
ICE CLIMBING
Techniques
Climbing without crampons



Ice Climbing: Techniques: Climbing without Crampons

Alpine climbers often encounter short sections of ice or frozen snow. Negotiating these sections without crampons requires balance climbing, moving up from one position of balance to the next. At each point of balance, your inside (uphill) foot is in front of and above the trailing outside (downhill) foot. To minimize muscle effort, your downhill leg is fully extended so you can put most of your weight on the bone of that leg. The ax, in your uphill hand, moves only after your body and feet are in balance, and your feet move only after the ax has been moved forward. As you climb, look for irregularities in the surface of the ice to use as footholds.

If the slope is too steep for secure balance climbing and you plan to proceed without crampons, you could take another route or try cutting steps. Step-cutting may be the answer if they can be cut quickly and efficiently.

Step-Cutting

The **adze** of the axe can be used in one of two ways for step-cutting.

1. The adze can be used to slash the ice by swinging it in a nearly parallel motion to the surface of the ice to create a slash step.
2. It can be used to chop by swinging it perpendicular to the ice to create a pigeonhole step.

In softer conditions, **the pick** can often aid in creating steps, by using it to slice through snow and ice in one smooth swing.

For all step-cutting, attach the ice ax to your wrist with **a leash** to help support your hard-working hand and to prevent loss of the ax if you drop it. **Slash Step**

The most frequently used technique for step-cutting is the slash step, for traversing up or down gentle to slightly moderate slopes (up to 30 degrees).

- To cut ascending slash steps, stand in a position of balance, holding the ax in the inside (uphill) hand.
- Swing the adze parallel to your uphill foot and away from your body.
- Swing the ax from your shoulder, cutting with the adze and letting the weight of the ax do most of the work.

On harder ice, this takes extra muscle, and two hands may be necessary. With successive swings, slice ice out of the step, starting at the heel end of the new step and working toward the toe. Scoop out chunks of ice with the adze and use the adze and pick to finish the step.