Shoveling 101

How to excavate an avalanche victim

While shoveling might seem elementary, it consumes most of the time during an avalanche rescue. Excavate immediately downhill of the probe strike. In burials deeper than one meter, start the excavation downhill about 1.5 times the burial depth. By excavating downhill from the probe, there will be less snow to move and you won't compact the snow over the victim's limited air pocket.

Avalanche debris is often firm, so chop the snow into blocks, then scoop. Try "paddling" rather than lifting each scoop. Avalanche professionals recommend aluminum shovels over plastic in real avalanche debris. Oval shafts provide the most strength with the least weight.

Single Rescuer

Once the victim is located, leave probe in place as a marker. Probe depth markings will also aid in determining optimum hole size. Start moving the snow out the sides of your hole. When the snow surface rises above your waist, start moving snow downhill, out the end of your hole. Attempt to get to the victim's face as soon as possible. Uncover their head and chest immediately to establish an airway. It is not necessary to dig the entire hole to the depth of the victim. Excavate at an angle as shown.
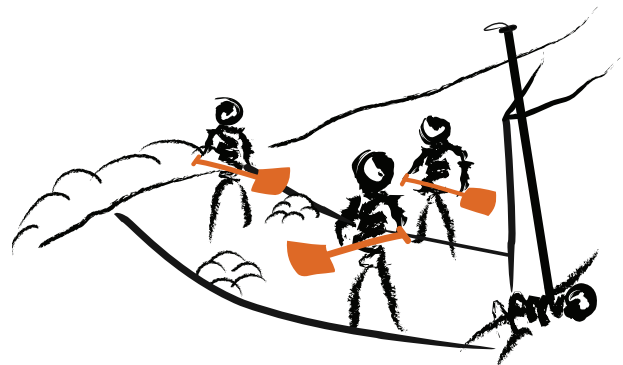

1.5 x burial depth

Multiple Rescuers

When multiple shovelers are available, two should begin shoveling just downhill of the probe. Others should begin shoveling downhill of them (1.5 times the burial depth), following the guidelines above.

In deep burials exceeding two meters, it might be difficult to move snow clear of the hole. In this case, the uphill shovelers should move their snow as far as possible – and another shoveler should move it to the surface. Extra shovelers should prepare the site for first aid and evacuation and rotate in as needed.

1.5 x burial depth