RK.HELISKI
PANORAMA BC

ALTITUDE IS EVERYTHING SINCE 1970

SAFETY AT RK HELISKI

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Wilderness/heliskiing involve risks, dangers and hazards. All guest prior to taking part in heliskiing must read and agree to the industry standard, release of liability waiver.

Basic background information is provided in this document on how to keep yourself safe as well as how your pilots and guides work behind the scenes to take you to the best safe skiing.

HELICOPTER SAFETY

Each morning during a meeting of the guides and pilots, a general operational plan is discussed. This plan takes into account weather, flight safety, snow safety and operational considerations. There will also be a backup operational plan in case conditions change. While flying the guide and pilot will discuss the next landing site and will determine where it is safe to land based on cloud, wind, temperatures, group weight and other operational considerations. Each day we base our decisions on safety first. Once the safety issues are addressed, we strive to take our guests to the best possible skiing. There are a number of issues that affect where we can land:

Fog

This is a very significant factor. Helicopters in the mountains cannot fly on instruments alone and thick fog can affect our ability to go to some locations or to fly at all. At RK Heliski we rarely encounter heavy fog, but it is possible. We have a variety of webcams that we can use to determine the extent of the fog before we take off.

Cloud

Similar to fog, clouds can reduce the locations at which we can land. In general, if you cannot see a landing, you cannot go there! Happily on many days when clouds affect our higher landings we can access lower elevation and treed runs safely.

Freezing rain and Icing

Freezing rain and icing conditions rapidly add weight to the helicopter and reduce safety margins. If a pilot encounters significant freezing rain or ice buildup, he may decide that it is unsafe to continue flying in the area where the problem exists.

Winds

Some wind is actually desirable for flying, but especially strong or gusty winds make flying difficult or in some cases unsafe. Our pilots have extensive experience in mountain flying and will use only those landings where they feel the winds are acceptable. That may mean that on some days with blue skies we may not be able to land on the mountaintops.

Warm temperatures

The warmer the temperature, the less lifting capacity a helicopter has. Each day pilots complete a series of calculations called a “weight and balance” which tells them how much weight can be taken to a given altitude. If temperatures are warm and group weights are high, the flying may be restricted to certain areas for safety reasons.

Altitude

As with temperature, the higher the altitude, the less lifting capacity a helicopter has. Weight and balance determines how high a pilot can fly with a group’s weight. If temperatures are warm and group weights are high, the flying may be restricted to certain elevations for safety reasons.

Heavy group weight

The heavier a group of skiers is, the more difficult it may be to fly above certain elevations. For this reason and others, we ask that you reduce the items you carry to only those that are necessary for your day of skiing.

Since your guide and pilot cannot change the weather or any of the other factors listed above, it is best for you to relax and realize that all these factors and more have been taken into consideration before you land on a given run. On days when the morning weather is questionable, we may delay departure to see if the weather improves. If we cannot fly because of weather considerations, you will be refunded for the skiing that you have paid for. If we get out skiing and cannot finish the day due to changing weather, you will only be refunded for each run that you did not ski. **Please consult our refund policy. Our yearly average is ONLY 2 cancelled days per year.**

Safety Briefings

On your first morning of helicopter skiing, you will attend a number of safety briefings. One of the first talks is in the comfort of the heliplex. One of our veteran guides will go over weather, current conditions, how to dress, best choice of eyewear and a general overview of how a typical day of heli-skiing or boarding unfolds. The guide will then discuss limitations of bringing any extra gear/clothing in the helicopter. The general orientation finishes with a demonstration of all safety gear in the guest pack and how to put together a probe and shovel, as well as the operation of our hand held radios in the event of an emergency. The information below is part of the briefing you will receive once you are dressed and ready to go outside, prior to skiing or snowboarding.

Bundling skis and snowboards

When skiers/boarders get to the bottom of each run, they must stop with the guide who has stopped 10 to 20 meters (10 to 20 yards) back from a black stake with a red flag. The helicopter may or may not be there yet. In any case, your guide has chosen a safe place to stop based on communication with the pilot. **DO NOT SKI OR SNOWBOARD PAST YOUR GUIDE!** This is a rule to be followed all day long in all situations. Bundle your skis together tightly as you were shown at the first briefing. Snowboarders should remove their boards and if your snowboard has high back bindings, fold them down.

Approaching when the helicopter is at the landing site

When it is safe to do so, your guide will make a make a path to the landing area or helicopter. Always approach the helicopter from the front unless specifically told to do otherwise by your guide. **NEVER** approach the helicopter from the rear! Hot jet exhaust gases and an invisible tail rotor are hazards in the rear of a helicopter and you should never move behind the passenger doors or ski basket for any reason. Follow exactly in your guide's footsteps. **DRAG YOUR SKIS BY THE TIPS OR CARRY A SNOWBOARD AT HIP HEIGHT, AND DO NOT LIFT THEM UP FOR ANY REASON. BE SURE TO CROUCH ASYOU APPROACH THE HELICOPTER**. Don't carry your skis over your shoulder! Snowboards should be held firmly against the body with one hand between the bindings and the other holding near the tip. Your guide will show you the correct-method.

This is the way skis and boards are handled regardless of whether the main rotor is spinning or not. The rotor may begin turning unexpectedly, so by always keeping your skis / board low, you will never have to worry in that regard. Hand your skis or board to the guide without lifting them. The guide will load the skis, snowboards and guest packs into the helicopter basket.

You must now proceed to the other side of the helicopter where passenger loading takes place. On the front of the helicopter you will see one or two tubes sticking out. These are called pitot tubes. They are for measuring the air speed of the helicopter. **YOU SHOULD STAY ONE METER (ONE YARD) AWAY FROM THE FRONT OF THE HELICOPTER AS YOU WALK AROUND**. These tubes are heated and can burn or melt your clothing. They are also at eye level when you are crouching down. If they are used as a handle and get broken, the day of skiing is over and the helicopter will be forced to return to the base for repairs.

Procedure if the helicopter is NOT at the landing site

Your guide will make a path to the landing area. Follow exactly in your guide's footsteps. Drag your skis by the tips or carry your snowboard as shown to where the guide is standing. The guide will stack the skis and boards in a very specific fashion to be sure they will not get blown away and are easy to handle when the helicopter lands. The guide will then position you a specific distance away from the pile of skis and the entire group will crouch down in a huddle. The helicopter will now land between the group and the guide. Always keep your eyes on the helicopter as it lands. After the helicopter lands the pilot gives the all clear signal, the designated door person for your group will open the door.

While the group enters the helicopter, the guide loads the skis and boards into the basket. Once this is completed, the guide will come around to the passenger's side and close and lock the door after everyone has entered. The guide then sits in the front of the helicopter next to the pilot.

Entering the helicopter

When you are on the passenger's side of the aircraft, wait for a signal from the pilot that it is OK to enter. When instructed to do so, you may open the door and begin entering the helicopter. If you are not familiar with the operation of the door, the guide will show you how it functions. Open the door gently until it stops. Never slam the door in either direction. There is a vertical handle and a strap for you to grab onto as you enter. Kick your boots together to remove some snow, but **DO NOT KICK THE STEP OR HELICOPTER!** Carefully step up on the step and move to the farthest available seat. Do not worry if snow gets into the helicopter with you. It happens every day and is not a problem!

You must alternate back and forth between the front and rear facing seats in order for everyone to be able to enter without difficulty. When you have found your seat, you should buckle up your seat belt and be sure it is snug. Then help the next person with their seat belt.

During flight

YOU MUST LEAVE YOUR SEAT BELT FASTENED AT ALL TIMES DURING FLIGHT. It is OK to take pictures while flying, but **SMOKING IS NOT ALLOWED**. Do not scrape or push on the windows. They are part of the emergency exit system and are designed to come out if you push on them! Please do not stamp your feet on the floor.

Exiting the helicopter

Do not remove your seat belt until your guide has opened the door and motioned you to exit. Be sure you put you're hat and gloves on **BEFORE** you exit. Also tightly hang onto any other personal items. The wind around a helicopter can easily blow loose items away. Slowly and carefully exit the helicopter. Remember that the floor and step may be slippery.

The guide will position the first person about one and a half meters (five feet) away from the helicopter, within the pilot's view. The rest of the group will then huddle around this person and remain crouched down and close to the helicopter. The door person in your group will close and lock the door and give the pilot the "thumbs up" signal. While the group is getting out of the helicopter, the guide goes around to the other side to unload the skis. When the guide also gives the pilot a "thumbs up", the pilot flies away from the group. The group must stay crouched down until the helicopter has taken off and is a safe distance away.

Having a helicopter take off when it is only one or two meters away from you is a very exciting part of heliskiing BUT it is vitally important that you do not move away from the group huddle for any reason. If you have a hat, glove or any other item blow away from you, **DO NOT** chase after it. We land in mountainous terrain. You could be running off the edge of a cliff or uphill into the rotors. Once the helicopter leaves, tell your guide that you have lost something and they will determine if it is safe to retrieve the lost item.

Smoking Policy

There is no smoking in or around the helicopter, or near where fuel is stored. If you want to smoke, please ask your guide where an acceptable location would be.

Emergency Procedures - Bell 212 & 205 Helicopter

Within each helicopter are one or more safety cards which graphically shown emergency procedures and exits. You are encouraged to review the safety card during flight.

Each helicopter has a number of emergency exits that you should be familiar with. The main emergency exits for the passengers are the windows. Each side facing window in the rear of the helicopter is an "Emergency Pop-Out Window" designed to be easily removed by pushing on the window on any of the four corners. Since they are designed to come out this way, please do not lean against the window during flight or scrape the windows with your hands or gloves.

If it is not possible to exit via the window on the side facing seats, you can join the rest of the passengers in the main compartment by knocking down the back of the seat directly to the right (forward) of the rightmost passenger. This allows access to all of the other emergency exits.

If all of the exits in the passenger compartments are blocked, the passengers can also exit via the front of the helicopter where the guide and pilot sit. To do this easily, remove the headrests separating the compartments by pulling on the attached wire and lifting up. The emergency exit system in the front of the aircraft consists of a T shaped handle (usually painted red), which is pulled up. This removes the attachment for the door and the door falls off.

If the helicopter comes to rest on it's side, one set of emergency exits may be blocked and the other set of exits will be above your head. In an orderly fashion, have the uppermost people push out the Pop-Out Windows. The top person should undo their seat belt and then exit. Each person should follow, one at a time. To assist in exiting, the seat legs form a ladder to climb out of the helicopter. They are brightly painted to draw your attention to this. There are straps on the roof, which also assist. Some models of helicopter may actually have a ladder mounted in the roof.

There is a fire extinguisher mounted next to the guide and pilot and an Emergency Locator Transmitter (ELT) is located just behind the pilot's head.

Emergency Procedures - Astar Helicopter

Within the helicopter are one or more safety cards, which graphically show emergency procedures and exits. You are encouraged to review the safety card during flight.

The helicopter has a few simple emergency exits that you should be familiar with. The main emergency exits for the passengers are the doors. First try each door for normal operation. If they will not open normally, there is a brightly painted handle near the front of the door protected by a plastic safety catch. Remove the plastic and pull back on the handle. This will remove the attachment for the door and the door will fall off.

There is a fire extinguisher mounted next to the guide and pilot and an Emergency Locator Transmitter (ELT) is located in a special compartment marked by a notice.

There are several special considerations when flying in the A Star helicopter. (This is the helicopter we use for small groups and private groups.) The A Star is a first class helicopter, but space is limited, Enter and exit slowly, one at a time. There is never a rush to get in, so it is best to wait until the person in front of you has fastened their seat belt before you enter the helicopter. Please do not lean against the windows during flight or scrape the windows with your hands or gloves.

The A Star helicopter is made of lightweight composite materials and is easily damaged. Do not kick the helicopter or stamp your feet on the floor. If you are seated directly behind the pilot, be aware that several flight controls are just in front of your feet. A special guard protects them, but it is possible for you to kick the controls if you are not paying attention. Also be aware that the A Star helicopter rotor blades are closer to the ground and crouching is absolutely essential when approaching the helicopter while it is running. As with all of our helicopters, **NEVER** go to the rear of the helicopter.

A last word on Safety

We believe it is important to discuss and review these safety issues with our new guests each morning, not because we expect to have a mishap, but rather because it is far better to be prepared so that everyone knows how to react in routine situations, loading and unloading, as well as in emergencies. This enhances the safety of all of the passengers. Even if you have experience in helicopters, we ask that you pay attention to the safety briefings so that you can behave appropriately around the helicopter and make your day as safe as possible.

Industry Standards

As members of the British Columbia Heli-ski and Snowcat Operators Association, we are required to conform to certain industry standards and practices set forth by HeliCat Canada. We meet or exceed these standards and are subject to periodic inspections by the association to ensure that we continue to do so. In addition to these inspections, we also occasionally hire independent consultants to provide expert opinions on how we can continue to enhance our avalanche and snow safety programs. In the past several years we have had some of Canada's most prominent experts visit our operation with this aim in mind.

CAA Infoex

As part of our snow safety program, we subscribe to the Canadian Avalanche Association Information Exchange (CAA Infoex). This is an unprecedented cooperative effort involving all of the leading operations involved in avalanche safety in Canada. Every day throughout the winter as many as one hundred parks, ski areas, snowcat, heliski, and government avalanche safety programs report their daily weather, snowpack and avalanche observations along with their stability evaluation to a central location in Revelstoke, British Columbia. This large pool of data is reported using special shorthand developed for relaying a vast amount of information with a minimal amount of effort. This data is compiled each night and then returned via the Internet to each member agency. The value of this exchange is that you can evaluate what the vast majority of avalanche experts are seeing and reporting regarding all of the factors relevant to avalanche stability. Particular attention is paid to operations, which are near to us. This is a valuable tool in assessing trends in snow stability that may be common to certain regions.

Snow Safety and Avalanches

Weather Forecast

Avalanches are a fact of life when skiing in the mountains. Because of this, we work exhaustively at reducing the risk and reducing our exposure to avalanche hazard. There are many ways in which we go about enhancing our safety. This page will describe a few of these important measures.

There are three major precursors to avalanche activity; precipitation (snow / rain), wind and temperature. Since these are all weather related factors, it is vital to have a very detailed mountain weather forecast. We subscribe to a special mountain weather forecast produced for ski operations by an independent Mountain Forecast Specialist.

- **A highly technical synopsis**
- **Actual winds and temperatures being reported at selected weather stations and via balloon soundings 500mb pressure isobars**
- **Forecast winds, temperatures and dew point at 2000, 3000 and 4000m**
- **Forecast freezing levels**
- **Forecast cloud layers**
- **Extended forecast**

We also look at visible, IR, animated and composite satellite imagery on the internet. This weather information is discussed each morning at the guides meeting as part of the avalanche forecasting process. It also is discussed as it relates to flying considerations. The important weather factors are recorded into a daily log and also recorded in our data base.

On the wall of the Guide's office is a very large chart on which a large number of variables are plotted on a daily basis. On the top of the chart is the morning cloud cover. Just below it is coded the rate of morning precipitation. The 24-hour high, low and current temperatures are drawn in graphical form. The actual winds at 10,000 feet / 3000m at Kelowna are then plotted. Below that, the previous day's avalanche stability rating is noted. The frequency, type and size of avalanches are noted in graphical form as well. Further down on the chart the height of snow at each of the four snow study sites visited is charted. At the bottom of the profile chart the height of new snow at each of the study sites visited is noted.

During the day, heliski guests often see their guide recording information in a notebook. As trained professional observers, guides are constantly recording wind, temperatures, snowpack data, avalanche observations and results of any tests. This information is then compiled later in the day in formulating a stability analysis. Any significant observations made are often immediately reported by radio to other guides in the field.

The observation of type and size of natural avalanche events is particularly important as an indicator of stability and extent of risk on any given day. Avalanches are classed according to type (loose or slab / wet or dry, etc.) and size. The smallest avalanches are classed as size 1 (not big enough to bury a person) while the largest are classed as size 5 (the largest destructive avalanches known).

Study Plots and Snow Profiles

We maintain four snow study site locations in various geographic areas within our heliski terrain. Each of these study sites has a stake for recording the height of accumulated settled snow as well as a second stake for recording the height of new or storm snow. This information is recorded on the Season Profile.

Once every two weeks a Full Snow Profile is done. A guide will dig down to the ground (as much as 3m or 10 feet) and analyze all of the layers in the snowpack. Observations made while doing this or snow profile include height and resistance of each layer, crystal type and size within each layer, moisture of each layer, strength of bonds between the layers (determined by various shear and compression tests), temperature of the snow every ten centimeters (temperature gradient).

This information is then graphed using a computer program and displayed on a board in the guide's office. This full profile is used as a baseline for tracking changes in the snowpack..

Many other test profiles are done daily as needed to provide more timely information or to provide information about a specific geographic area or when tracking changes in a layer of particular interest.

Any critical layers that are noted in the snowpack are recorded on a special board in the guide's office and are tracked continually as the season progresses. This is an ongoing process, as one layer may begin to strengthen and bond while another layer weakens or perhaps a new layer is formed. Snow is never static and a variety of processes within the snowpack compete to change or metamorphose the snow crystals in different ways.

Field Tests

During your ski day you may notice your guide is always poking and prodding the snow and may actually take out a shovel to dig a hole or pit in the snow. Your guide is not nervous or crazy, they are simply constantly monitoring the snowpack for changes. It is amazing what a trained professional can determine by the use of very simple tests. The key is really constant testing. Some of the tests used include the shovel shear test, compression test, Rutschblock test, hand shear test, ski pole test, probing, ski cutting and test snow profiles.

Should your guide stop and ask you to wait while they conduct a test or dig a pit, please be patient. It is all in the interest of your safety! If you are interested in the nature of the tests being conducted, ask your guide to provide a simple explanation or demonstration.

Explosive Testing and Control

On rare occasions it is felt necessary to use explosives as an attempt to control avalanche slopes that may threaten some of our runs. Explosives can be used as a means of stabilization and control of selected slopes or they can be used as a test of snow stability in general. Explosives are never used indiscriminately. As a rule, explosive work is only effective if you use the right charge, on the right place on a slope, at the right time. Otherwise the use of explosives can be a costly way to make a loud noise and produce a dark hole in the snow without creating an avalanche.

Over time we have developed a very good catalog of indicator slopes that can be effectively tested or stabilized with explosives. Even explosive control cannot eliminate the risk of avalanches on any given slope.

Morning Guides Meeting

Each morning at 07:00 the daily activities for the guides begins. One person goes to the Heliplex weather plot to make the morning weather and snow observations. Meanwhile a second guide logs onto the internet and downloads the CAA Infoex and the Morning Weather forecast. The relevant observations are plotted on the season profile and recorded in the daily log. The guides and pilots read the morning weather, CAA Infoex and plot the weather map in preparation for the business of the meeting.

At 07:30 the meeting begins in earnest. Snow stability, weather, avalanche and flying considerations are discussed. All of the considerations mentioned above may enter into the forecast of today's snow stability. Based on the snow stability forecast and the weather forecast a run list is prepared for the day. A sheet containing a list of over one hundred different runs is color coded red, yellow or green. A run is coded green if it is considered safe to ski on that day. A run is coded red if it is considered unsafe to ski on that day. (Once coded red, there is no way to change the coding of the run until the next day. It cannot be skied that day!) A run is coded yellow if further observation or a certain criteria needs to be met. A yellow run can only be skied if the guides in the field make a unanimous decision that it can now be considered green. Any guide has the power of veto and can change the code of a yellow run to red, either in the office or in the field.

An operational plan for the day is then determined and one or more alternate plans may be considered as well in case of changes in weather, etc. By 08:00 the meeting is over and the guides head upstairs to have breakfast in the Heliplex. Shortly after the guides change into their ski clothes and prepare to meet the arriving guests and set up the rental skis. Later in the morning the safety briefings begin. By around 9:30am the first group flies away and the day's heliski program is in motion.

Evening Guides Meeting

When the heli-skiers arrive back at the Heliplex, often all they can think of is relaxing, having a drink or two and perhaps a few snacks from the restaurant while they laugh and reflect on the events of the day. For the guides and pilots the day is not yet over. As the saying goes, the job is not done until the paperwork is completed. After socializing for a short time, with the heliskiers, the guides and pilots get together again for the evening guides meeting. The overall success of the day is discussed with an eye toward constantly improving the quality of service provided to our guests. The pilots present any special concerns they may have had in regard to the flying or related issues. The weather, avalanche, and snowpack observations are recorded in the daily log and plotted on the seasons profile if necessary. Any snow profiles are entered into the computer and a graph is printed. The snowpack structure is discussed and recorded in the daily log. A decision is made regarding the snow hazard and a rating is given (from Extreme-Low) for each of three elevation regimes; Alpine, Treeline and BelowTreeline.

The daily statistics are entered into the computer. Finally, a standard template is used to record and share, within the formal information exchange (INFOEX). The following morning, the cycle of activity begins again!

A Few Final Thoughts

Even with all of the mitigating efforts outlined above and many more, the possibility of avalanches always exists to some degree when heliskiing. We cannot control nature or the weather. The risk of avalanche is something you must acknowledge and accept if you are to go heliskiing. Our guides accept this risk on a daily basis throughout the winter, but only you can decide if the risk is acceptable to you.

If you are curious about any of the items mentioned above, be sure to ask your guide to provide you with further details.

Ski & Snowboard Etiquette

Since there are no marked hazards and no groomed runs you have to be alert for problems while boarding or skiing. Before we mention the various things you can do to enhance your own safety, please remember the first three rules of heliskiing and boarding.

- **Follow the directions of the guide**
- **Stay close to the guide's track**
- **Always stop above the guide**

Heli-boarding and heli-skiing is a controlled experience. You are not allowed to go wherever you please as the wilderness is uncontrolled and many times deviation from the guides ski line can put you and others in peril. Most problems can be avoided by following these three simple rules than by any other actions you can take on your own. Mountain Guides and Ski Guides are highly trained professionals that spend their lives safely conducting trips in the mountains. Safety is their business. The rest of the items mentioned below may further enhance your safety, but only if you remember to follow the first three rules.

Whenever possible, stay in visual contact with the rest of the group and always stay near the tracks of your group and your guide. The guides are often familiar with a run and aware of many more hazards than you are. Don't go exploring away from the line the guide has chosen. If the guide veers off in one direction or another it is best to follow as there is always a reason.

Some common unmarked hazards include buried rocks and tree stumps. Be alert to subtle changes of color in the snow. An area of darker snow may signal a rock, boulder or tree stump just below the surface. Unusual variations in height of snow may signal a buried hazard. Ski around but not over any spot you suspect hides a nasty surprise. Sometimes slight ridges in the terrain can also be rocky places. Such ridges will often be blown clean of snow. Rocks or boulders may lie just below the snow surface especially after a fresh fall of new snow. Some ski runs are in areas that have been cleared of trees by conventional logging (clear cuts).

These areas often afford very good skiing especially during bad weather, but may have buried stumps, fallen trees, steep road banks, logging roads and occasionally even fences to watch for. Ski and board in control.

When in avalanche terrain, your guide may direct you to ski in his / her track or to ski one at a time or even to ski with certain spacing between each skier. Maintain this spacing until directed to do otherwise. Do not proceed until the other skier has reached the safe spot designated by the guide or until they have skied the distance stipulated by your guide. When stopping to rest, always stop in safe places like the edge of a run, top of a ridge, large group of mature trees or on a small rise or outcrop. You will notice that your guide will often pick places like this as natural resting spots in any case. Avoid traversing onto large open slopes unless directed to do so by your guide. If the snow suddenly cracks or settles with a loud noise or sound be sure you notify your guide. This is a sign of potential snow instability.

Stay out of steep narrow chutes or gullies unless your guide specifically says it is OK to enter them. When in confined terrain it is often best to ski one at a time.

When skiing on potential avalanche slopes keep an escape route in mind in case the slope begins to slide. Fluffy snow flying around your skis is not an avalanche. That is called good skiing. If an entire slope begins to move together, that is a slab avalanche. Call out to the group if you are caught. Make every effort to quickly ski downhill and off to the side. If you cannot get off the slope, then fight to stay on top of the snow. Discard your skis and poles. When the moving begins to slow down, place a hand in front of your face for an air pocket and extend a hand toward the surface if possible. If you are not caught but another group member is, then your guide will direct you.

At the beginning of each day you will be briefed on how an avalanche transceiver operates and what you are to do in an emergency and how to use the safety gear you have been provided. Also remember that having skiers/snowboarders caught in an avalanche is a rare occurrence and following your guide's directions during the day is one of the very best preventative measures you have.

Skiing the Trees

Even though there is nothing that can match the views from a high mountain peak on a clear day, experienced powder skiers will tell you that tree skiing during a snowfall, is probably the best powder skiing that you can ever have. There are a few things to be aware of in the forests and open glades. First of all, it can be easy to get lost if you don't know where you are going. If you head in the wrong direction the forest may become thicker and there may be no chance of the helicopter accessing you in thick trees. Here it is doubly important to stay close to the tracks of your guide. Ski with a partner or in groups of three as directed by your guide. If your partner goes missing, stop and call out to see if they need assistance. Listen for your guide. They will often whistle or call if you don't rejoin the group in reasonable time. If you hear them calling and you have stopped because you fell or are taking a short break, return the call so the group knows where you are and can be sure that you are OK.

Although more common in other mountain ranges of BC, tree wells can be a hazard to the unwary and have even led to back country ski fatalities in the past. Tree wells are a deep holes in the snow right next to the trunk of a tree. They most often form next to large tall trees in deep snow-pack areas. The branches keep snow from collecting along the base and a tree well forms. The best way to avoid tree wells is to avoid skiing too close to the base of large trees. By skiing with a partner you can have rapid assistance if you fall in. If you fall next to a tree well, attempt to fall backward rather than forward. If you fall head first into a tree well and your bindings do not release, it may be impossible to get out without assistance – all the more reason to ski with a partner.

Tree bombs and snow mushrooms on treetops are a phenomenon unique to heavy snowfall areas. Often heavy balls of snow or mushrooms accumulate on the tops of trees and on their branches. These large clumps of snow can fall off and cause injury (thus the term tree bombs) during warm temperatures, on windy days or if you brush against or push a large tree. Best to avoid skiing under a tree with large hanging snow mushrooms on warm or windy days.

Skiing the Glaciers

Glaciers can be some of the most beautiful and also some of the most dangerous places to ski. It cannot be overstated how important it is to follow close to the tracks of your guide and follow all directions closely. Glaciers can have avalanche terrain, icefalls, crevasses, moats and berg-schrunds to contend with. It takes a trained eye and years of experience to properly assess these hazards.

Icefalls are steep or overhanging walls of ice, which form when a glacier flows over steep under-lying bedrock or cliffs. Stopping directly below such an area is an invitation for disaster as they are unpredictable. They can often send large blocks of ice crashing down below them, which can also trigger an avalanche. Having mentioned the hazard, it should also be mentioned that icefalls are also truly magnificent to photograph and can tower as high as 100m or 300 feet. Crossing rapidly below them may be a reasonable risk when an icefall has a history of relatively little activ-ity. Don't stop directly below them to take a photograph!

A moat and a bergschrund are similar features in that a moat is a hole in the ice or snow where the glacier recedes away from rock. A bergschrund is the uppermost crevasse on a glacier where the lower ice of a glacier separates from the upper ice of a steep snow or ice face. Detecting these features is based on knowledge of ice dynamics, local history for an area and subtle visual clues.

Glacier crevasses, or large cracks in glacier ice, form when glacier ice flows over top of bedrock that is uneven in nature. A difference in the rates of flow in the ice over these underlying fea-tures make for areas of tension and areas of compression and thus cracks the ice. Often crevass-es can be ten meters wide, 50 meters deep and 100 meters long. Conversely they may also be so narrow that they are difficult to detect after several snow falls.

As the season progresses even moderately large crevasses get bridged over by the winter snow. Later in the season it may be safe to actually ski across some of these bridges that were open holes in the early season. In any case it is often best to ski with some distance between each skier rather than skiing all together in a bunch where the combined group weight may make a bridge fail.

Crevasses can often be detected by knowing what a glacier looks like early in the season and memorizing the terrain. In addition, crevasses tend to form on convex slopes more readily than on concave slopes. A trained observer notices patterns of crevasses that relate to terrain features. Subtle clues that a crevasse may be ahead of you are a slight but noticeable depression in an otherwise uniform snow slope. This depression may be lighter in color after a recent snowfall or darker in color if dust has blown across and accumulated in the depression. Crevasses can be quite difficult to detect after a new snowfall or when visibility is poor. Don't ski, jump or turn on hollows or depressions on a glacier. Ski one at a time across obvious bridges and once again, follow your guide's instructions.

Cliffs and Cornices

A cornice is a large overhang of windblown snow that often forms in the lee side of a ridge or mountaintop. These overhangs can extend 10 or more meters (30 feet) into space. From above they simply look like a flat snow slope. Always stay well to the windward side of any ridge that you are not certain of. Best to ask you guide where it is safe to go along a mountaintop or ridgeline. When cornices drop off they can take you for a nasty ride down a mountainside without your skis and they can also start avalanches when they fail. Don't stand on top of them or below them. Avalanches often start below corniced areas as these are often areas of snow deposition and slab formation during wind and storms.

Cliffs can vary from a few feet in height to over a hundred feet (30m) or even more. Never pass your guide and never take a jump on skis or snowboard unless your guide has said it is OK. Snowboarders often love taking hits (jumps) and should discuss when it will be OK to take air. It is usually a good idea to have the guide or a trusted partner check out the landing before committing. Boarders like to joke that you can't get hurt in the air, but the landing is another matter altogether. If you are fond of "taking air", talk to your guide in advance and they may be able to line you up with some good jumps as the day rolls on.

Valley Bottoms and Creek Beds

As you ski down toward the bottom of a run you may encounter creeks or gullies that may not be totally covered over with snow. Your guide will often select a safe place to cross on a snow bridge if required. Cross one at a time in the guide's track if requested to do so and always have a partner watch you. If a bridge fails and you fall in without assistance you could become hypothermic or even drown.

Ski Sober

To ensure the safety of yourself and the other group members you must refrain from alcohol and drug use while on a heli adventure. Anyone breaking this rule may be immediately barred from skiing or boarding for the duration of the day. Smokers should not smoke anywhere near the aircraft or fueling systems. Ask your guide or pilot about a suitable location to have a cigarette.

The Games Skiers Play

Your guide will ski down the run first and take frequent breaks. Unless directed otherwise, you will be free to ski or board on either side of their tracks. Everyone should not ski at once. Allow the boarder / skier ahead of you to start out and get about ten meters or ten turns ahead before you start. In this way each member of the group has plenty of room and doesn't have to worry about hitting the boarder or skier next to him / her. Weaker skiers may not want to always ski at the back of the group and everyone in the group should have a turn at skiing behind the guide. Early in the day the guide may ask weaker skiers or those having problems to ski right after him / her so that personal instruction on ski technique can be given.

If you are on a snowboard and you like making wide arching turns it is best to board near the end of the group and make your turns starting on one side of the groups tracks, cross the tracks then turn again on the other side of the groups tracks to recross the tracks in the other direction. In this way you can avoid the problem of being too far from the guide's line during your huge turns.

When you come down to the end of a pitch, DO NOT PASS THE GUIDE. Slow down as you approach the group to avoid hitting the guide or other group members. Turn and watch approaching skiers so that you can see any potential problems if a skier loses control near the group.

Final Thoughts

Heliskiing/Snowboarding is an adventure of a lifetime!!
RK Heliski has been fulfilling these adventures for close to 50 years!!

Frequently Asked Questions

DO I NEED TO SIGN A RELEASE OF LIABILITY WAVIER?
Yes, all wilderness activities in British Columbia require participants to sign a release of liability waiver form prior to taking part in the activity

WHAT IS THE MINIMUM AGE TO HELI-SKI?
1. Our company policy is that guests need to be a minimum of 14 years and older to heliski and heli board with us. If they are the ages between 14 and 18 years old a parent or guardian must accompany then when skiing at all times.
2. A waiver will be signed by the Guardian separately.
3. A second waiver will also be signed by both the minor and the guardian.

DO I HAVE TO JUMP OUT OF THE HELICOPTER?
No. Our helicopters land and the guide directs you safely from the machine.

WHAT DO I GET FOR LUNCH?
You will be served a hearty lunch consisting of sandwiches, chocolate bars, cookies, fruit, juice and hot tea. Special dietary requirements can be met with prior notice.

CAN I BRING A BACKPACK AND CAMERA?
RK provides all guests with a guest pack, small cameras and cell phones are acceptable

WHAT TIME DO WE START SKIING? RETURN FROM SKIING?
Groups complete their safety talks after breakfast and will fly directly from the Heli-Plex or are shuttled to a nearby staging area. Lift off for the first group will be approximately 9:30am returning to the Heli-Plex from 3:00pm on.

CAN I BE IN A FAST GROUP?
Groups are determined by stated ability and we direct all clients to our skier ability levels to determine this rating.

CAN I BE IN A FAST GROUP?
Appropriate winter clothing for the day, ski/snowboard boots-Part of the package includes poles, powder skis and snowboards.

HOW DO I DRESS?
Clothing should be layered for sub-zero temperatures. Bring goggles, hat and ski gloves. For sunny days, sunglasses and skin protection - all available in our gift shop.

CAN I USE MY OWN TRANSCEIVER AND BALLOON / ABS PACK?
For liability reasons we require you use rk's avalanche transceivers. But you are welcome to use your own Balloon/ABS pack.

Frequently Asked Questions

HOW LONG DOES IT TAKE TO SKI A RUN?

This varies dependent on the snow conditions, terrain and the groups' ability level.

HOW MANY VERTICAL METERS DO WE SKI EACH DAY?

Our skiing is sold by the run. The glacier runs are longer than tree runs. Runs will average 800 v/m.

DO YOU FLY IF IT IS SNOWING?

Weather determines where we ski or whether we are able to ski at all. While blue skies and deep powder appear ideal, the best conditions often occur below the tree line on snowy overcast days.

WHAT HAPPENS IF YOU CANNOT FLY?

It happens very occasionally that a day is canceled. (RK averages only 2 canceled days per year). In case that it does happen, refunds are subject to the terms outlined in our REFUND POLICY.