping on steep rocks, ice and rock include the danger of one mountaineer slipping and pulling the entire rope trains off the mountain. In this kind of terrain, it is time to use crampons. In these sections and depending on the team members’ skills, the climber can continue unroped (a) or use fixed belays (f).

Beware. Examine the surroundings better and avoid friction at all times. If you see a glacier stream, stop to watch the weather and take the rise of temperature into account (d).

Rope-up and navigation

If you have to be rooped up in steep terrain, you must decide whether to stay roped up or unroped (c).

On the glacier, you will only need one person to lead. The rest of the team must follow the leader. At the top, the leader will have a new ice axe and will be responsible for ice axes. The rest of the team will help by carrying and arranging the ice axes (c).

If you are at the top of the glacier, unroute the entire roping system. Never unroute it while moving together roped up! (b).

Tension. To ensure that tension is always under control, ratchet the rope round by clipping a figure-of-eight loop into a three-way karabiner. Spacing (8-10-12 m):

- Rope teams of 4 to 7 mountaineers at least 10 m apart
- Two-person-rope at least 8 m apart, 3 stopper knots
- Three-person-rope 12 to 15 m apart, 3 stopper knots
- Four-person-rope 15 to 18 m apart, 3 stopper knots

While moving, keep the right amount of tension in the rope to keep it slack-free. If you can’t see your own crevasse underneath, the rope must stay extended and slack-free (a).

Before stepping onto the glacier, you will need crampons. In the dark period (d). Check the conditions

Constant orientation & navigation

Official walking and glacier travel as well as your probability can make orientation and navigation difficult. Therefore it is important to be equipped with a map, altimeter, compass and GPS. In the dark, stay and two persons are great friends. Even in terms of the internet and satellite receivers, the nautical map as a tool of 25,000 is not to be underestimated. An altimeter is also as useful in and around it. A GPS device can be very useful when you are not able to see the frontal part of the glacier. Therefore it is important to be aware of a standardized and navigated line of route (b). Know the location of fields of crevasses. Don’t lose track of time (c). The rope-up break to refuel, rehydrate and urinate

Soroflessness is key

The leading cause of accidents are falls from slipping or tripping. Mind how much time a person at altitude can seriously affect your work as an alpinist. Stay out and avoid it completely. Remember your safety! Fast emergency number! Avoid the temptation to plunge haphazardly onto it. It is usually the most easiest attempt (a).

Rope-up and navigation

If you are in snow-covered glaciers, you will not need to roam. Rappel up to a clipping a figure-of-eight loop into a thirwa three-way karabiner (8-10-12 m)

- Two-person-rope 12 to 15 m apart, 3 stopper knots
- Three-person-rope at least 10 m apart, 3 stopper knots
- Four-person-rope 15 to 18 m apart, 3 stopper knots

While moving, keep the right amount of tension in the rope to keep it slack-free. If you can’t see your own crevasse underneath, the rope must stay extended and slack-free (a).

Descending, be sure to keep your crampon points flat against the ice as well. Slightly bend your knees, splay your toes outward in a flat fashion. If you are on an ice-covered surface, make your foot step forward place the two outer points, simultaneously and as flat against the ice as possible.

Flat-Footing (French or "Eckstein" technique) and Front-Pointing (German technique).

Generally used on lower-angle slopes of up to approx. 35°. Press all bottom points of each crampon firmly into the ice, simultaneously and as flat against the ice as possible. Flat-footing makes good progress in your action (a). When descending, you have to keep your crampons flat against the ice as well. Slightly bend your knees, take your hands in your pockets and focus your attention. Flat-Footing. On slopes steeper than approx. 35°, the technique of front-pointing comes into play. Carefully and deliberately klax your foot forward place your toe or ice on a bone. Keep your crampons as broken - you may get stuck to the ice and have to start to roll, stumble and bruise (a).