

## Mountain School Tech Tips: Safe Spring Snow Scrambling

Ski season is ending, and spring hiking season is beginning. At this time of year, most trips will involve considerable amounts of hiking over snow covered slopes. Like every outdoor sport, snow hiking/scrambling comes with its own unique set of risks. The most frequent two are (1) slips, slides, or falls on snow (aka “the involuntary glissade”) and (2) avalanches.

Slips and falls on snow are the leading cause of mountain accidents in Canada and the US. Also known as the “involuntary glissade”, a simple slip, unarrested, can result in long, nasty slides frequently ending with the unfortunate “glissader” wrapped around a tree, rock, boulder, or simply lying in a broken heap at the bottom of the slope. Injuries may range from some nasty “road-rash” type skin abrasions to serious and life-threatening injuries. As always, prevention is better than cure.

Here are a few tips to help you avoid the “involuntary glissade”:

1. Carry and use an appropriately sized (for you) ice axe. For most purposes, an ice axe the correct length will brush your ankle bone when you hold the head in your hand.
2. Get your ice axe off your pack and into your hand as soon as you start walking on snow. Don't wait until you've taken a tumble or a paralyzed with fear on a steep icy slope.
3. Always, but always, carry the axe in your uphill hand.
4. A solid self-belay with your ice axe is the first line of defense. Learn the correct way to use your ice axe to get a bomber self belay with every step. If you don't know how to do this – come to the annual KMC spring snow review and learn how. It's always announced on the email list and is in either late April or early May.
5. If you do slip, self-arrest **immediately**. If you don't know how to self-arrest, learn; if you do know, practice occasionally. Another good reason to come to the spring snow review.
6. Dress appropriately. Gloves are a must, and you should seriously consider a long sleeved shirt and trousers. I've seen some very nasty and painful “road rash” type abrasions on “involuntary glissaders.” You might even want to wear a helmet – you wear one skiing don't you?
7. Wear the stiffest sole boots you have available. They kick better, more secure steps.
8. Speaking of steps, when you kick them angle them **into** the slope. They are more secure and offer some protection from slips.
9. If you are glissading intentionally, check the run-out before you start, and make sure you can stop when you need to.

Typical spring/summer avalanches are caused by the failure of bonds within the snowpack as daytime heat penetrates the snowpack and reduces its strength resulting in wet snow slides. These wet snow slides tend to move more slowly than dry slab avalanches, but they can be just as dangerous. Wet snow is water

saturated, dense and heavy. A relatively small wet slide is often enough to knock a hiker off their feet and carry them down, perhaps snapping the odd bone or tearing a tendon or two along the way, or just carrying a hiker into or over a terrain trap.

Again, prevention beats all. Here are some things you might want to consider to help you avoid wet snow avalanches:

1. Plan to be off steep slopes early. Get an early start and finish the day before slopes become dangerously overheated.
2. Make use of some of the rules of thumb for determining how wet is too wet. If you are sinking from boot-top to mid-calf, the snowpack has lost strength and is becoming dangerously weak. Now is the time to get off steep slopes (over 30 degrees).
3. Don't forget to look up. Most wet slides occur naturally, so don't linger or congregate under steep slopes. Regroup or rest in safe locations well away from overhead hazards.
4. Give cornices a wide berth. On ridges, stay well back. When cornices fail, they often pull away well back over the tops of ridge-lines. Avoid exposure to overhead cornices too. Choose routes that avoid overhead exposure and don't gather up below corniced slopes.
5. Remember that winter like snow conditions can, and frequently do, persist into spring. Buried weak layers like surface hoars and facet layers can last well into spring (and infrequently, summer), and sudden spring snow storms can cause fresh snow avalanches similar to those that occur in winter.

As usual, this column sounds like a recipe for doom and gloom, if the snow slip doesn't get you the avalanche will. But, of course, in reality, a little good planning can make for a fun, safe and enjoyable outing. After all, the devils club, slide alder, tangled thickets of rhododendron and tedious boulder fields are well covered by a smooth blanket of snow and travel can be fast and easy. Plus, there's that great glissade at the end of the day.