# KNOW YOUR AVALANCHE TECHNOLOGY

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Knowing the tools and skills of safe travel in avalanche terrain is an essential component of making informed decisions in this environment. These tools include having rescue gear and knowing how to use it, understanding avalanche terrain, recognizing signs of instability and making smart choices.

Backcountry rescue gear includes a shovel, probe and an avalanche transceiver. The transceiver is perhaps the most difficult to master, and with so many options on the market the only sure way to ensure knowing how to use your own is by familiarity from on going practice. Transceivers should be worn under at least one layer of clothing and battery checked thoroughly before heading into the backcountry. Setting up a transceiver drill with friends or spending time at the 'beacon parks' located at many local resorts are great ways to become familiar and proficient with this complicated device.

Avalanche probing techniques also need practice. An effective probing method is to make a spiral of probe holes, working outward from a suspected burial area targeted by a transceiver or a piece of gear on the surface. A great drill for practicing with a probe is to bury a backpack in a 10 foot by 10 foot area of snow and then have the rescuer locate it solely by probing. It is surprising how difficult this can be.

Quick shoveling technique can be a lifesaver and should not be ignored! Once a confirmed strike on the victim has been made with the probe, leave the probe in its exact position. This will serve as a guide for shoveling. Using gravity to assist snow removal, stand on the downhill side of the probe and push snow downhill and to the sides. If multiple rescuers are available, start one person shoveling on the downhill side of the probe and then place the other two abreast just below, making an upside down V formation. This technique removes snow quickly and creates a platform for the victim to be placed on once uncovered.

Knowing how to perform a partner rescue allows for more confident travel in avalanche terrain, but avoiding avalanches altogether and not having to use rescue gear is the ultimate goal. Knowing what type of terrain and conditions produce avalanches is a big step in making this goal a reality. Slopes between 30 and 45 degrees are the most likely to produce avalanches, with the most active range hovering between 36-38 degrees. Although slopes steeper than 30

degrees are the most dangerous, even slopes between 25 and 30 degrees can avalanche in the right conditions. During periods of high instability, lower angle slopes can and do fail and propagate into larger and steeper slopes above them. Purchasing and learning how to use an inclinometer to assess slope angle is a smart investment for any backcountry user.

Knowing the weather is a major component in deciding when and where to travel in the backcountry. Changes in temperature, precipitation and wind all contribute to changing snow conditions which can rapidly increase the avalanche hazard. Paying close attention to recent weather patterns, sudden weather shifts and current forecasts provides vital information for smart decision making in avalanche terrain.

Once in the backcountry, recognizing the signs of snowpack instability will help to ensure safe travel in avalanche terrain. The most obvious sign of snow instability is recent avalanche activity which confirms that unstable snow exists and triggering an avalanche is probable. It is crucial to note the aspect and elevation of recently avalanched slopes and to avoid those with similar orientation. Riding on fresh snow adjacent to recent avalanches is only asking for trouble. When notable signs of instability are present, all slopes steep enough to avalanche might slide and should be avoided. Additional signs of slope instability include shooting cracks and collapsing of the snowpack, often accompanied by a loud whumpfing sound. If you are near or on a slope when this happens, get off the slope quickly and stay away from it and other similar slopes in the area.

Using observations and knowledge to form an opinion about avalanche hazard is complex and difficult. Staying informed through the entire avalanche season will help tie all the pieces together. Keepinging informed by reading the daily avalanche advisory, looking at snotel and NWS sites, taking pictures and notes of past and current avalanche activity and continuing avalanche education by attending an avalanche awareness class is a good, proactive approach to staying alive in the backcountry. Knowing the rules for safe travel in avalanche terrain will help to guarantee that this and every season in the backcountry end up happy and healthy.

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