

Mountaineering tech tips

Basics

1 Prepare your itinerary carefully

Get accurate information about the weather and the condition of your planned route; your challenges will vary according to the conditions. Decide how you will ascend and descend. Is your party ready for an itinerary at this level of difficulty?

2 Bring the appropriate equipment

In mountaineering, you have to be fast, and extra weight is your biggest enemy. Anticipate the necessary gear for the route and the conditions. Add equipment for retreat and/or rescue. For example, take a crevasse rescue kit for a glacier travel. Always have a map, compass, altimeter and headlamp.

3 Adapt your protection to your environment

It is essential to be quick when mountaineering. When the whole team is simul-climbing with a taut rope, exploit quick and reliable opportunities for protection offered by the terrain (a piece of gear in a crack or a sling around a rock horn). On difficult sections, take the time to protect yourself and your partner well. Anticipate belay stations based on upcoming challenges on your route.

4 Know when to turn back

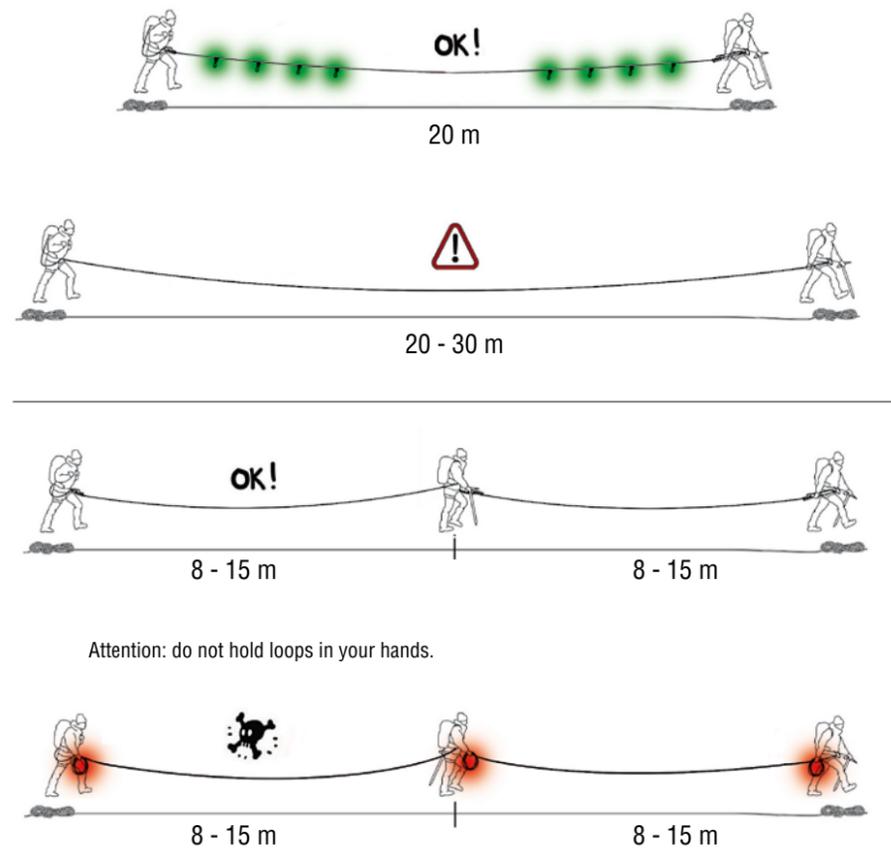
During your journey, keep four important factors in mind: the human element, the conditions, the terrain and the timing. At a turning point, analyzing these four factors will help you decide whether to continue or not. For example: How is the climbing party doing physically? Are the weather and route conditions good? Is the terrain acceptable? Do you have enough time?

5 Stay focused

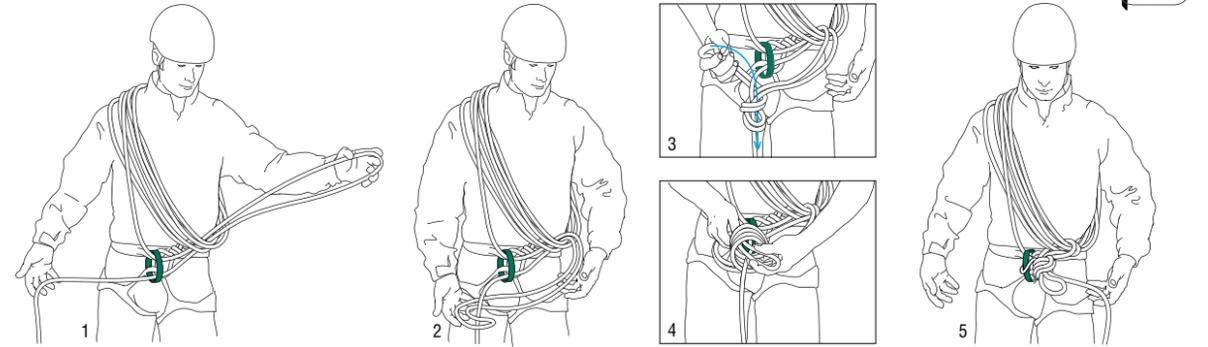
Stay focused over easy sections and during the descent. At the summit, you're only half-way done!

A. Tying in and progression on a crevassed glacier

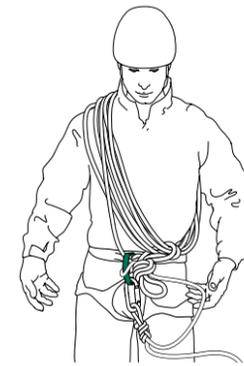
Distances between climbers.



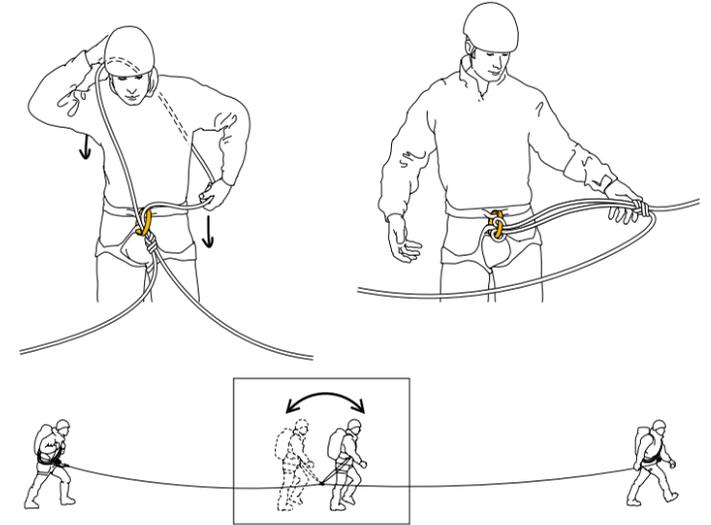
Tying in for short-rope technique.



Tying off so the excess rope can be used when the rope in use is loaded: using a cow's tail.

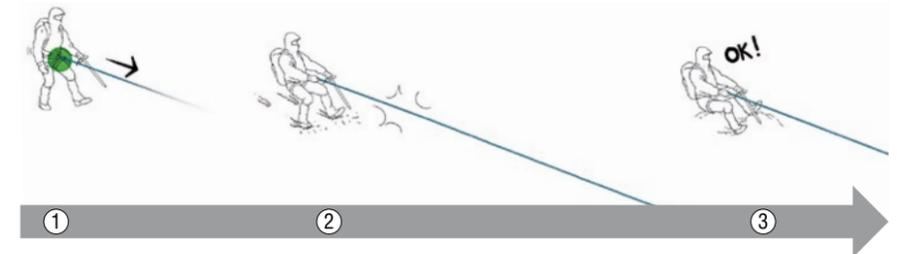


Climbing with a party of three: how the middle climber ties in.

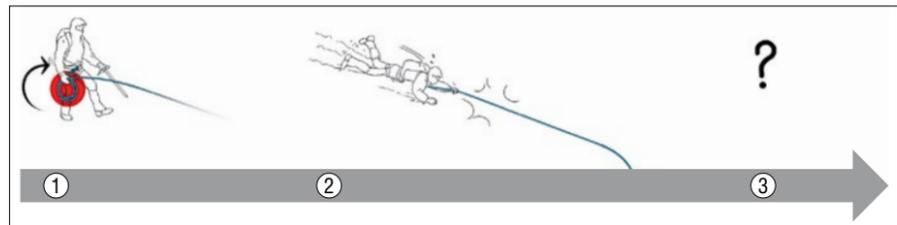


B. Falling in a crevasse

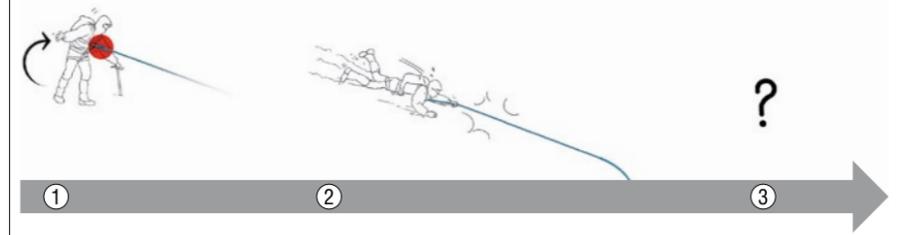
Stopping a fall:



- ventral tie-in, taut rope = OK

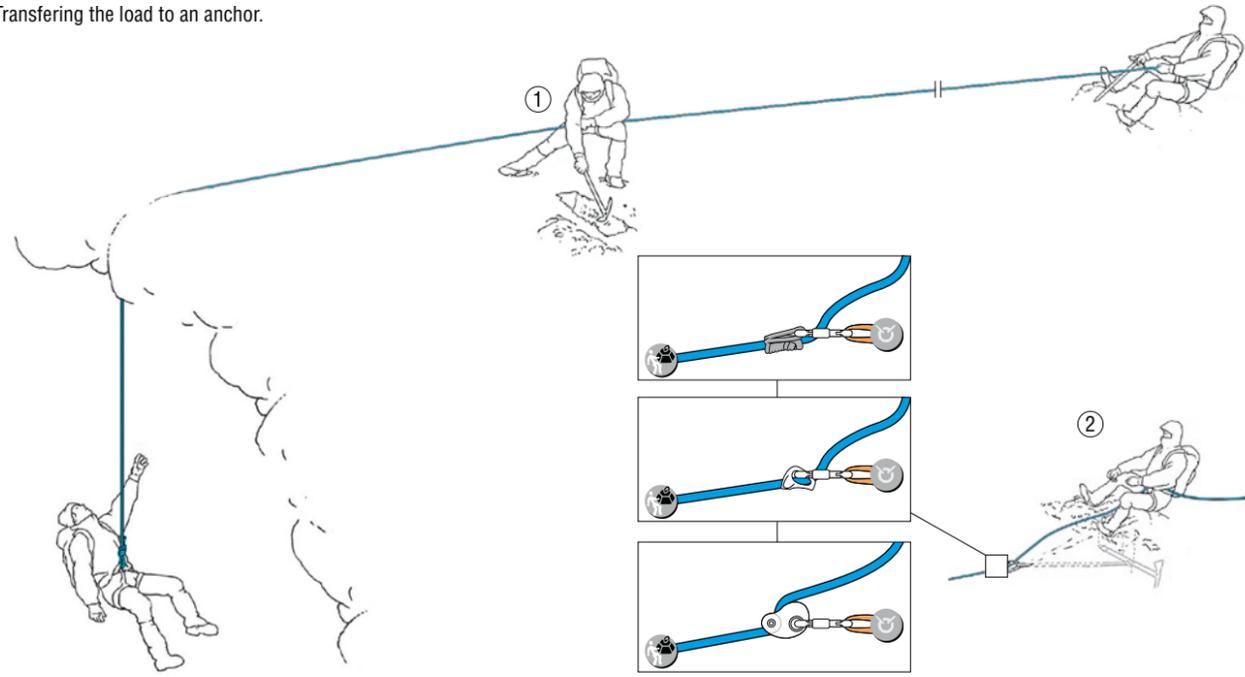


- when holding loops = danger



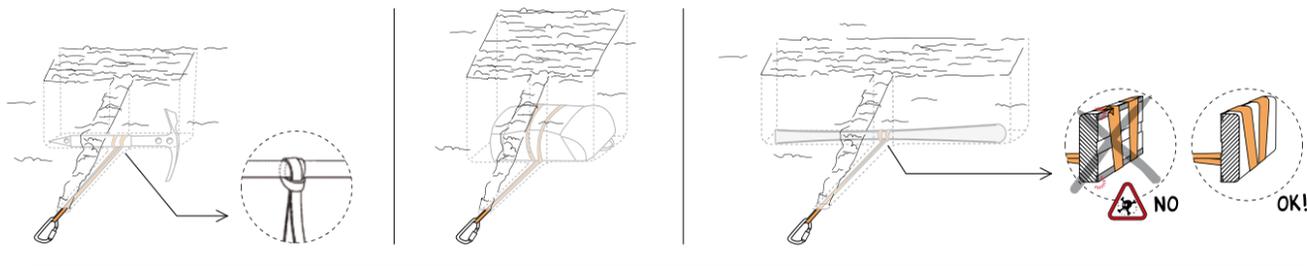
- tied in at chest-level = danger

Transferring the load to an anchor.

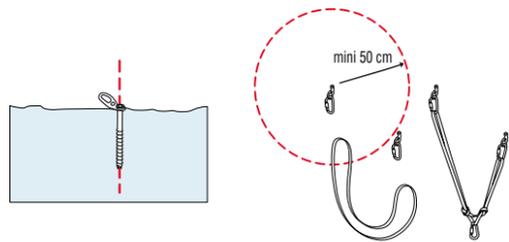


Various anchor solutions.

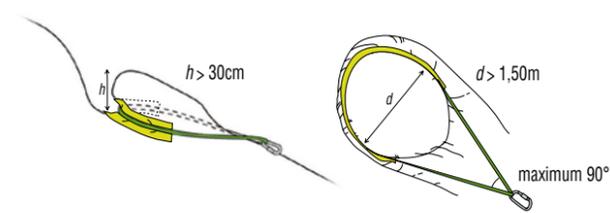
Snow.



Ice.



Hard snow.



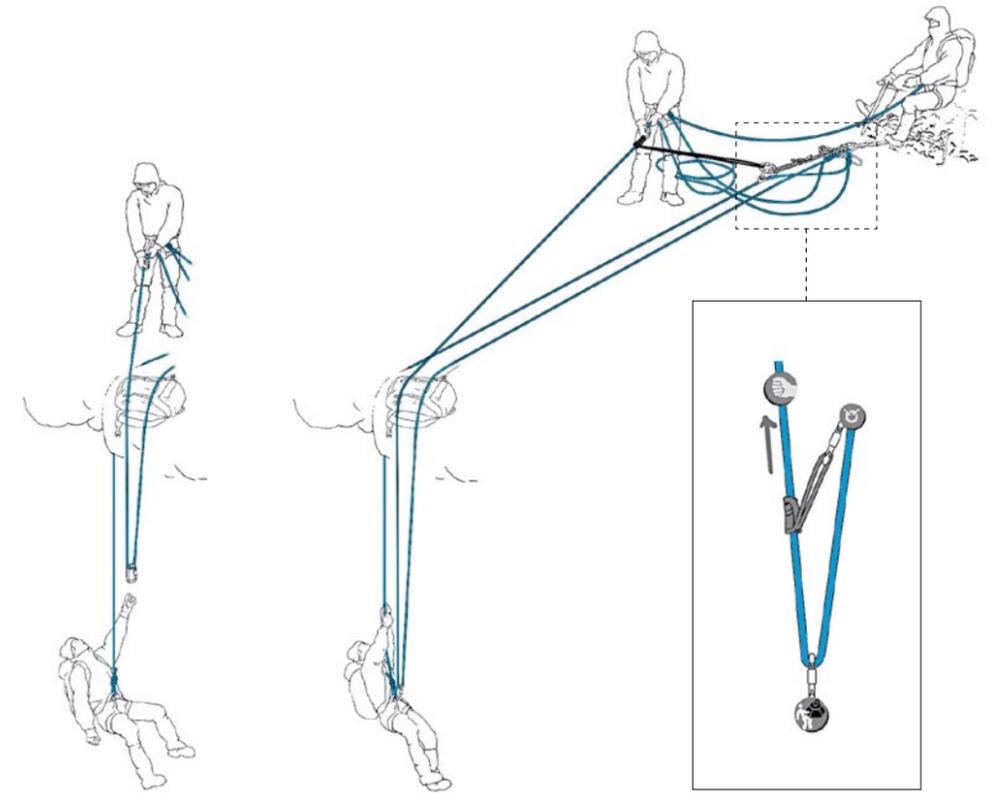
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C. Hauling

Simple pulley system

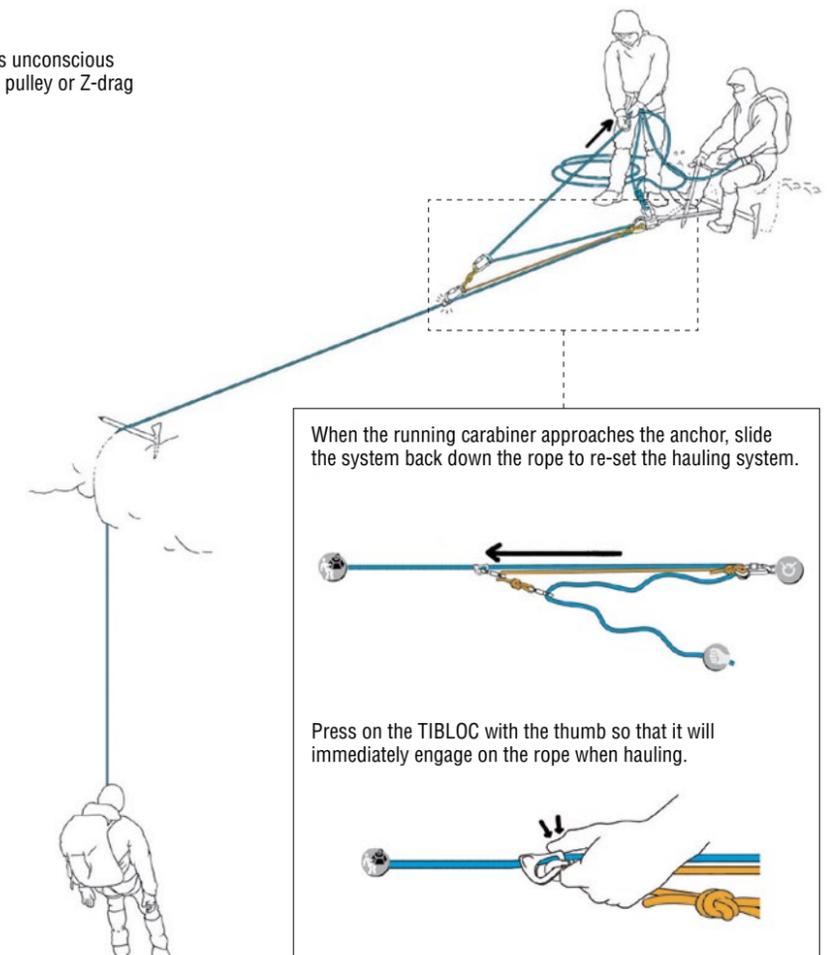
The simple pulley system is very efficient. It may be used when the victim can help haul himself out. It's a good solution in case the rope is jammed on the edge of the crevasse.

A progress capture device should be installed on the hauling rope. This system requires a lot of rope but not much equipment.



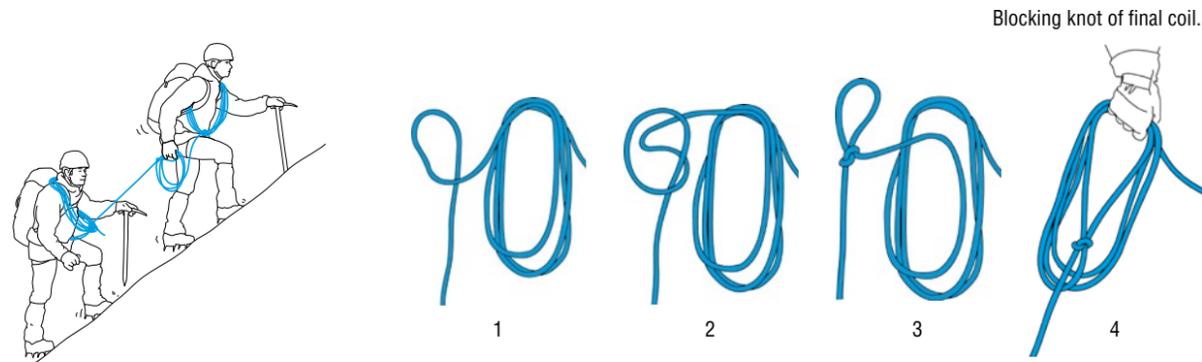
Double mariner system

The Double Mariner system is used if the victim is unconscious or when you don't have enough rope for a simple pulley or Z-drag system.



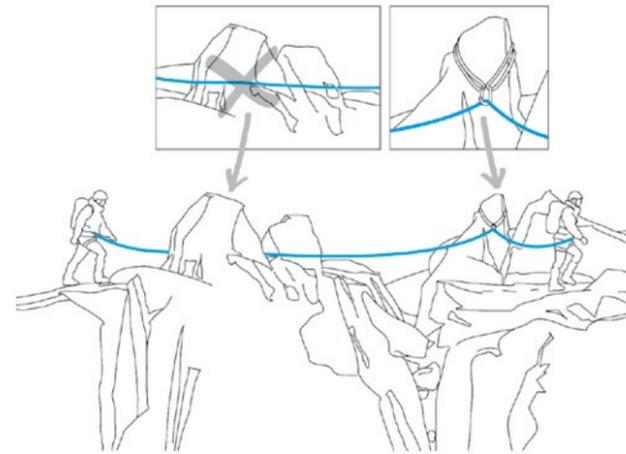
D. Moving along an easy snow slope

The leader holds a few coils of the rope in his hand, the last one secured with a blocking knot. The leader adjusts the length of the rope to the difficulty of the terrain and always positions himself uphill. The distance between the leader and second is very short, and the rope is kept taut.

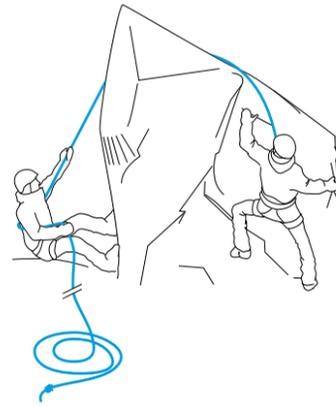


E. Progression on an easy arete

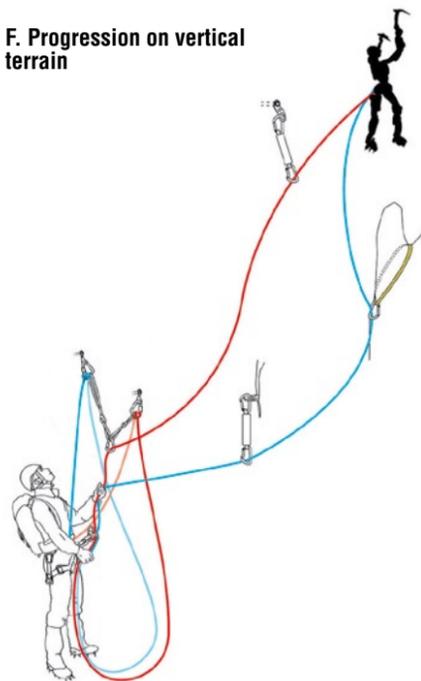
Progressing with a taut rope, the leader places protection and uses natural protection offered by the terrain (boulders, rock features, horns...).



On the harder sections, the leader asks the second to belay him. Once the section is completed, the leader belays the second.

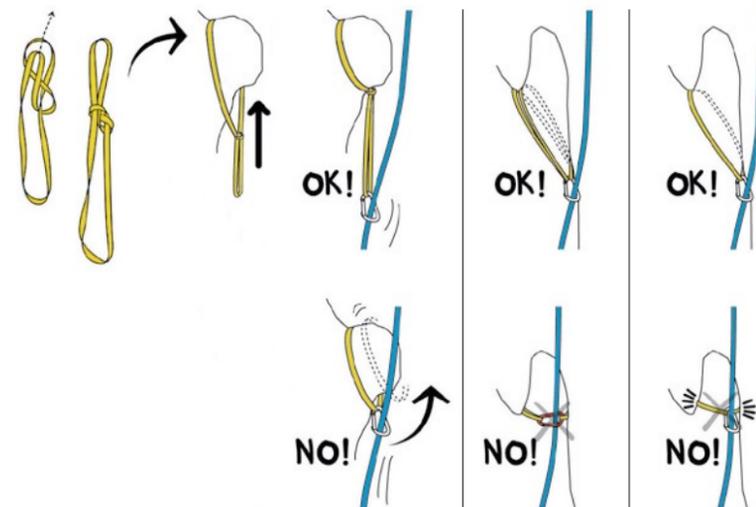


F. Progression on vertical terrain

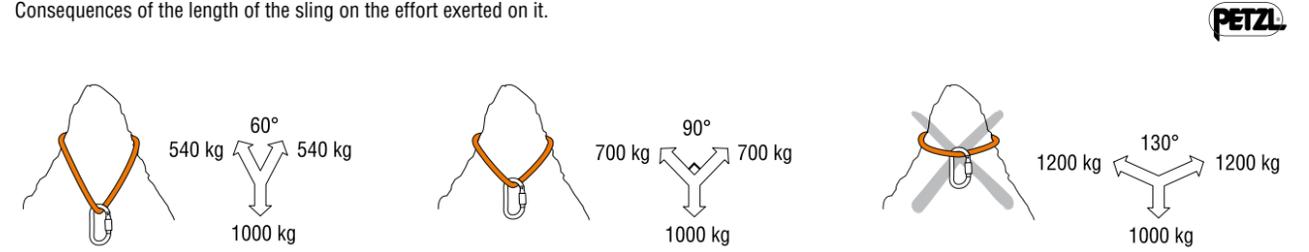


G. Protection

Make a sliding knot on the sling, keeping the sling from coming off the feature. Choose the length of the sling loop according to the feature.



Consequences of the length of the sling on the effort exerted on it.

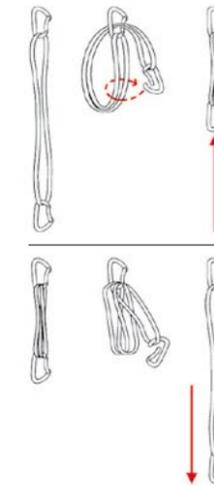


Carrying tips

Carrying webbing slings on the torso.

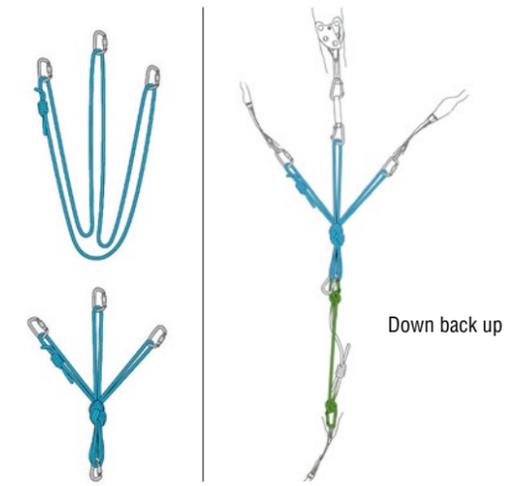


Extendable quick draw

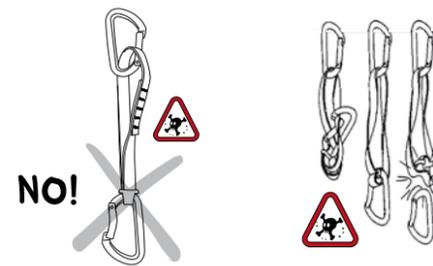


H. Belay station

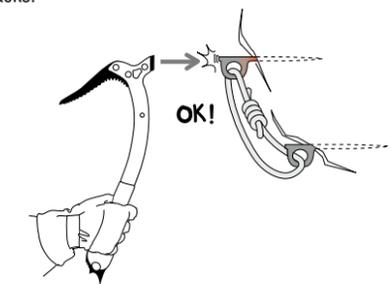
Equalizing nuts and pitons for a belay anchor.



Do not put a STRING on a sling



In the mountains, make sure to hammer in belay station pitons again. The effects of freezing and thawing can cause the pitons to come out of the cracks.



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