

Everett Mountaineers 2022

Rockfall Avoidance



This is North-South
Ingalls Peak saddle —
a scree field where
helmets are necessary.



Here's an area in North Cascades National Park where rocks are both loose and large — VERY hazardous.



Awareness

Helmet

Don it before you need it.

Your helmet provides no benefit while it's in your pack.

When your helmet is on your head, your pack is lighter.



Helmet

There can be rockfall hazard even below timberline.

This party donned helmets because thick forest blocked their view of determining whether or not there was rockfall hazard.



**ROCK! ROCK!
ROCK!**

Be aware of other
climbers' positions.

Be prepared to yell
"ROCK-ROCK-ROCK"!



ROCK! ROCK! ROCK!

If you hear "ROCK-ROCK-ROCK" above you:

Move out the way if you can, otherwise lower your head to protect your face.



ROCK! ROCK! ROCK!

If possible, lift hands off handholds to avoid crushing-type injury.



Footwork

To reduce the chance of dislodging a rock, step carefully.

Transfer your weight to your upper leg, then slowly and smoothly push down on it — rather than rapidly “pushing off” from your lower leg.

Requires good leg strength. Prepare by doing squats at gym.



Beware of mud

Be aware that rockfall hazard increases when soil is saturated. Mud is weaker than dry dirt.



Stay alert

In meadows, rocks may be few in number, but can still be very loose.

Don't let your guard down just because it's a meadow with pretty flowers.



Travel strategies

Spread laterally

If ascending a broad talus field like this, consider spreading out laterally to avoid being each other's "firing line".



Stay apart

Consider spreading far apart. If the lead climber dislodges a rock, the lower climber has increased time to move out of the way.



Stay apart

These climbers are going one at a time, in a section of gully with extremely loose rock.

The second climber doesn't start traveling until the first climber is safely out of the gully.



Stay together

If a rock is dislodged, it will be limited in how much speed it picks up.

This party split up into two groups. Within each group, members stayed close together. The groups went one group at a time through this section.



Photo credit: Brian Booth

Zig-zag

Consider zigzagging to avoid traveling single file up the fall line.

When zigzagging, top climbers should pause while lower climbers pass beneath.



Zig-zag

Party descending on a diagonal to avoid having being in each other's firing line.



Diagonal

Volcanic plug domes are sometimes more like a pile of rubble than a "mountain".

Party is traveling on a diagonal to avoid being in each other's firing line.



Diagonal

Forest fire can result in loose dirt and rock.

Party is traveling on a diagonal to avoid being in each other's firing line.



Traverse

Party is traversing (sidehilling) to avoid being in each other's firing line. Traversing can be slow and tiring.



Photo credit: Brian Booth

Use snowfields

If there is mixed rock and snow, sometimes it's best to maximize your travel on snow so you can minimize your travel on loose rock.



There is no single strategy that can be used for minimizing rockfall hazard in all situations.

Sometimes you have to weigh one strategy versus another and determine which is best for the current situation.



The key to safety
in the mountains
is achieving the
right balance. 🤸



Photo credit: Brian Booth

