Lead Skills

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Climb: Monte Sordo, Finale Ligure, Italy. **Photographer:** James Rushforth

Climbing on Loose Rock

Accidents involving loose rock fall into three main categories:
1) Belayers being hit by rocks from the leader
2) Leaders falling because they held/ stood on loose rock
3) Being hit by random rockfall from above (either from other climbers, natural rockfall or from your ropes when abseiling)

One of the major contributing factors to accidents when climbing on loose rock is known as 'positive reinforcement'. You climb a chossy route, place gear behind loose flakes and climb on loose blocks. They stay in place and you're fine.

You climb another chossy route without dislodging rocks on your belayer. And another and another. Success! There's nothing like positive reinforcement.

However, the truth is that in most near misses, the climber has no idea they even had a near miss. Maybe you didn't weigh *quite* enough to pull that huge block off. Climbing on loose rock is a bit like playing football on a minefield. Stay away, but if you end up stuck in a band of choss, take your time and be very gentle.

There are precautions you can take (such as wearing a helmet, not starting a route beneath other climbers, or just avoiding loose routes altogether), but if you climb enough alpine rock, you'll eventually encounter an unavoidable loose section.

The real skill is to learn how to deal with choss. You *can* place gear in loose rock, you *can* pull on loose blocks. But you first have to factor the following into the equation:
- Exactly how loose the features are
- How sharp the edges are
- How big the loose rock is
- Where the rock would fall if it broke
- If you have gear beneath you in solid rock
- How your partner will follow the pitch

It is fairly safe to climb through a small band of brittle flakes if your belayer is out of the rockfall zone and you have good gear in solid rock just below you. Place gear appropriately so that your rope runs clear of any loose blocks or sharp edges. Communicate with your

partner so they know where the loose sections are. It is not safe to climb a massive, teetering jenga-tower of sharp-edged 'death blocks' with your belayer and another team directly below.

Testing Rock Quality

Visual Test

Look at the feature and figure out how it is attached to the main part of the wall. If it looks detached, don't touch it.

Some features have very thin fracture lines around them, which suggest poor rock quality. These fracture lines are sometimes covered in lichen or otherwise hard to see, so look carefully.

Tap Test

If you are still uncertain about the quality of a rock feature, give it a gentle tap and listen to the noise it makes. Loose rock 'echoes' and sounds hollow.

If you must climb through a small band of brittle flakes, determine which are the best holds and selectively distribute your weight between them. Pull down on holds, rather than out.

Runout Routes

Runout routes (climbs with little or no protection) should only be attempted by experienced climbers who understand the risks involved.

You can obviously reduce your chances of an accident by not climbing a sparsely protected route. However, if you are lured in by the appeal of danger, or if you just end up on a runout section, you will be safe if you abide by the two golden rules:

1) Do not climb up something that you cannot climb down
2) Do not fall!

Here are some tips to help you stick to these two rules:

* Choose a route which is well within your comfort zone.
* Make slow, controlled movements, keeping three points of contact at all times.
* Place gear at every possible opportunity. Go off-route if you have to.
* Equalize gear to make a stronger point of protection. A lot of bad gear equalized together is better than no gear.

* Test the quality of each hand and foot hold before you use them. Stay away from loose rock.

* Remember that you can always downclimb if the route gets too sketchy.

Following a Runout Traverse – Back Roping

The consequence of falling on an unprotectable traverse is likely to be a horrendous pendulum. Depending on the route, this could be much worse for the follower than the leader.

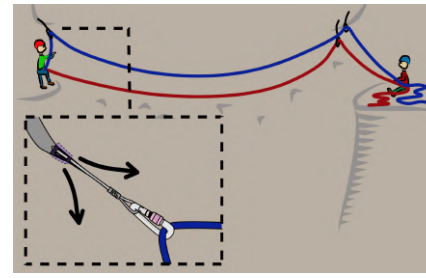
To reduce fall potential, the leader should place protection as high as possible before and after the traverse.

If the follower still faces a serious fall, they could use a 'back rope'. Back roping works best when climbing on two ropes (such as half ropes).

If you only have one rope, consider the lowering-out technique instead (see page 62).

Step 1

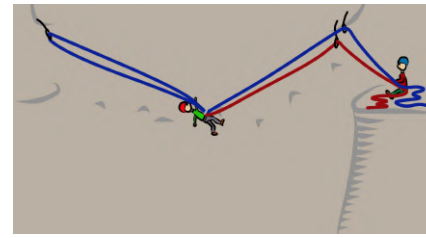
Leave one of the ropes clipped into the last reliable piece of gear. It must be bomber and capable of taking a sideways and a downwards pull. You will have to leave this piece of gear behind.



Step 2

Clip a carabiner or quickdraw to your belay loop and to the rope which you are back roping from. This ensures that you can retrieve your rope after the next steps.

Step 3
As you climb across the traverse, the leader takes in on one rope (red) and gives slack on the other (blue). If you fall, you will be suspended between the ropes.



Step 4
After the traverse, untie from the back rope and pull it through the gear. Make sure there is no knot in the end of the rope!

Step 5
Tie back in to the end of the rope and allow your partner to take in the slack before you continue climbing.

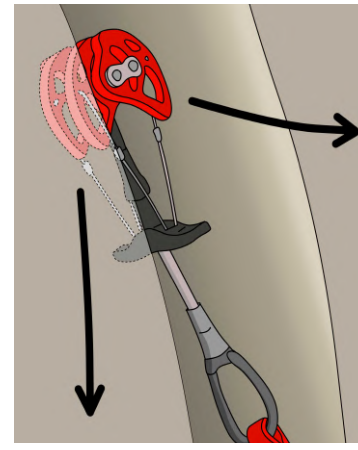
Pendulums and Tension Traverses

Knowing how to 'bail sideways' is a good skill to have. Maybe you've climbed off-route and now have a blank expanse between you and the right route, or maybe you're halfway up a pitch and the climbing gets too difficult.

Your problems may be solved if you can pendulum (swing across) or tension traverse (climb across while assisted by a tight rope) to easier ground.

Pendulums can also be used when abseiling (see page 45).

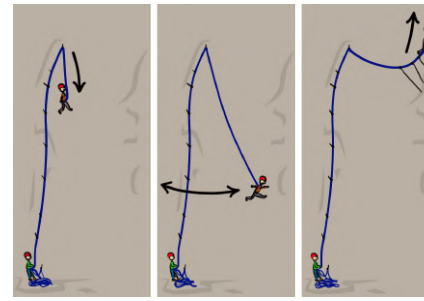
Step 1
Place a piece of gear which can hold a downwards and a sideways pull (you may want to equalize a couple together). This gear needs to be bomber, and you may not be able to retrieve it later.



Step 2
Clip your rope into the gear and ask your belayer to take you tight on the rope.

Step 3

Get your belayer to lower you. If you plan to pendulum, you can start swinging as you are being lowered. Do this by running sideways across the wall. Communicate with your belayer so you don't get lowered too far — make sure you know where you're trying to swing to!



Step 4

Keep your momentum and swing a little higher each time. Often, you'll need to grab a hold at the pinnacle of your swing, so be ready for this. Once you've stuck the pendulum, continue climbing as normal, making sure to extend the next few pieces of gear to reduce rope drag.

A tension traverse is similar but instead of swinging, you will semi-climb across with some of your weight on the rope.

Top Tips

* Choosing between a pendulum and a tension traverse is dictated by the terrain. Pendulums are more suited to smooth rock where there are no features for your rope to snag. A tension traverse is a better choice for lower-angled, blocky terrain.

* Your partner will need plenty of slack rope to follow the traverse (around twice the diagonal distance of the pendulum). This usually isn't a problem, but if you climb a full rope length with a pendulum at the start of the pitch, your partner won't have enough rope to follow it safely.

* If using half ropes, clip one to the pendulum point and the other to the pieces after the traverse. This will significantly reduce your rope drag and make it easier for your partner to follow.

Following Pendulums and Lowering Out

Following is easy if the leader did a short traverse and extended gear well afterwards. Just follow the pitch as normal and gently swing/tension across. However, for longer traverses across unclimbable terrain, you won't be able to remove the gear which the leader traversed from or else you'll swing uncontrollably across the wall. To avoid this, you'll need to do a lower-out. It's important to communicate well with your partner

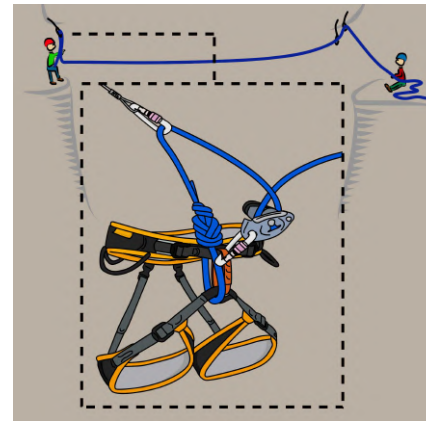
during this process (If you are climbing with two ropes, you may choose to use the simpler back rope technique — see page 60).

There is no completely safe way to follow a long traverse because there is always the danger of the lower-out piece failing. Using a belay device as described on the following pages significantly reduces the consequences of a fall if the piece fails. If it fails, your belay device (in most cases) will lock, stopping you from falling to the end of the rope. You will still swing across the rock, but much less than if you had lowered out without a belay device.

GriGri's (or similar) will lock in the majority of cases that they are suddenly loaded. However, they are not actually designed for this. Depending on the distance, difficulty and consequences of the traverse and the quality of your lower-out piece, you may want to back up your attachment with a prusik.

Step 1

When you reach the gear which the leader traversed from, clip into it with a sling. If you have a good hands-free stance, you don't need to clip in. Make sure the gear is still bomber after being pulled sideways by the leader. If you're not certain about it, back it up with another piece.

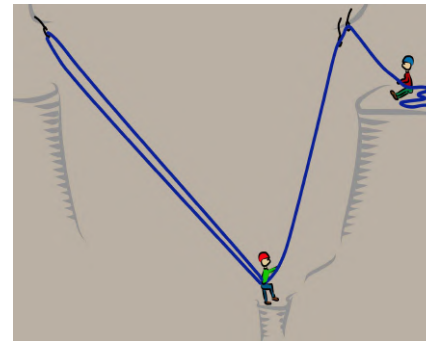


Step 2

Attach a GriGri to the rope as shown.

Step 3

Tell your partner that you are ready to lower. They will pull in the slack so the rope comes tight. You can now remove your clip-in sling if you are using one. Be aware that the tensioned rope will pull all the other pieces of gear in different directions which may cause them to be plucked out.



Step 4

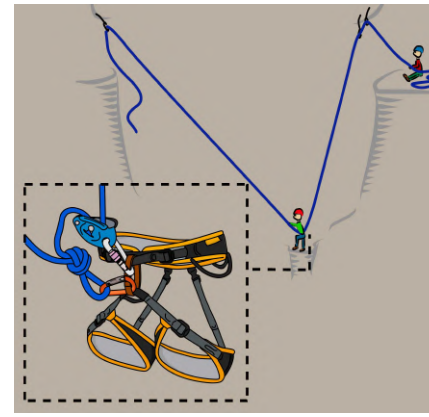
Communicate with your partner as they lower you down and across. If semi-climbing (tension traversing), your partner may have to alternate between taking in and lowering out.

Step 5
Once you make it across, you'll need to retrieve your rope from the lower-out point and then transition back to climbing. This is much easier if you have a hands-free stance. If you don't, you could clip directly into a piece of gear to un-weight the rope. Either way, tie-off your belay device and remove any prusiks.

Step 6
Untie from the end of the rope and pull it through the lower-out point. Make sure to completely remove your tie-in knot before you let go of the rope!

Step 7
Tie back in to the end of the rope.

Step 8
Release your tied-off belay device and belay the slack rope through while your partner takes it in at the same time. This protects you from falling to the end of the rope should you fall at this point.



Step 9
Remove your belay device once your partner has taken in all the slack. You are now ready to continue following as normal.

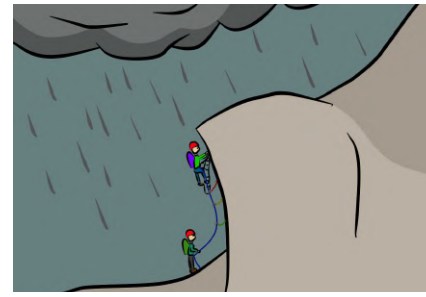
If you have lowered down too far, or still cannot climb the pitch, you can prusik up the rope (see page 116) until you reach easier ground.

It may be possible to retrieve the lower-out gear by penduluming to it when you are higher up.

Basic Aid Climbing

Using protection pieces as hand or foot holds is generally regarded as a poor style of ascent. But using this simple technique to get yourself out of trouble is very good style.

Many alpine routes have sections that, in poor weather, may be impossible without using aid. Just a few aid moves may be all that is needed to reach a summit or a safer descent. Knowledge of aid techniques



can also provide a way to safely move up or down a crag in an emergency.

French-Free

This is the most basic form of aid climbing which means grabbing hold of a piece of gear and pulling on it to miss out a move. You could also clip a sling directly to the gear to use as a foot loop.

If you think your partner may struggle to follow a section of the climb, you can help them by placing gear frequently enough so they can pull from one piece to the next.

Times when you might french-free:
- To avoid a tough move
- If you need to move quickly and don't have time to figure out a crux sequence
- If you think you'll fall while clipping a piece of gear. You can hold onto the gear, then clip, then continue climbing

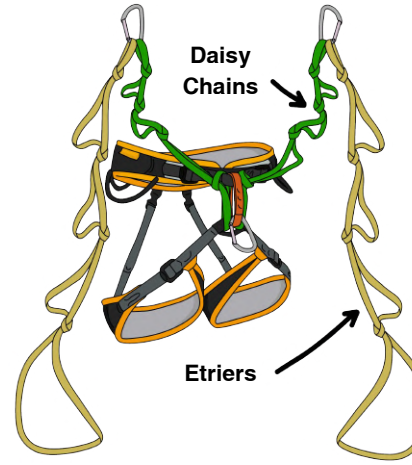
Basic Aid Setup

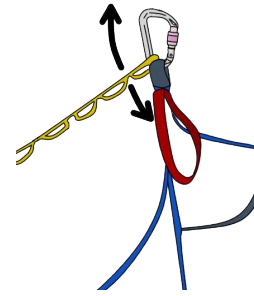
Aid climbing is more efficient when using daisy chains and etriers, but these are not worth taking on a climb unless you specifically plan to aid sections. Here is an improvised set of aiders:

* Two 120cm slings girth hitched through tie-in points (or belay loop), with overhand knots tied at intervals. Knots are offset so the loops stay open (improvised daisy chains).

* Two long slings/pieces of webbing attached to daisy chains with a carabiner. Offset overhand knots are tied at intervals (improvised etriers).

* Carabiner attached to belay loop. This is used for shortening the daisy chain or clipping yourself directly into gear.





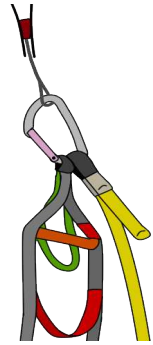
Top Tip

It's better if the daisy chain is on the spine side of the carabiner, and the etrier is on the gate side. This allows your daisy to slide up the spine (rather than get stuck in the gate, or unclip from it) when you stand up high.

Basic Aid Technique

Step 1 — Place Gear

Place a piece of gear and clip an aider to it.



Step 2 — Test Gear

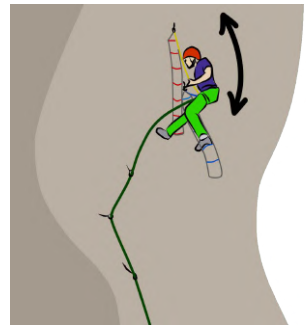
Unless you've just clipped a bolt or an obviously bomber piece of gear, you should test it before fully committing. How you test it depends on what the gear is.

First, ease your weight onto the piece, until it holds the majority of your body weight.

Nuts, slings and pitons can be 'bounce tested'. Do this by bouncing your weight on your top daisy or etrier, with a slightly increased force each time. Essentially, you are shock-loading the gear.

If the gear fails, you'll swing gently onto your daisy on the lower piece, which should be strong enough to hold because you bounce tested it — right?

Bounce testing is a skill that requires a fair amount of practise to understand the amount of force which is generated. A piece that survives the bounce test will likely hold your weight while you walk up your aiders but it does not necessarily mean it will hold a fall.



More easily damaged or low-strength gear, (such as cams or micro nuts) should only be very gently bounced.

Tiny cams or skyhooks shouldn't be bounce tested, as they would be damaged over time. To test, weight the piece, press your body away from the wall and move side-to-side. This generates a little more force than bodyweight without the harsh impact of a bounce and simulates the direction you might pull the piece when you're higher up on it.

Try not to look directly at the piece you are testing — if it fails, it'll hit you in the face! Look away, and wear a helmet.

Step 3 — Commit

Once you're happy that the piece will at least hold your weight, it's time to commit. Shorten your daisy or clip in directly to the piece so you can sit in your harness.

Step 4 — Reset

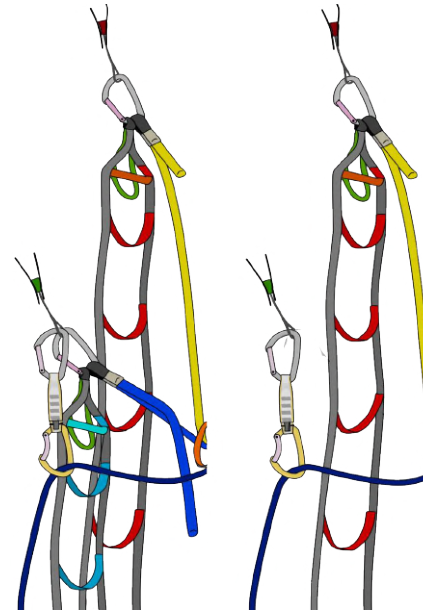
Clip your lead rope into the lower piece. Then remove your aider from it.

Step 5 — Get High

Getting as high as possible on your top piece means less moves to the top.

On slabby terrain, use your etrier steps to walk upwards. With practise you should be able to stand in the top step. Your daisy will slide up the spine of its carabiner.

Adjust your daisy shorter to give you some downwards tension for balance. This also means that if you lose balance you won't fall the full length of the daisy.



Vertical or overhanging terrain is more strenuous. Pull on the gear while walking up the steps until you can clip directly into the gear with the carabiner on your belay loop.

Once you are as high up as you can get, it's time to place another piece of gear and repeat the sequence.

Basic Aid – Following

To follow a section of aid, you can either prusik up the rope (see page 116) or aid up using the same technique as the leader.

Make sure to communicate with the leader so they know whether to belay you or fix the rope to the anchor for prusiking.

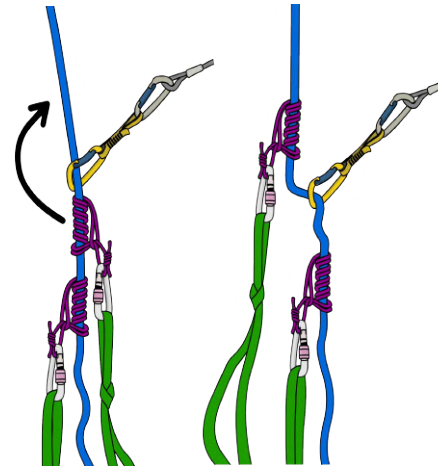
Removing Gear while Prusiking

If a piece of gear isn't being pulled sideways by the rope, you can simply unclip and remove it. Make sure to unclip the gear when your prusik is still a few inches below it — your prusik will jam into it if you go too close.

Often, the gear will be pulled sideways by the rope and it is very hard to

unclip. In this situation:

- Weight your lower prusik
- Remove your upper prusik from the rope
- Re-tie the prusik on the rope above the gear and weight it
- Now you can more easily remove or unclip the gear



Sometimes, this results in your lower prusik getting 'sucked in' to the piece of gear (particularly if the route is slightly traversing or overhanging). For pitches like this, it is useful to have a belay device (GriGri's work best) set up on your belay loop. Here's how:

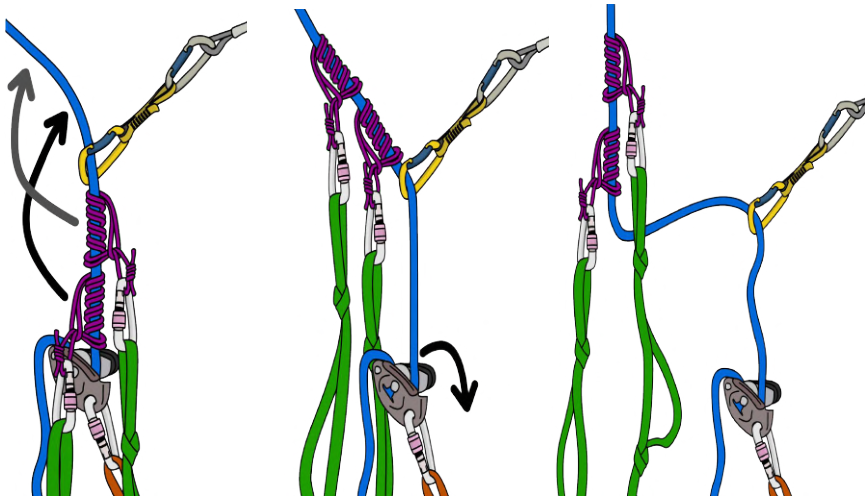
Step 1
Prusik close to the piece.

Step 2
Pull slack through your GriGri and weight it.

Step 3
Remove both prusiks (one at a time) and re-attach them above the piece.

Step 4
Release rope through your GriGri so that you are weighting the prusiks.

Step 5
Now you can remove the gear.



Basic Aid – Traverses and Overhangs

The system for aiding a roof is basically the same as a traverse. Just place a piece then reach as far sideways as you can to place your next piece. It's often difficult to bounce test from this position, so try stamping in your etrier instead of weighting your daisy.

Clipping every piece of gear to the rope will make it easier for your partner to follow.

To follow a traverse or a steep overhang, you'll need to take your prusiks off the rope and clip directly into each piece of gear that the leader placed. Effectively, you are 'leading on top rope'.

Simply clip across the pieces, removing the ones behind you as you go. Make sure to re-adjust your back up knots frequently, so you won't fall far if a piece fails.

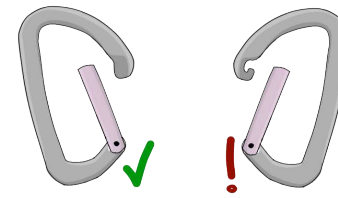
Basic Aid – Top Tips

* Always use a back up (such as a clovehitch attached to your belay loop with a screwgate) when prusiking up a rope.

* When leading, clip as high on the piece as possible (e.g; in the plastic thumb-loop of a cam, rather than the sling). This gives you more height, meaning quicker overall progress.

* It's better to use a 'keyhole' style carabiner for your aiders, as it will be less likely to get stuck on slings and wires than a 'nose' style carabiner. You can use either a snapgate or screwgate.

* When switching from aid to free climbing in the middle of a pitch, attach a sling to your top piece. This will be your final foot step before you free climb. Make sure to clip your aiders and daisies away on the back of your harness so you won't trip over them.



Basic Hauling

Hauling a bag on a separate rope can be much easier than climbing with it on your back. This technique is useful for:

- Overnight routes
- Long, steep multi-pitches when your daypack is heavy

Hauling is typically only beneficial on terrain steeper than 80 degrees, where there are few obstacles and no loose rock. Otherwise, you'll be better carrying the load on your back.

How To Haul

Equipment

For a basic hauling setup, you'll need:

- A second rope
- A hauling device (such as a Petzl Micro Traxion)
- A durable bag

Step 1

Attach one end of the haul rope to the back of your harness. If your harness doesn't have a designated 'haul loop', you can loop a short sling around the back of your waist belt and attach the rope to that. Be careful of using gear loops — they can break if the rope gets stuck.

Step 2

Attach the bag to the other end of the haul rope and also directly to the anchor with a sling.

Step 3

When you arrive at the top of the pitch, attach the hauling device to the master point. Feed the rope through the device first, then unclip the rope from your harness (this ensures that you cannot drop the rope). Pull through slack until the rope is tight on the bag at the lower anchor.

Step 4

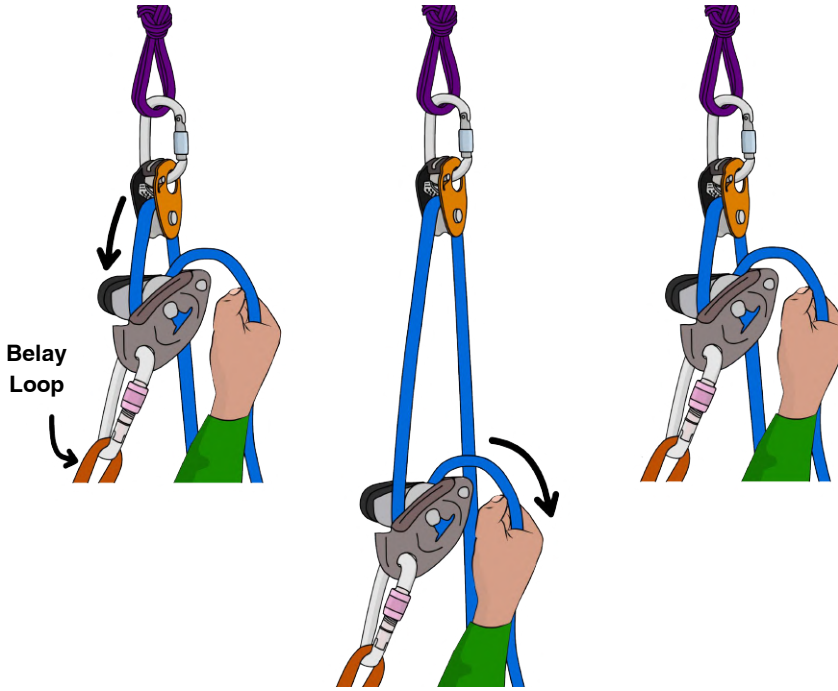
The belayer releases the bag from the lower anchor.

Step 5

Haul the bag up, stacking the rope neatly as you go. For light loads, it is quickest to hand-over-hand the rope and periodically pull slack through the hauling device. For heavier loads, it is much easier to use your body weight to pull the bag up. Use a GriGri as shown.

Step 6

Clip the bag to the anchor with its sling and remove the hauling setup. You can now belay your partner.



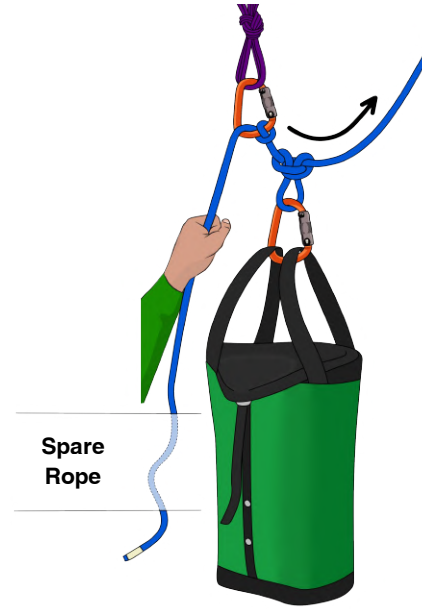
Basic Hauling Tips

* A specifically designed 'mini haulbag' is best, but any backpack can be used, providing the terrain is suitable. Make sure to attach the pack securely, tuck away any straps and use common sense. Hauling a lightweight pack up low-angled rock will most likely result in you losing all your belongings and dislodging rocks.

* Using a dynamic lead rope (instead of a static rope or cord) as your haul line gives you more options. It acts as a back up if your main rope is damaged, or it can be used in conjunction with the main rope for wandering pitches (i.e: treat them as half ropes). Having a second rope also doubles the length of your abseils.

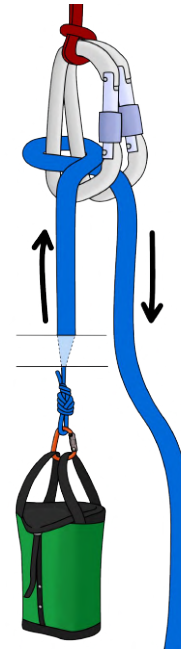
* On long traversing pitches, the bag should be tied in short with an alpine butterfly. This enables the belayer to lower the bag out gently with the remaining rope.

If the bag is fairly light, you can simply lower it out by hand. Heavier loads may need to be lowered out using a munter hitch or belay device as shown.



* If you don't have a pulley, an alternative for light loads is to simply belay the bag up with an auto-blocking belay device (such as a GriGri or an ATC in guide mode) or a garda hitch.

If the bag gets stuck, you can pause hauling and begin belaying your partner. Once they have climbed up and freed the bag, you can tie-off the lead rope and continue hauling.



* Some hauling devices may not always lock with certain rope diameters. If your chosen technique involves letting go of the rope, you should add the occasional back up knot so the bag cannot fall the full length of the rope.

* Some hauling devices are easily dropped. To prevent this, the leader can trail the haul rope with the device pre-attached as shown. After leading a pitch, the device can be attached to the anchor before removing the rope from your harness. This means that you can't drop either the device or the rope while setting up the haul.

Simul Climbing

Simul climbing is a technique where all climbers move at the same time while tied into the same rope. Protection is placed by the first climber and removed by the last.

This technique allows climbers to extend the length of their pitches, without extending the length of their rope. With experience, a simul-pitch can stretch for 300m or more, whereas a belayed pitch is limited by the length of your rope.

Simul Climbing is Most Useful:

- On long, easy routes when it is safer to move fast (e.g: if climbing pitch-by-pitch would result in getting hit by a storm or stranded overnight).
- On a long, exposed approach or descent when a fall is very unlikely, but the consequences would be severe.
- If a pitch is slightly longer than your rope length. A short section of simul climbing can allow the leader to reach a more solid belay.

Advantages

- Much faster than belayed climbing.

Disadvantages

- Much more dangerous than belayed climbing. If the follower falls, they could pull the leader off too.

Simul Climbing is Dangerous:

- If any member of the team might find the route difficult (especially the follower)
- On loose rock
- On runout routes (climbs which offer little protection)
- For inexperienced climbers

Prerequisite Skills

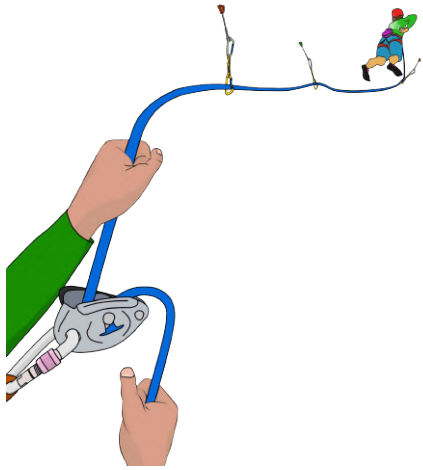
Simul climbing introduces a level of risk that is completely inappropriate for beginner climbers. This section is written for experienced trad climbers who are proficient at:

- Placing trad gear and building anchors
- Route-finding on complex terrain
- Leading long multi-pitch routes
- Self-rescue
- Analysing and managing risk

The Basic Simul Climbing System

Step 1

The leader begins climbing. They place gear and are belayed with a GriGri.

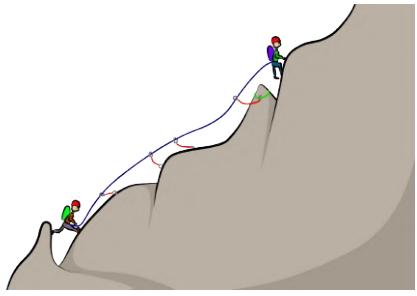


Step 2

When the leader has climbed the full length of the available rope, the belayer simply begins climbing (leaving their GriGri attached to their belay loop).

Step 3

Both climbers continue up, moving at the exact same speed and keeping protection on the rope between them.



Step 4

When the leader reaches a suitable anchor, they stop climbing and belay the follower up.

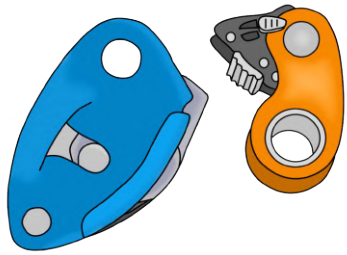
Simul Climbing Equipment

What To Take

With both climbers constantly moving, it is easier to stay warm, and so belay jackets could be left behind. With a faster style of ascent, you could take less food and water.

The less you bring, the easier the climbing will feel, and the less chance you will have of getting exhausted or benighted on a long route. However, the decision to leave critical items behind should only be made with lots of experience.

Depending on how far you plan to stretch your simul-pitches, you may want to bring a bigger rack. Having more gear enables you to climb the route in less pitches and therefore spend less time changing over belays.



Gear Distribution

It's better to distribute the gear fairly evenly between the leader and the follower so that neither climber has an excessively heavy load. Often, the leader will take a little more weight so the follower will be able to stay as light and nimble as possible.

Remember that the leader will start the simul-pitch with the whole rack, but the follower will have it all by the end.

Simul Climbing Devices

In addition to the equipment you would normally take on a multi-pitch, these two devices give you more options for simul climbing:

- Progress capture devices (such as the RollNLock or Tibloc)
- An assisted braking belay device (such as a GriGri)

The Simul Climbing Setup

For most situations, the optimum distance between climbers while simul climbing is around 30 meters. This is close enough that you can communicate well with each other and manage rope drag, but also far enough to ensure adequate protection between climbers.

Simply using a 30m rope has drawbacks, especially if your route has an involved descent. Shortening a full length rope with coils will give you more options on the route. There are several ways of doing this. A simple setup is described on the following page.

Follower:

- Tied in to the end of the rope with a figure-8.
- 20-30m of rope is neatly coiled over the shoulder, then pulled tight to belay loop with an alpine butterfly.
- GriGri pre-attached to belay loop with a small amount of slack in the rope.

Leader:

- Tied in to the end of the rope with a figure-8.
- GriGri pre-attached to belay loop (this allows a quick transition to belaying when needed).

Optional Rope Coils

The leader could also attach to the rope with coils in the same way as the follower. Each climber takes half the number of coils so the length of rope between them is still the same. This enables the leader to quickly release some extra rope without needing to communicate this to the follower.

Make sure to keep your rope coils tight so they are unlikely to snag on rock features as you climb. Whenever releasing coils, always keep a hand on the brake strand of rope until you either re-tie your coils or reach the end of the rope — GriGri's are not designed to be hands-free.

Simul Climbing – Understanding Dangers

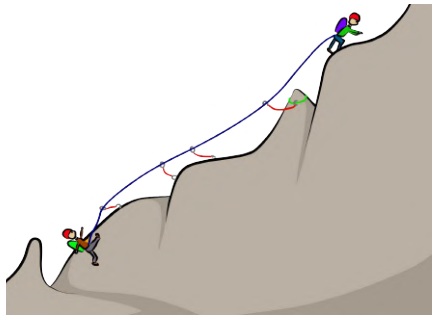
Falling

The main danger with simul climbing is falling. This isn't a big deal if the leader falls (assuming they protected the climb well and the follower hasn't allowed slack into the system).

However, if the follower falls, they will probably pull the leader off too. The leader will then be sucked, crotch first, into their last piece of gear. The force applied to that piece of gear during a simul-fall is far greater than the force applied in a standard leader fall. This is because:

- There is twice as much weight falling on the piece.
- The second cannot give a dynamic belay because they are falling.

This increased force is much more likely to cause the gear to fail. For this reason, it is not safe to simul climb on routes that are loose, runout, or that either member of the team may find difficult. Using progress-capture devices reduces the chance of this type of fall (see page 78).



Awareness

It's easy to get swept up in the flow of a long simul-lead, and take unnecessary risks.

As a simul-leader, you should:

- Communicate clearly with your partner about your plan.
- Ensure that you protect the climb well when needed.
- Save enough gear to make a solid anchor.
- Be prepared to switch to belayed climbing anytime, even if this involves downclimbing.
- Be aware of your partners position on the route. If they are about to climb a tricky section, you should place gear on the rope in front of you just before they climb it, so you are both protected. Or better, make an anchor and belay them up.

Unroping

On long ridges, there are often stretches of non-exposed hiking between steeper rock sections. A rope which is dragged through hiking terrain is likely to get stuck or dislodge rocks.

It may be safer to put the rope away and stay close together, therefore avoiding any self-inflicted rockfall danger, and being able to communicate more easily about route-finding.

Make sure you have a solid belay when transitioning back to belaying or simul climbing. Being unroped on exposed and/or difficult terrain is obviously very dangerous.

Climbing at Different Speeds – The Accordion Effect

It is important for both climbers to move at the same pace so there is no unnecessary slack in the system. Having too much slack can result in either an unnecessarily long fall for the leader, or a high loading of the progress-capture device if the follower falls.

The follower also risks pulling the leader off the wall if they are not keeping up the pace, or if they have to down-climb.

Keeping the exact same pace all the time is extremely difficult. However, using rope coils makes this much easier.

For example, the leader may stop to place gear, when the follower is in a strenuous or awkward position. Instead of staying there, the follower can move up to a comfortable position while pulling the excess slack through their GriGri. From a resting position, the follower can then belay the slack rope back while the leader climbs up.

Also, if the follower would prefer a real belay for a difficult section, but the leader needs more rope to reach a solid anchor, the follower can release some coils and belay the leader until they find an anchor.

Once the leader has made a suitable anchor, the follower can either tie-off the coils again or continue belaying out the rest of their coils while the leader belays the rope in. This ensures there is never any unnecessary slack in the system. Once all the slack has been taken in, the leader can continue to belay the follower up to the anchor.

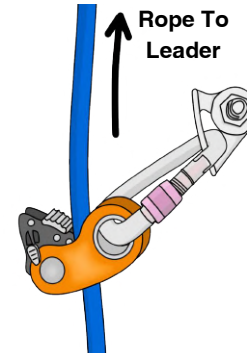
Similarly, if the leader encounters a difficult section, the follower can stop at a good stance and/or make an anchor. The follower can then release their coils and belay the leader.

Being able to quickly transition between simuling and belayed climbing allows you to safely navigate crux sections while cruising across the easier terrain.

Using Progress-Capture Devices

The use of a progress-capture device (such as the RollNLock or Tibloc) can protect the leader from receiving too hard of a pull on their rope if the follower falls.

The leader simply attaches a PCD to a piece of gear as shown. In theory, if the follower falls, the device will lock on the rope and hold the fall without affecting the leader.

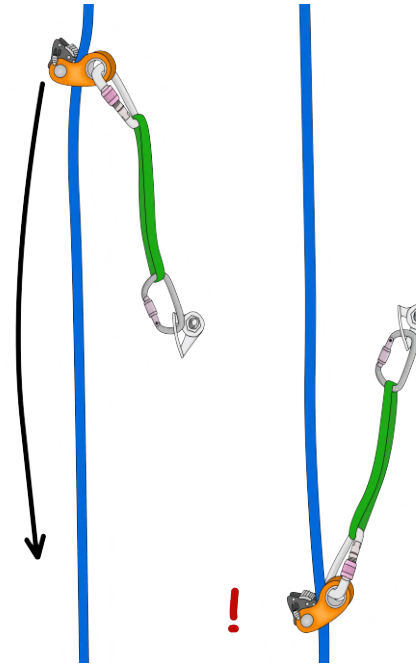


In reality, there are serious drawbacks, which could make the situation more dangerous if the system is not fully understood.

PCD's should only be attached to bomber multi-directional gear with minimum extension. Clipping one directly to a bolt is the best option, but they can also work well with trad gear if some cunning sling craft is used. Make sure your rope is able to run freely through the device.

The more the device can move up or down, the more the leader will 'feel' a tug if the follower falls and therefore have a greater chance of being pulled off. This will also exert a greater force on the rope, increasing the chance of ruining the sheath. For this reason, do not extend a PCD.

The leader should place another progress-capture device before the follower removes the previous one, so there is always one in the system.



Dangers of Progress-Capture Devices

* Many types of PCD work poorly on wet or icy ropes.

* If the leader needs to downclimb, the follower cannot take in any of the slack created. In this case, the leader must belay themselves down with their GriGri.

* If the follower needs to downclimb, they will have to remove their coils and self-belay down.

* A high force (such as the follower falling when there is slack in the system, or falling on a ridge traverse) could sever the rope's sheath.

* On wandering climbs, the PCD may get pulled to one side, causing it to (depending on the type of device) disengage or add rope drag.

Types of Progress-Capture Device

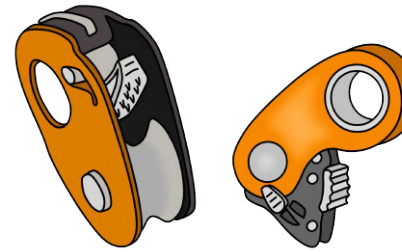
There are many types of PCD's available, but some are more suitable than others for simul climbing. A device with a ribbed camming style is less harsh on rope sheaths than a toothed device. A PCD with a ball bearing pulley will feed rope through smoother than one without.

A good device is the Climbing Technology RollNLock which features a ribbed cam and a ball bearing pulley.

Another commonly used device with a ball bearing pulley is the Petzl Micro Traxion. However, this is a toothed device and so is more likely to damage a rope's sheath.

Other ribbed devices include the Kong Duck and the Wild Country Ropeman. These do not have a pulley, so do not feed as smoothly as the RollNLock.

A much simpler device is the Petzl Tibloc which is cheaper and lighter than the others but is toothed and has no pulley.



Simul Climbing – Summary

Simul climbing does not need to be epic. For example, if after climbing a full rope length, the leader is still 3 meters away from a belay, the follower may be able to safely provide them with enough rope by removing their belay and walking 3 meters across a ledge. This may be much safer than the leader attempting a desperate downclimb.

The techniques discussed in this section are for advanced, experienced climbers who are looking for creative ways to solve problems and climb faster.

Make sure you fully understand the dangers and only apply simul climbing techniques to situations when it is safe to do so.