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Multi-Pitch Climbing





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A multi-pitch route is one that is split into two or more pitches.

This may be because it is longer than your rope, or it could be a wandering route that would involve a lot of rope drag if climbed as a single pitch.

Due to the length and complexity of multi-pitch routes, you should develop your problem solving and self-rescue skills before embarking on this kind of adventure. This is covered in detail in *The Trad Climber's Guide To Problem Solving*.

What to Bring

On long multi-pitches, it's wise to bring the following equipment in addition to everything you would normally take on a single pitch.

Food and Water

If your multi-pitch is likely to take more than a few hours, consider bringing food and water to snack on at the belays. Many routes have luxury belay ledges, so if you're not in a rush, why not have a vertical picnic?

Headlamp

Headlamps are essential on long multi-pitches. Finishing a climb, or trying to descend in the dark can be incredibly difficult and dangerous.

Extra Climbing Gear

You'll need two anchor kits for a multi-pitch route. Make sure you bring:

- Two cordelettes/ long slings
- At least six spare screwgates
- Two belay devices

If the descent from your route involves abseiling, make sure to bring ATC style belay devices and prusik cords.

Route Description

On a single pitch, it's easy to remember where to climb. However, on a multi-pitch you may have forgotten the details by pitch six, particularly if two different routes branch off the same anchor. A route description (or topo), neatly folded in your pocket, will help show you the way.



Clothes

Any comfortable all-cotton clothes will suffice for single pitch cragging, especially venues with a short approach. For multi-pitch routes, or for any climbs with a long approach, wearing synthetic clothing is a better choice. Synthetics insulate much better than cotton in wet or cold environments.

If you expect cold temperatures, bring a pair of gloves so you can belay with warm hands and then take them off to climb. A thin hat that fits under your helmet is a very lightweight way of keeping you warm too. If the descent is long, it's nice to bring a pair of approach shoes.

A warm jacket, or even a thin wind-proof layer, can make multi-pitches more comfortable when it gets windy and the sun disappears, especially for the belayer. Down jackets are a poor choice unless you're climbing in dry climates below freezing. Most down jackets will repel a small amount of

moisture, but the feathers will clump together in a storm and you'll freeze. They also tend to rip very easily on rock.

Extra Rope

You'll need to bring a second rope if your route involves an abseil descent where the anchors are more than half of your rope's length apart (i.e: you can only abseil 35 meters with a 70 meter rope).

You will also need a second rope if climbing as a team of three (see page 82).

Backpack

All this stuff can be put into a small backpack and carried by the second. Depending on the route and your tolerance of suffering, you may not need any of it. For routes that are difficult to return to the base, you'll need to bring everything up the route with you. Plan before you go.

Belay Changeovers

Efficient belay changeovers will speed up your ascent, making you less likely to get benighted or stranded in a storm.

Sometimes the more experienced climber will lead every pitch. Other times, each climber will choose which pitches they prefer. A common tactic is to swing leads (lead alternate pitches). Be aware that easier pitches may be runout.

Swinging leads is the most efficient. The rope is already stacked with the new leader's end on top and the quickdraws from the previous pitch will be racked on their harness.

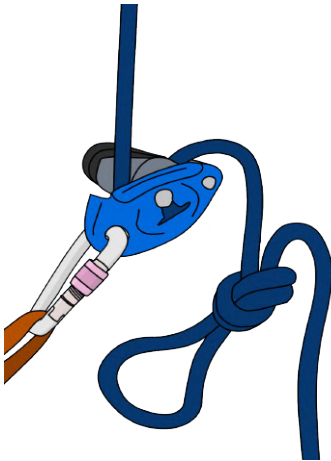
It's much better if both climbers can go hands-free during the changeover. How you do this depends on who will lead the next pitch. Two methods are described on the next page.

1) Tie-Off Your Belay Device

If alternating leads, the easiest method is to tie-off your belay device. Tie a simple knot (such as an overhand) in the rope beneath your belay device. If the climber falls, the knot will jam into the belay device and stop them.

When the leader is ready to climb, simply unfasten the knot and they will be on belay immediately.

This works well if there is a small ledge to stand on. If not, the climber may also prefer to attach to the central point with a sling.

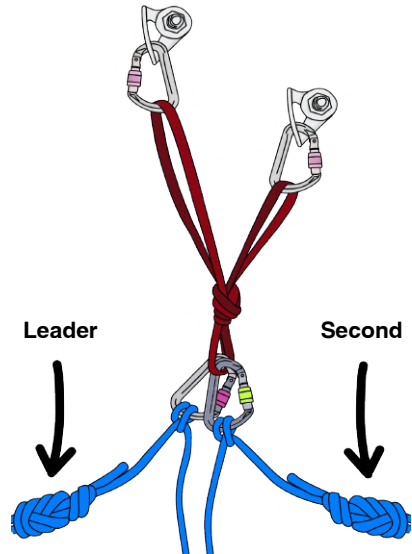


2) Attach to the Central Point

If the same person is leading every pitch, the second will have to attach to the central point when they finish following the pitch. They can do this in the same way as the leader.

Use separate screwgates to attach the second's rope to the central point(s). When they are attached, they can be taken off belay.

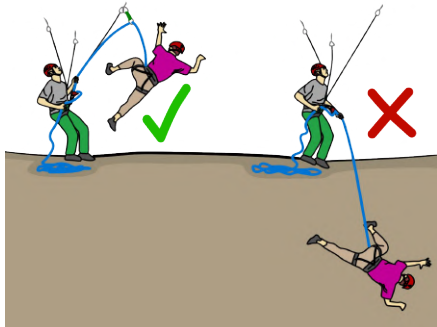
Remember - The leader will need to be put on belay **before** they detach from the anchor.



Leaving the Belay

It's a good idea for the leader to clip an anchor bolt as their first piece of protection. This eliminates the chance of a factor two fall.

It's also much easier for the belayer to hold a fall this way.



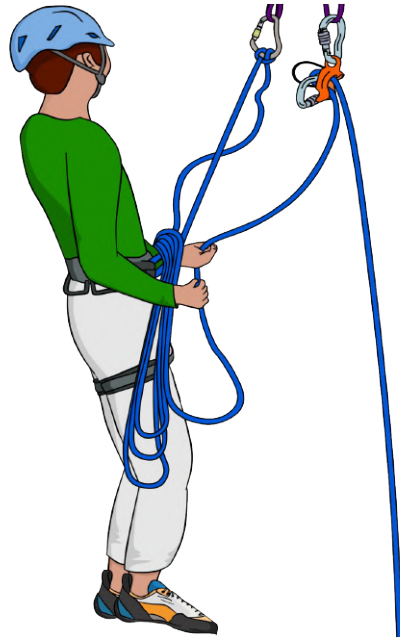
Rope Management

Stacking or coiling the rope neatly so it doesn't tangle is important on multi-pitches. If the belay ledge has a flat area, simply stack the rope onto it in a place where it won't slide off.

If there isn't a suitable area to put the rope, you can stack it in neat coils across the rope which goes between your harness and the anchor (lap coils).

Alternatively, stack it through a sling. Either way, the first coils should be the longest, with progressively smaller coils added on top. This ensures the rope feeds out well on the next pitch.

If it is windy or there are bushes or loose rock below you, make sure to keep the coils short enough so they don't get stuck.



Time Budget and Retreat options

Make a realistic estimate of how long the route might take. Figure out what time you need to have finished the route (to avoid thunderstorms or darkness etc..) and then work backwards from there.

Break the climb down into pitches and figure out how long each one will take. Remember to add time for approaching and descending the route and for belay changeovers.

Be conservative with your estimations — it's much easier to lose time than gain it.

As part of your time budget, it's smart to figure out places where you can switch to an easier route if you are running low on time, or places where you could easily descend without leaving most of your slings and carabiners behind.

Teams of Three

In most situations, a pair of climbers is faster than a team of three. But having someone to chat with at the belay makes climbing as a three more social.

It also means you have an extra person to help carry the gear and lead

some of the harder pitches.

There are many ways to connect three climbers to the rope. Two popular methods are described on the following pages, both of which require two ropes.

Caterpillar Style

Step 1

The leader climbs a pitch with one rope.

Step 2

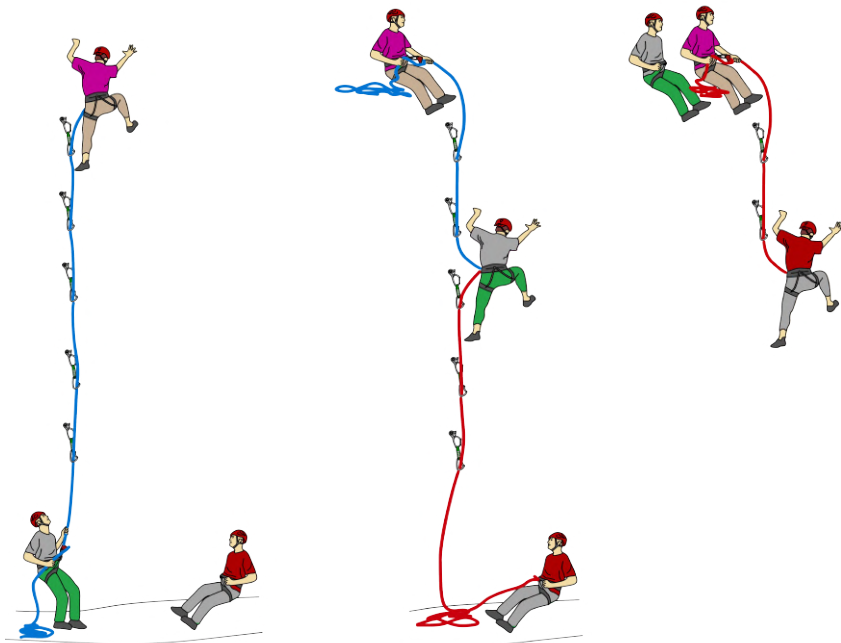
The second climber follows on that rope, but trails another rope (both ropes are tied into the harness tie-in points).

Step 3

The second climber unclips the quickdraws from the first rope and clips them to the second rope beneath. This ensures the third climber is protected from a swinging fall if the pitch traverses. If the pitch is straight up, the second climber could remove the quickdraws.

Step 4

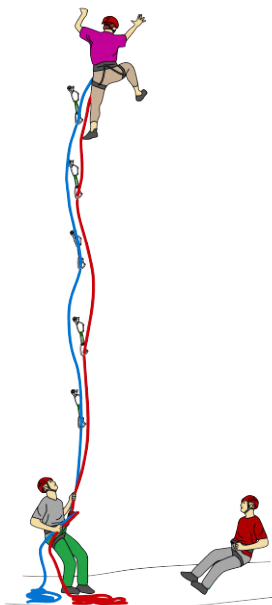
When the second climber has reached the anchor, the third climber is put on belay on the second rope. They remove the quickdraws as they follow.



Double Rope Style

Step 1

The leader climbs with both ropes. They clip alternate quickdraws to each rope. The leader can be belayed by both climbers with a GriGri each, or by one climber with an ATC.



Step 2

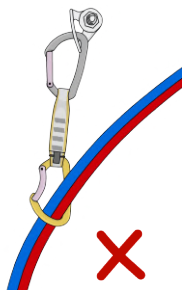
The second and third climbers follow, keeping around five meters apart from each other, while the leader belays them both at the same time. It is highly recommended to belay with an auto-blocking belay device directly from the anchor, such as an ATC in guide mode (see page 33).

When communicating, finish the command with the rope colour, so the belayer knows which rope you mean (e.g: slack on red rope!).

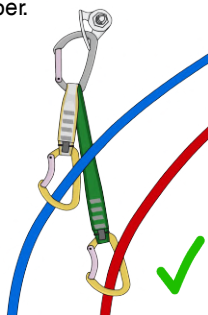


Common Mistake

Clipping both ropes into a carabiner causes the ropes to rub against each other if a climber falls while leading or following. This could damage your rope or even cut through the sheath.



If you need to clip both ropes to a bolt (e.g: to protect both followers on a traverse), use two quickdraws of different lengths as shown. These quickdraws are then removed by the third climber.

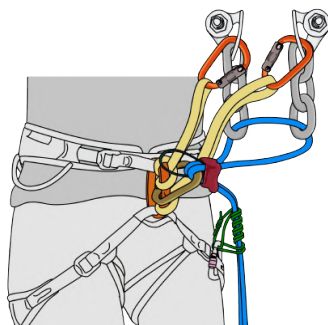


Multi-Pitch Abseils

Attaching to the Anchor

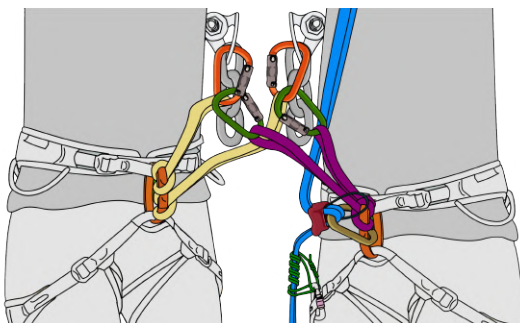
Attach to each anchor with two slings as described on page 61.

You can attach to the chains or the bolts to save space for your partner.



If there is only space for one climber to attach, the other climber can clip directly into their partner's screwgates as shown.

However, this means that the climber who descended last must descend first on the next abseil.

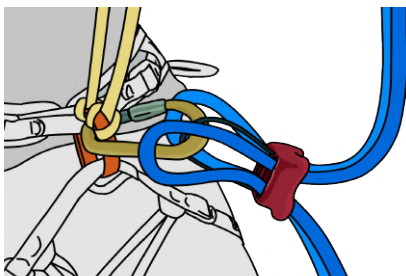


Removing Your Belay Device

Once securely attached to the next anchor, you can remove your belay device as follows.

Step 1

Unfasten the screwgate. Uncclip the device's cable and both ropes from it.

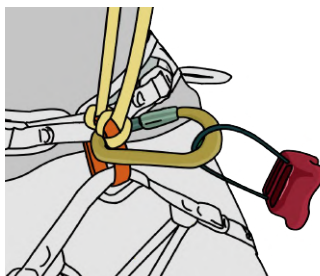


Step 2

Re-clip the cable. This ensures that you can't drop it.

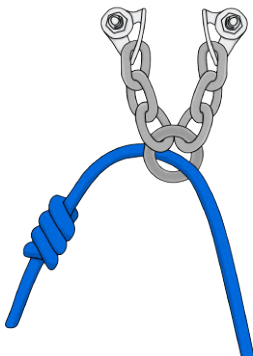
Step 3

Pull the ropes out of the device.

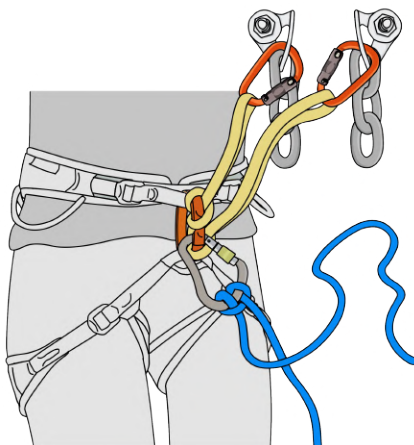


Threading Ropes

Thread the rope through the next anchor and tie a stopper knot in it before you pull it down. Tie the stopper knot big enough so that it cannot fit through the main abseil point. This ensures that you cannot lose your ropes.



Alternatively, tie the rope to yourself so it cannot be dropped.



Abseiling with Two Ropes

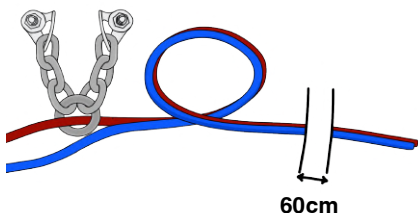
If your descent requires two ropes, you'll need to tie them together. A simple and safe way to do this is to

use the overhand knot described below.

Step 1

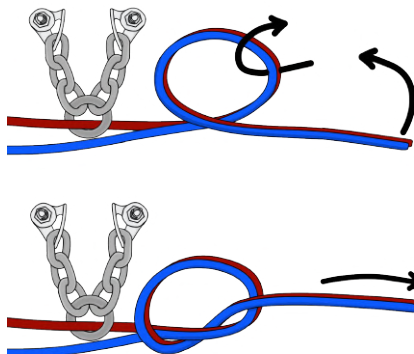
Thread the end of one rope through the anchor.

Then hold one end of each rope together and make a loop at least 60cm from the end.



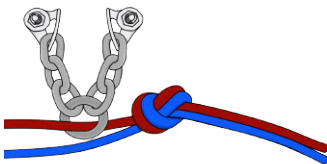
Step 2

Put the ends through the loop to make an overhand knot.



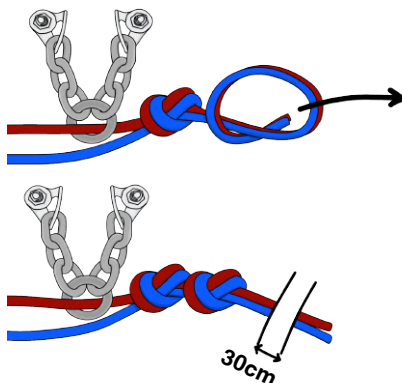
Step 3

Pull each strand of rope very tight on either side of the knot, making sure the knot is neat.



Step 4

Back it up with another overhand knot immediately next to it. Pull that tight too. You should have at least 30cm of rope left after the knots.



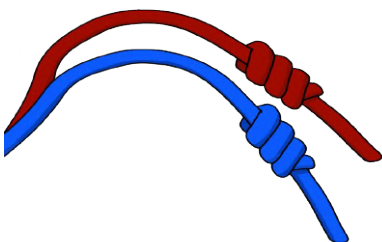
Throwing Ropes

You should throw your ropes down in a way that they are unlikely to get tangled together or stuck on

something. The following is a simple method of reducing your chances of a stuck rope.

Step 1

Tie knots (such as the triple barrel or overhand) in the bottom end of both strands of rope. This stops you from accidentally abseiling off the end.



Step 2

Prepare to throw the ropes down. It's better to do this one rope at a time. Starting from the end, stack one rope in coils over your arm.



Step 3

Shout 'rope' to anyone who may be in the area below. When you are certain that no-one could get hit by your ropes, you can throw them.

Take the first half of the coils in one hand and the second half in your other hand. Throw the second half of the coils down, closely followed by the first. Keep an eye on the ropes at the anchor. With all the weight on one side, the rope could zip through the anchor at this point.

Step 4

Stack the other rope and throw it down in the same way.

If there are climbers below, either wait for them to finish climbing, or ask them if you can slowly lower the ends of your ropes down. This may cause your ropes to snag on features, but will be much less dangerous for the person leading up.

