IDAHO DEPARTMENT OF PARKS AND RECREATION

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AVALANCHE SAFETY

Idaho's unlimited recreation potential is not without its dangers.

We offer this guide to provide you with resources that may help you recreate more safely.

Take away points that you will find in this booklet...

GET THE GEAR: Ensure everyone has an avalanche transceiver, shovel, and probe on their person and knows how to use them.

GET THE TRAINING: Take an avalanche course.

GET THE FORECAST: Make a riding plan based on the current avalanche and weather forecast.

GET THE PICTURE: If you see recent avalanche activity unstable snow exists. Riding on or underneath slopes is dangerous.

GET OUT OF HARM'S WAY: One at a time on all avalanche slopes. Don't go to help your stuck friend. Don't group up in runout zones.

TABLE OF CONTENTS

Explanation of Terms

Avalanche - A large mass of snow, ice, etc., detached from a mountain slope and sliding or falling suddenly downward.

Avalanche Path - A location where an avalanche normally recur from time to time in the same mountain locality.

Avalanche Transceiver or Beacon - A class of radio transceivers specialized to the purpose of finding people or equipment buried under snow.

Bed Surface - The main sliding surface under the slab.

Cornice - An overhanging build-up of snow, usually on the leeward side of ridges.

Crown Face or Fracture Line - Upper boundary of the slab avalanche.

Debris Field - This is the zone where deposition takes place after deceleration of the debris. The bottom boundary of a slab avalanche. **Where an avalanche victim is likely to be found.**

Depth Hoar - An advanced, generally larger, form of faceted crystal (see facets)

Facets - Angular snow with poor bonding created from large temperature gradients within the snowpack.

Flanks - The sides of a slab avalanche.

High-marking - Highmarking is the practice of climbing steep slopes with a snowmobile to attain the highest mark/location on the slope, or get over the top.

Propagation - The spreading of a fracture or crack.

Slab - One or more cohesive layers of snow that may start to slide together.

Slab Avalanche - slab avalanches occur when one or more layers of cohesive snow break away as a unit.

Sluff - A small avalanche usually made up of loose snow.

Surface Hoar - Crystals, often shaped like feathers, spikes or wedges, that grow upward from the snow surface when air just above the snow surface is cooled to the dew point.

Runout Zone - an area where avalanches can run and should be crossed one at a time and not a great place to stop.

Temperature Gradient - How fast temperature changes over a certain distance within the snowpack.

Terrain Trap - A terrain feature that increases the consequences of getting caught in an avalanche by increasing the odds of a deep burial.

Weak Layer - This is the lubrication layer, the layer that is the most likely to fail within the snowpack.

Whumpf - The sound of a fracture propagating along a weak layer within the snowpack.

Wind-loaded - Terrain on which the wind has deposited additional snow.

Wind-slab - One or more stiff layers of wind-deposited snow.

Why avalanche awareness?
Mountains attract recreationists who scramble up and down the slopes, hoping to conquer peaks, each in their own way. Yet, to do this they must enter the timeless haunt of avalanches.

Each year, avalanches claim more than 150 lives worldwide, a number that has been increasing over the past few decades. Thousands more are caught in avalanches, partly buried or injured. Everyone from snowmobilers to skiers to highway motorists are caught in the "White Death." Most are fortunate enough to survive.

This is meant to be a brief guide about the basics of avalanche awareness and safety. For more in depth information, several sources are listed under "resources" in the last section of this booklet. They are all well-written, highly recommended publications by knowledgeable avalanche and backcountry experts.

Who gets caught in avalanches?
What is the profile of a typical United States avalanche victim? According to the Colorado Avalanche Information Center, 89 percent of victims are men, most victims are between the ages of 20-29 (although the average victim age is 31), and three-quarters of victims are experienced backcountry recreationists (who are more likely to enter risky situations).

One of the major reasons for increasing snowmobile avalanche fatalities is the technology and power increase in mountain snowmobiles.

When and where avalanches happen
Although avalanches can occur on any slope given the right conditions, in the United States certain times of the year and certain locations are naturally more dangerous than others. Wintertime, particularly from December to April, is when most avalanches will "run" (slide down a slope). However, avalanche fatalities have been recorded for every month of the year.

The highest number of fatalities occurs in January, February and March, when the snowfall amounts are highest in most mountain areas.

While expertise is not a guarantee that you won't be caught in an avalanche, it does provide some basic knowledge about how to avoid avalanche areas, what types of weather and terrain signs to watch for, and what to do if you are caught in an avalanche - all information that may save you or other members of your party.

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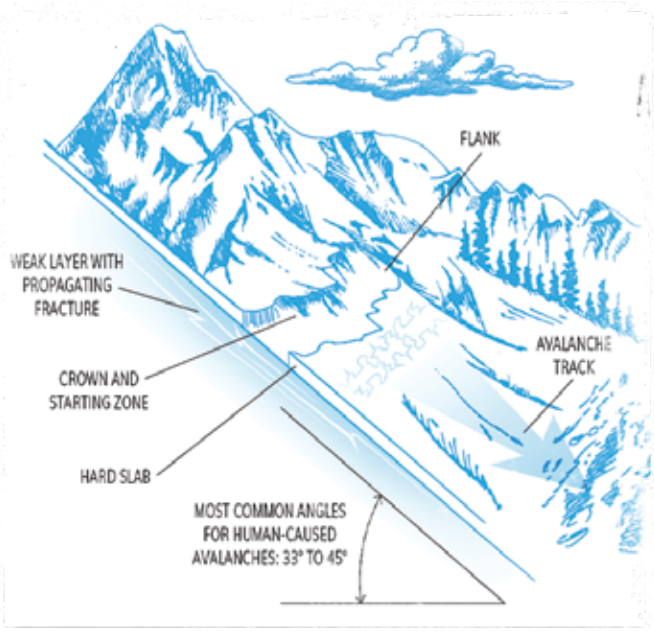
Anatomy of an avalanche

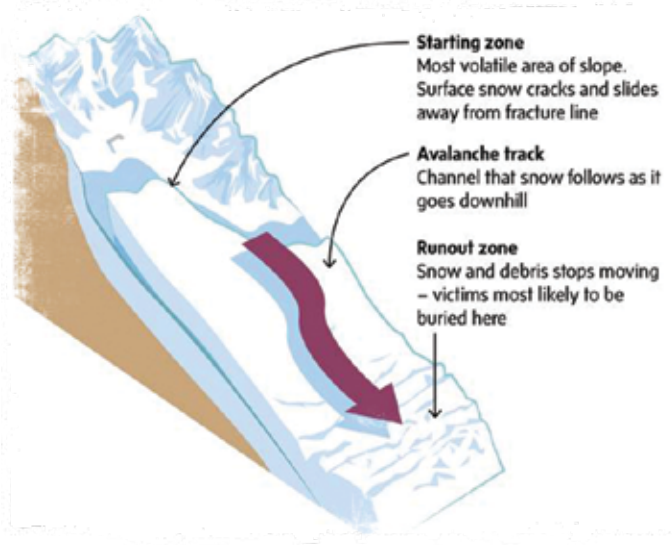
All that is necessary for an avalanche is a mass of snow and a slope for it to slide down. For example, have you ever noticed the snowpack on a car windshield after a snowfall? While the temperature is cold, the snow sticks to the surface and doesn't slide off. After temperatures warm up a little, however, the snow will "sluff," or slide, down the front of the windshield, often in small slabs. This is an avalanche on a miniature scale.

Of course, mountain avalanches are much larger and the conditions that cause them are more complex.

Slab avalanches are the most common and most deadly avalanches, where layers of a snowpack fail and slide down the slope. Hard slab avalanches involve large blocks of snow and debris sliding down a slope. In soft slab avalanches, the snow breaks up in smaller blocks as it falls.



An avalanche has three main parts. The **starting zone** is the most volatile area of a slope, where unstable snow can fracture from the surrounding snow cover and begin to slide. Typical starting zones are higher up on slopes, including the areas beneath cornices and "bowls" on mountainsides. However, given the right conditions, snow can fracture at any point on the slope.



The avalanche **track** is the path or channel that an avalanche follows as it goes downhill. When crossing terrain, be aware of any slopes that look like avalanche "chutes." Large vertical swaths of trees missing from a slope or chute-like clearings are often signs that large avalanches run frequently there, creating their own tracks. There may also be a large pile-up of snow and debris at the bottom of the slope, indicating that avalanches have run.

The **runout zone** is where the snow and debris finally come to a stop. Similarly, this is also the location of the deposition zone, where the snow and debris pile the highest. Although underlying terrain variations, such as gullies or small boulders, can create conditions that will bury a person further up the slope during an avalanche, the deposition zone is where a victim will most likely be buried.

Avalanche factors: what conditions cause an avalanche?

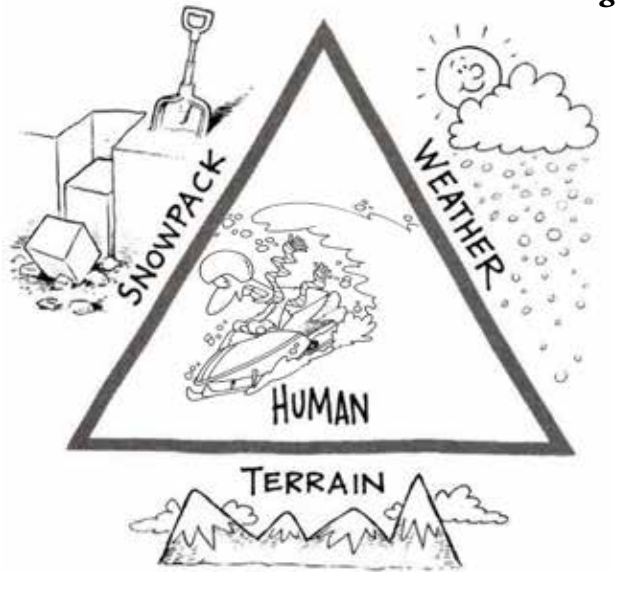
Several factors may affect the likelihood of an avalanche, including weather, temperature, slope steepness, slope orientation (whether the slope is facing north or south), wind direction, terrain, vegetation, and general snowpack conditions.

Different combinations of these factors can create low, moderate, considerable, high or extreme avalanche conditions.

Keep in mind that some of these conditions, such as temperature and snowpack, can change on a daily or even hourly basis. This necessitates constant vigilance of your immediate surroundings while doing any wintertime backcountry travel. The route you chose may be safe when you begin, but may become dangerous if conditions change dramatically throughout the day.

The following factors often occur in combination to produce an avalanche, but if a slope is unstable in any way, it may take only the weight of one snowmobile to set off an avalanche. The more foresight you have about conditions and situations to avoid the safer your outing will be.

Avalanche Triangle



Weather
Avalanches are most likely to run either during or immediately after a storm where there has been significant snowfall. The 48 hours following a heavy snowstorm are the most critical. Consequently, it becomes important to be aware of current weather conditions as well as the conditions from the previous couple of days. Temperature, wind, and snowfall amount during storms can create fatal avalanche conditions during your outing. If there has been heavy snowfall the day or night before your trip, it may be wise to postpone the trip or plan for a day of low angle riding in order to avoid the increased avalanche danger.

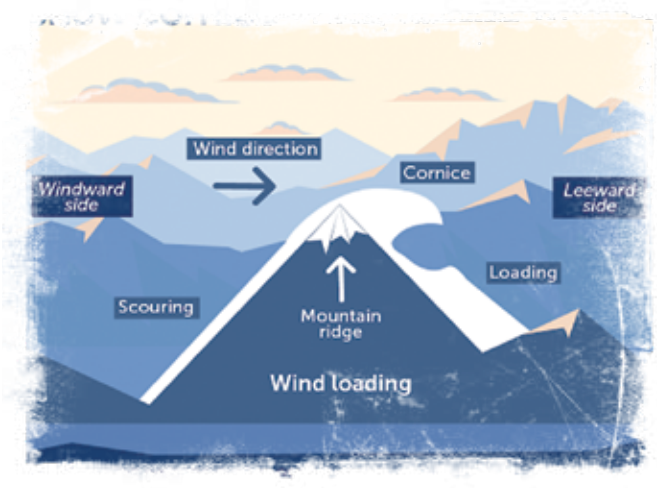
Snowfall
Recent snowfall puts extra stress on the existing snowpack, especially if it does not adequately bond to the pre-existing surface layer. The extra weight of new snow alone can cause a slab to break off and fall down the slope, particularly in storm-induced avalanches. Snowfall amounts of one foot or more (frequent in mountainous areas) create the most hazardous situations, producing avalanches that are often large enough to block highways and cause major destruction.

Temperature
Because snow is a good insulator, small temperature changes do not have as much effect on snowpack as larger or longer changes do. For instance, shadows from the sun crossing the snow surface throughout the day will not significantly change snowpack stability. Changes that last several hours or days, such as a warm front moving through, can gradually increase temperatures that cause melting within the snowpack. This can seriously weaken some of the upper layers of snow, creating increased avalanche potential, particularly in combination with other factors.

When temperatures rise above freezing during the daytime and drop back down again at night, melting and re-freezing occurs, which can stabilize the snowpack. This is particularly common during the springtime. When temperatures stay below freezing, especially below zero degrees Fahrenheit, the snowpack may remain relatively unstable.

Wind direction
Wind usually blows up one side of a slope or mountain (the windward side), and down the other (the leeward side). Blowing up the windward slope, wind will "scour" snow off the surface, carry it over the summit, and deposit it on the leeward side. What

this does is pack snow unevenly on the leeward side, making it more prone to avalanche. A cornice or icy overhang at the top of a mountain or ridge is a telltale sign of wind-loading. It is safer to travel on the back, or windward side of such a slope, where the snow layer is thinner and wind-packed.



Snowpack conditions

Perhaps the most significant factor (but not the only one) is how the snowpack has developed over the season. We only see the surface and maybe the top few layers of snow, but it can be layers of snow several feet deep that may ultimately determine whether the slope will fail.

Understanding the history of snowpack for that season can reveal several clues about slope stability. The snowpack as a whole may change not only during the course of the winter season, but throughout the course of a single day, due to changing weather and temperature conditions. This is why constant awareness is necessary.

Snowpack conditions are extremely important because many layers of snow build up over the winter season. Each layer is built up under different weather conditions and will bond differently to the subsequent layers. Snowflakes, or snow crystals, within the snowpack eventually become more

rounded due to melting/re-freezing and settlement. This metamorphism allows them to compress and (generally) form stronger bonds.

In between snows, the temperature may rise and melt the exposed surface layers, which when they re-freeze create a smoother, less stable surface for the next snowfall. Failure is much more likely to occur during or after the next few snowfalls. Rain between snows creates a slicker surface as well, and can weaken the bonds between snow layers. On the other hand, light snowfalls and consistently cold temperatures help strengthen the snowpack and make it more resistant to avalanche. Weak layers deep in the snowpack can cause avalanches even if the surface layers are strong or well bonded.

A type of snow called depth hoar (a course, grainy form of snow crystal) is often the culprit behind avalanches. Because of its granular structure, similar to dry sand, depth hoar bonds poorly and creates a very weak layer in the snowpack. Unfortunately, the weather conditions necessary to produce depth hoar most often occur very early in the season, and these weak layers are buried under subsequent snows. All too often, deeper depth hoar layers are discovered only after an avalanche has swept off the overlying layers.

Slope angle
Most avalanches occur on slopes between 30 and 45 degrees, but can occur on any slope angles given the right conditions. Do not expose more than one rider to these slopes at a time.

You can measure the slope angle with an inclinometer, or you can "eyeball" it by looking at the angle between a tree and the slope and estimating the angle. Of course, you may want to practice before using this technique in the backcountry to be sure of your accuracy. Be aware that a single slope can have varying degrees of steepness across its face, depending on the terrain.

Slope orientation
Although avalanches will run on slopes facing any direction, most avalanches run on slopes facing north, east, and northeast. Because the sun is at such a low angle, particularly during the winter, a colder and deeper snowpack develops. Slopes that are under shadow throughout most of the day are suspect because the snowpack remains cooler, without much of the melting and bonding that can make the snow layers stronger.

Remember also that certain slope orientations are much more affected by wind-loading, particularly northeast, east, and southeast (similar to the orientations mentioned above). If you are not already familiar with the terrain, taking a compass along would be a good idea. Alternatively, if you know where you are going ahead of time, you could potentially plan your route in such a way as to avoid suspect slope orientations, especially if other potential avalanche factors exist.

Terrain

Paying attention to where you are in the grand scheme of things can offer clues about avalanche likelihood. Bowls and gullies are suspect at any time, regardless of other conditions. Snow can accumulate deeply and quickly in these areas, increasing the possibility of an avalanche. Even if you can see that an avalanche has already run, be wary. Avalanches can fall in a "piecemeal" fashion, where one avalanche will run and leave the rest of the slope weakened, and the slightest provocation can cause subsequent avalanches on that same slope. Smaller depressions or shallow gullies in the mountainside can also be hazardous. During an avalanche, these "terrain traps" serve as accumulation points for snow and debris in which a victim could be buried.

Crossing steep slopes where you may trigger the avalanche yourself should be done cautiously. In contrast, as you cross a valley floor you may also be caught in an avalanche triggered naturally on the steep slope above you. Therefore, during hazardous

conditions minimize the amount of time traveling beneath avalanche starting zones and never park in a potential avalanche runout zone. Even a small avalanche starting high on the slope can carry down large amounts of snow onto and across the valley floor. Remember to keep an eye out for obvious avalanche chutes, where avalanches occur more frequently.

Vegetation

On a snow-covered slope, heavily forested areas are much safer than open spaces, but don't assume that any vegetation at all will be protective. Lone trees, bushes, or large rocks on a mountainside can sometimes weaken the stability of the snowpack. A fracture line (the break-off point for an avalanche) may run from a lone tree to a rock to another tree. Also, during avalanches, trees and rocks catch debris and cause excessive snow pile-up, as well as provide lethal obstacles for anyone caught in an avalanche.

Tree line, above which conditions become too harsh for trees to grow, also plays a significant role in avalanche areas. Many avalanches start above the tree line, making high-elevation mountains especially risky. Although forests help stabilize the snowpack, if an avalanche starts above tree line, it can cut its own path, or chute, through the trees below. Likewise, where there is a swath of trees missing from a forested

mountainside, there are probably frequent avalanches running down that particular chute.

Smooth surfaces, such as a rock face or grassy slope, may cause avalanches during the spring melting season. On the other hand, if the vegetation is very low-lying, such as tree stumps or shrubs, it can become buried underneath the first few snows and be relatively ineffective at anchoring the upper layers of the snowpack.

How to determine if the snowpack is safe
There are several ways to gauge snowpack stability. Remember to be hyper aware to recent avalanche activity; cracking; collapsing and recent weather.

Keep any eye out for any cracks shooting across the surface, or small slabs shearing off. These are signs of weakened snowpack. Also, listen for "hollow" or "whumping" noises as you take a break from riding your snowmobile. This indicates that there is a weaker layer underneath, leaving the surface layer more prone to collapse. Careful, continuous observations throughout your trip can reveal natural clues, but other more reliable measurements, such as snow pits and shear tests, will help you predict more accurately how stable or unstable the snowpack is.

Always use your resources. Check avalanche.org to locate the nearest forecast center, read and understand the forecast as it pertains to the area you plan to ride in.

Avalanche safety gear - Carry an avalanche transceiver, shovel and probe on you at all times.

Ideally, avoiding avalanches in the first place is much easier than trying to survive one. Avalanche safety begins even before you begin your travel. In addition to keeping an eye out for weather and terrain conditions, there are steps you can take ahead of time to help you or other members of your party if you are caught in an avalanche.

Proper equipment can be a critical factor in rescue efforts. Avalanches kill in three ways.

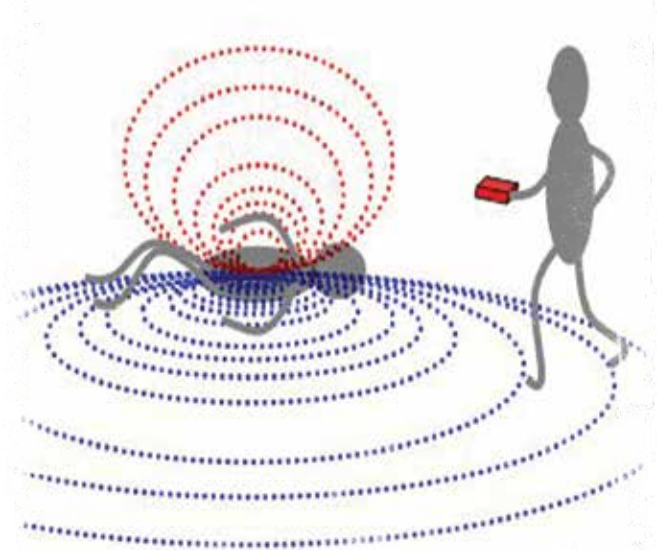
- 65% Suffocation
- 25% Trauma from collision with trees, rocks or other obstacles
- 10% Hypothermia and shock

Portable shovels made of aluminum are lightweight and compact enough that they can (and should) be carried in a backpack. Digging by hand takes an average of 45 minutes to dig out one square meter of snow. Using a shovel to dig out the same amount of snow takes less than ten minutes.

Collapsible probes are also easy to carry along and usually consist of two-foot lengths of tubular steel that join together to make a probe six to twelve feet long. A probe length of less than eight feet is not recommended. Probing is essential to finding a buried victim if there are no visible clues on the surface.

Avalanche beacons (transceivers) are the most commonly used rescue device. When properly used, they provide the fastest way of locating a victim.

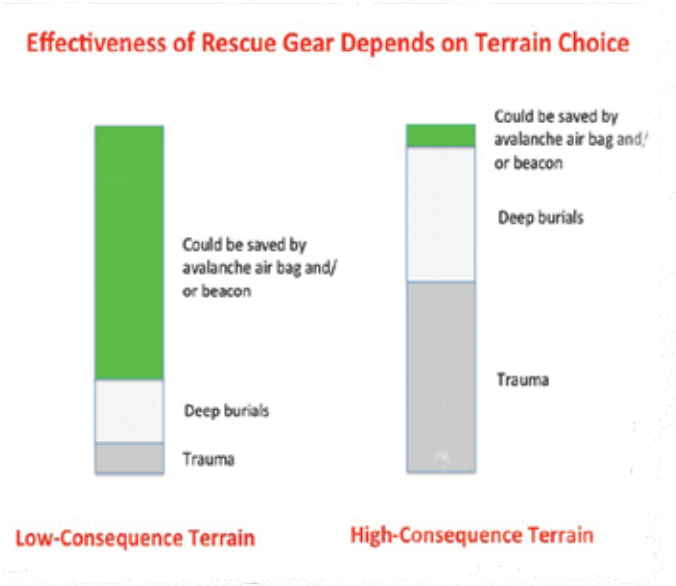
When a victim is buried, the transceiver will emit a frequency that other transceivers can home in on. However, it is critical to have the transceiver set to "transmit" during your outing. When trying to locate a buried victim, rescuers will then switch their transceivers to "receive" to locate the signal.



Remember that more than one transceiver unit is required. A transceiver will not help locate a victim who is not also wearing one. Likewise, a victim with a transmitting beacon may not be found unless someone else has a transceiver to pick up that signal. Using beacons requires practice. Homing in on a buried signal involves moving in increasingly smaller circles around the area of the signal.

Avalanche flotation devices aim to prevent asphyxiation by reducing the depth of burial in the event of an avalanche. These devices are designed to increase flotation, keeping the wearer at the surface of the avalanche, and thereby prevent or minimize burial. Unlike other avalanche rescue devices, the primary purpose of an avalanche flotation device is not to facilitate and accelerate rescue but to prevent burial of the victim. Avalanche flotation devices consist of a self-contained balloon system housed within a backpack. If caught in an avalanche, the wearer can deploy the balloon by pulling the activation handle. This will initiate the release of gas/compressed air from the cartridge housed in the backpack, causing the balloon to inflate. The inflated balloon increases the wearer's volume and size, preventing burial.

Several studies have examined the effectiveness of avalanche flotation devices in reducing burial depth and improving chances of survival for persons caught in an avalanche. These studies have reviewed documented cases of persons equipped with an avalanche flotation device being caught in an avalanche and have also reviewed data from field tests of various avalanche flotation devices. Terrain choice will continue to be the great equalizer. Flotation device or not, high-consequence terrain will result in greater trauma.



Each of these studies found that while avalanche flotation devices cannot in principle prevent burial, they can reduce the frequency and extent of burial in an avalanche. One study found that the use of an avalanche flotation device reduced the likelihood of complete burial from 39% to 16.2%. In cases where individuals were completely buried despite utilizing an avalanche flotation device, the presence of the avalanche flotation device was found to facilitate rapid rescue by companions, as at least part of the balloon was visible above the snow.

Research has shown that the role of avalanche flotation devices in reducing burial and facilitating rapid rescue greatly reduces the mortality rate for persons caught in an avalanche. **Time is of the essence.** Carrying this equipment may mean the difference between life and death for someone buried in an avalanche.

Tips for avalanche survival

Cross or climb the slope one at a time to minimize danger with the other members of the party watching each individual from a safe location.

- Look for instability NOT stability
- Take your pulse… Know before you go.
- Communicate & Listen
- Accept that we are only human: Understand yourself and group dynamics.
- Use a system – checklists, procedures and rituals
- Do not go out with only one task in mind…

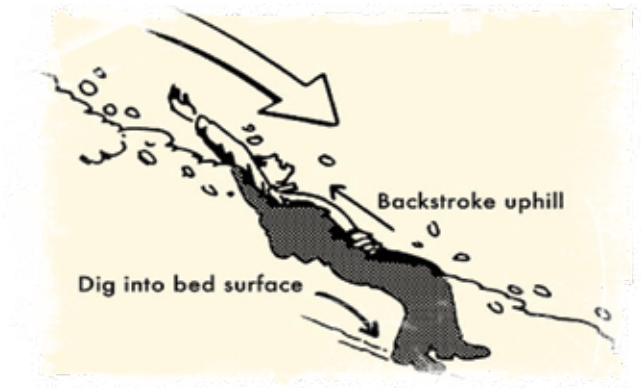
If you plan to climb you will find a reason to climb.

- Remember to conduct snow stability checks and if they are telling you the snow is unstable spend the day playing in the meadows or trees.

If you are caught in an avalanche

- Try to get off of the moving slab
- Hang onto sled unless a violent tumble
- Swim hard and fight, grab trees
- Push one hand towards the surface
- Make an airspace around your mouth
- Relax- your partners have practiced a lot, they were in a safe place & you checked all your beacons at the trailhead

Use "swimming" motions, thrusting upward to try to stay near the surface of the snow. When avalanches come to a stop and debris begins to pile up, the snow can set as hard as cement. Unless you are on the surface and your hands are free, it is almost impossible to dig yourself out. If you are fortunate enough to end up near the surface (or at least know which direction it is), try to stick out an arm or a leg so that rescuers can find you quickly.



If you are in over your head (not near the surface), try to maintain an air pocket in front of your face by grabbing your backpack strap and tucking your head into the angle formed by your elbow. When an avalanche finally stops, you will have from one to three seconds before the snow sets. Also, take a deep breath to expand your chest and hold it; otherwise, you may not be able to breathe after the snow sets. To preserve air space, yell or make noise only when rescuers are near you. Snow is such a good insulator they probably will not hear you until they are practically on top of you.

Above all, do not panic. Keeping your breathing steady will help preserve your air space and extend your survival chances. If you remain calm, your body will be better able to conserve energy.

Rescuing a victim

- Yell! Avalanche - Watch that person
- Make a mental effort to stay calm
- **Do not** go for help
- Re-group and make a plan with a leader
- Is it safe to search - Auxiliary slides possible?
- Last Point Seen!
- All beacons to receive
- Identify most likely areas of burial
- Visual clues are critical & time saving
- Probe & scuff search areas of likely burial
- Search evenly spread across the debris field, don't cluster, and communicate
- Make your evacuation & first aid plan

Try to watch the victim as they are carried down the slope, paying particular attention to the point you last saw them. After the avalanche appears to have finished and settled, wait a minute or two and observe the slope carefully to make sure there is no further avalanche danger. If some danger does still exist, post one member of your party in a safe location away from the avalanche path to alert you if another avalanche falls.

Do not go for help, you are the help!

Someone needs to take charge of the group and ensure all rescuers have their beacons switch to receive. Begin a beacon search from the last point seen or by coming in from the flanks of the path.

Look for clues on the surface (a hand or foot, piece of clothing, etc.). As you move down or across the slope, kick over any large chunks of snow that may reveal clues. Since equipment and items of clothing may be pulled away from a victim during an avalanche, they may not indicate their exact location, but can help determine the direction the avalanche carried them. Mark these spots as you come across them. Be sure that all rescuers keep their packs on.

Once the victim is found, it is critical to unbury them and clear their airway as quickly as possible. Treat any injuries, shock, or hypothermia.

Avalanche quick checks

Following is a list of quick checks you can make throughout the day:

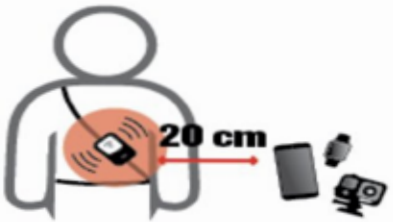
- What have the weather conditions been over the past few days? Recent heavy snows?
- Do you observe any wind loading on the slopes?
- Do you have a good sense of the snowpack? Have you performed any snowpit or shear tests?
- Have you noticed many fracture lines, heard "whumping" or cracking sounds, or hollow noises in the snowpack?
- Are you keeping an eye on the orientation and steepness of the slopes?
- Are you lingering in gullies, bowls, or valleys?
- Noticed any recent avalanche activity on other slopes similar to the one you are on?
- If a slope looks suspect, are there alternative routes?
- If there is no alternative to crossing a suspect slope, do so **one rider at a time** to minimize risk.
- When descending or ascending a slope, try to stay as far to the sides of a potential avalanche chute as possible to decrease your chances of being caught if an avalanche runs.
- Be aware of the condition of those in your party. If someone is tired, hungry, or cold they may not be using their best judgement.
- Remain constantly aware of changing weather or temperature conditions, particularly if your outing will last more than a few hours.
- Always carry avalanche rescue equipment on your body in your back pack, beacon (worn under your outer layer), probe, and shovel.

TRANSCEIVER INTERFERENCE

KEEP YOUR DISTANCE!

Electronic devices, metal objects, and magnets of any kind will interfere with your transceiver's signal if they are too close.

TRANSMITTING



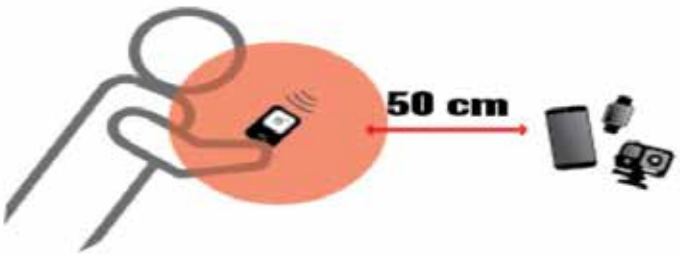
Always wear your transceiver at least *20 cm* away from anything electronic, metallic, or magnetic.

NO:

- Heated jackets
- Foil-lined jackets
- Magnetic jacket closures
- Chest-mounted cameras

HELPFUL MEASUREMENTS

SEARCHING



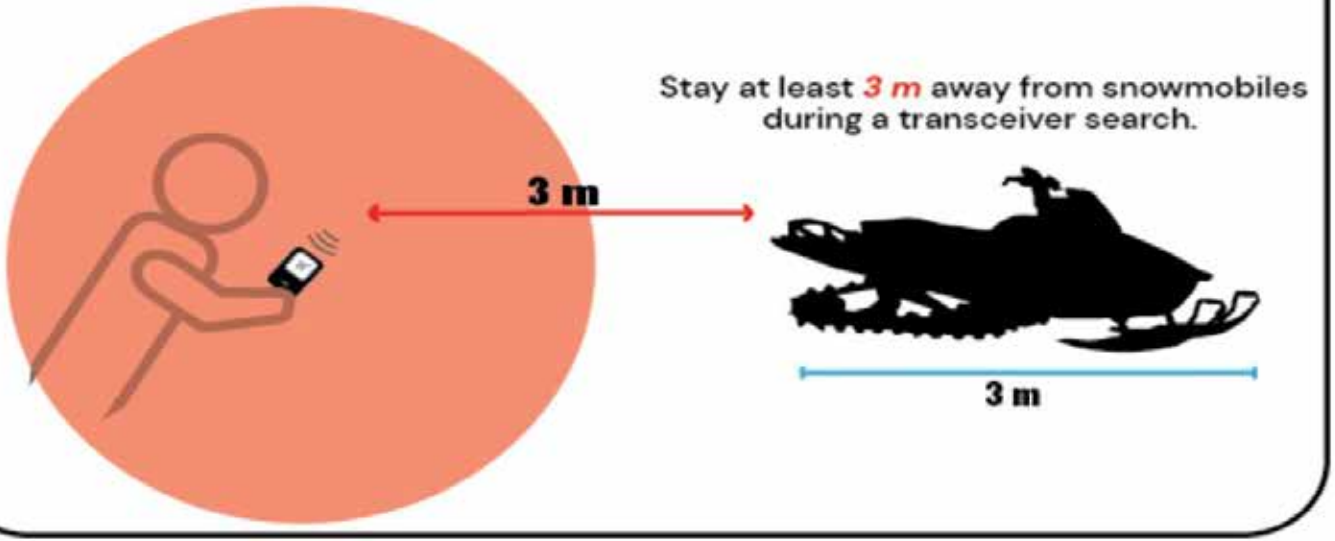
Increase the distance when searching.

Always hold your transceiver at least *50 cm* away from all electronics, metals, and magnets.

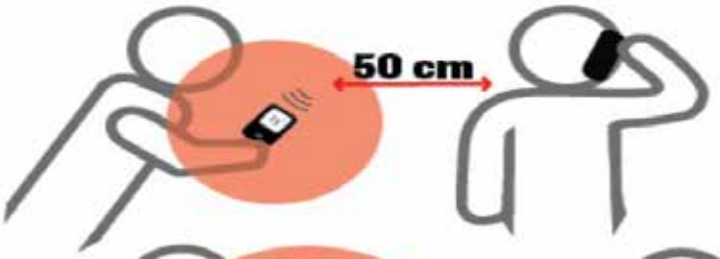
CAUTION

- Heated gloves and electronic watches ***must*** be taken off and stored away before a transceiver search
- Heated socks can interfere with your fine search when you're holding your transceiver close to the snow surface

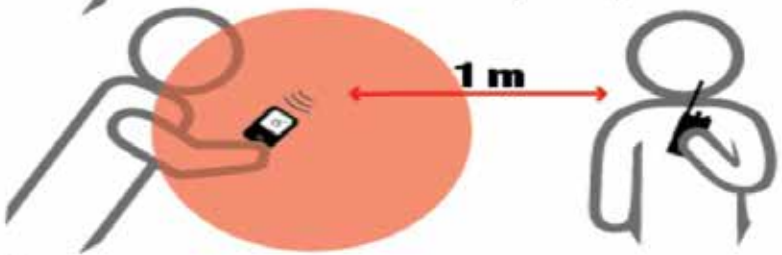
SEARCHING WITH SNOWMOBILES



CALLING FOR HELP



When *using* most communication devices, including analogue and FRS-band VHF radios, stay at least *50 cm* away from a searching transceiver.



When *using* a digital VHF radio, stay at least *1 m* away from a searching transceiver.

Resources

Web

- International Association of Snowmobile Administrators avalanche education repository - www.snowiasa.org
- www.avalanche.org

Printed materials

- Snow Sense - by Jill Fredston & Doug Fesler
- The ABCs of Avalanche Safety - by Sue A. Ferguson & Edward R. LaChapelle
- Sledding in Avalanche Terrain - by Bruce Jamieson & Darcy Svederus
- The Avalanche Handbook - by David McClung & Peter Schaerer
- And many, many others...

Video materials

- Avalanche! - by NOVA
- Winning the Avalanche Game - by The Friends of the Utah Avalanche Forecast Center

5 key safety guidelines when riding in avalanche terrain

GET THE GEAR: Ensure everyone has an avalanche transceiver, shovel, and probe on their person and knows how to use them.

GET THE TRAINING: Take an avalanche course.

GET THE FORECAST: Make a riding plan based on the current avalanche and weather forecast.

GET THE PICTURE: If you see recent avalanche activity unstable snow exists. Riding on or underneath slopes is dangerous.

GET OUT OF HARM'S WAY: One at a time on all avalanche slopes. Don't go to help your stuck friend. Don't group up in runout zones.

Danger Level		Travel Advice	Likelihood of Avalanches	Avalanche Size and Distribution
5 Extreme		Avoid all avalanche terrain.	Natural and human-triggered avalanches certain.	Large to very large avalanches in many areas.
4 High		Very dangerous avalanche conditions. Travel in avalanche terrain not recommended.	Natural avalanches likely; human-triggered avalanches very likely.	Large avalanches in many areas; or very large avalanches in specific areas.
3 Considerable		Dangerous avalanche conditions. Careful snowpack evaluation, cautious route-finding and conservative decision-making essential.	Natural avalanches possible; human-triggered avalanches likely.	Small avalanches in many areas; or large avalanches in specific areas; or very large avalanches in isolated areas.
2 Moderate		Heightened avalanche conditions on specific terrain features. Evaluate snow and terrain carefully; identify features of concern.	Natural avalanches unlikely; human-triggered avalanches possible.	Small avalanches in specific areas; or large avalanches in isolated areas.
1 Low		Generally safe avalanche conditions. Watch for unstable snow on isolated terrain features.	Natural and human-triggered avalanches unlikely.	Small avalanches in isolated areas or extreme terrain.

- Carry an avalanche transceiver, shovel and probe on you at all times.
- Watch the weather and make your plan.
- Leave your plan and a return time with someone. Check the batteries in your beacon.
- The day before - Visit avalanche.org
- At the trail head - Test the send and receive function of all beacons, the beacon is worn under your first layer. Pack your probe and shovel in your backpack. Carry all rescue gear on you at all times.
- On the ride - Never ride alone & ride one at a time on slopes greater than 30 degrees.
- Look for signs of instability. (Warning signs)
- Be willing to change your ride plan if the snowpack dictates.
- Only high-mark or expose one person at a time on a slope. If your partner is stuck watch them from a safe location.
- Recent avalanche activity means slopes are unstable and similar ones should be avoided.

WWW.AVALANCHE.ORG
Subscribe to avalanche center e-mail lists to receive the most current forecasts

Avalanche Centers in or near Idaho
McCall – (208) 634-0409
Panhandle – (208) 765-7323
Sawtooth – (208) 622-8027
Gallatin – (406) 587-6981
Logan – (888) 999-4019
Bridger Teton – (307) 733-2664