

AVALANCHE 101

Answers to common avalanche questions

"Take the attitude of a student, never be too big to ask questions, never know too much to learn something new." Og Mandino

Last year the GNFAC taught 62 avalanche education classes to more than 4,300 people in Southwest Montana. Grade school and graduate students, skiers and snowmobilers, search and rescue groups, ski patrols, Rotary clubs and businesses attended classes, all there for the same thing — to learn about avalanches. During Q&A sessions many people asked questions. Here's an attempt to answer the most common ones.



BY DOUG CHABOT

Do my partners and I need the same type of beacon, or will different brands work together?

All avalanche transceivers work on the same frequency of 457 kHz. All brands are compatible.

Don't ski tracks on a slope mean it's safe?

Ski tracks on a slope give a false sense of security. Many people have been caught and killed in avalanches on heavily tracked slopes. In order to avalanche, a slope must be steeper than 30 degrees, have a slab of snow over a weak layer and, finally, a trigger. If a person cuts an unstable spot on the slope it can initiate fractures which will propagate outward avalanching all previous tracks. A uniform weak layer buried deep in the snowpack can fail and create a slide, no matter how chopped up the slab above it is.

If a slope has previously avalanched, is it safe with new snow on it?

The simple answer is no. Weak layers are not easily destroyed, and new snow would only rebury this layer creating instability and future avalanches. A few years ago another forecaster and I were in the middle of an avalanche cycle in the Cooke City area. We investigated a few slides and that night it stormed. In the morning I skied onto a 30-degree slope that appeared unscathed, but I found the freshly buried crown indicating it avalanched yesterday. I called my partner over since I figured the slope was safe. As we dug our pit the

entire slope cracked and moved a few inches right at the pit wall. The weak layer was still there, as unstable as ever, and we were lucky the slope didn't avalanche again.

Is a slope more stable after it collapses or "whumps"?

The "whumps" we hear and feel are buried weak layers collapsing in the snowpack. When they collapse but don't avalanche it doesn't mean we're good to go. Slopes have avalanched after collapses. Two years ago a Montana ski patroller got a large slope to crack 11/2 inches wide with explosives, but it did not avalanche. Another shot was placed in the crack moments later and the entire slope released. Treat slopes that have fractured or collapsed with caution. They may not be safe and should not be trusted.

Can I ski out of an avalanche by aiming toward its edge?

If the slide is small and you're at the top when it breaks and you're an expert and your bindings don't release and your skis are pointed toward the side — maybe, just maybe you can ski out of danger. But maybe isn't definitely. An avalanche can accelerate to over 80 mph in seconds, too fast to outrun. If caught in an avalanche, something has gone terribly wrong. Even with a perfect plan, expert ability and a cool head, once caught, unmanageable forces strongly influence life or death.

What should I do if I get caught?

Try and stay upright and ski out of it, because sometimes luck smiles brightly on us. Failing that shed poles and get rid of skis. Try and slow down by digging into the bed surface if possible. The best chance of survival is being near the tail of the slide since there's less snow for burial. It's also recommended to try and log roll off to the side. This technique has worked on occasion. The worst place to be is in the leading edge where the slide is the most turbulent and violent. Fight, swim, pray, and never give up. As the slide decelerates and starts to compress try and sweep one hand in front of your face to create an air pocket while using the other to reach out of the snow so rescuers can find you quickly. If uninjured, a buried victim has a 90 percent chance of surviving if dug up within 15 minutes.

Do avalanche airbags work?

Avalanche airbags definitely work at keeping people alive. By pulling a rip cord on the air bag pack, a colorful balloon inflates. Although it will not "float" the wearer to the surface, it increases the odds that a piece of the balloon will be visible, negating a timely beacon search. Airbags are not a replacement for avalanche beacons. ♦

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Investigating a 7-foot deep
avalanche on Buck Ridge.