

Flying VFR in the Mountains

Consider these pointers before heading for the hills...

Expect less engine power, propeller efficiency and lift

- Density altitude is the key factor. Density altitude is affected by elevation, pressure and temperature
- A lightly loaded aircraft is best—but make sure you have enough fuel and survival gear
- Plan mountain flights early in the morning, late in the afternoon, or in the early evening

Carefully study the terrain so that you know what's up ahead

- Always use the latest VFR Navigation Charts (VNCs) and a valid *Canada Flight Supplement (CFS)*
- Choose routes marked by diamonds on the VNC, or use the routes that experienced local pilots recommend
- Use the “right hand rule” in a wide valley to avoid aircraft flying in the opposite direction and to give you room to turn around
- Keep reading the chart while enroute so that you'll always know exactly where you are
- Don't rely solely on GPS for navigation

Get a good weather briefing

- Study the *Local Area Weather Manual* (available from NAV CANADA) for information about regional climate patterns, seasonal weather and local effects in the areas you'll be flying in
- Expect delays: weather in the mountains is always changing, so accurate forecasting is hard. Mountains can have a big impact on weather, including localized changes. Weather is also transitory, seldom lasting more than a matter of hours. Give yourself lots of time
- Get a good weather briefing, but local advice or knowledge can also be helpful
- Ask for, and give others, pilot weather reports (PIREPs)

Know where the updrafts and downdrafts are

- Delay your flight when the winds at mountain-top level are greater than 30 knots
- Always try to visualize where the wind is coming from. Remember that upper-level winds may not be the same as valley winds. Look for clues like wind blowing on water, trees or plants, or your aircraft's drift. Birds tend to face the wind when they take off
- Don't try to out-climb downdrafts—your aircraft may not be able to. Turn out of the sinking air as soon as you can and locate the rising air (usually by turning upwind or downwind), which will be nearby
- Cross ridges at a 45-degree angle
- Stay away from violent turbulence from mountain waves and rotors; know what warning clouds look like



TAKE FIVE... for safety

Five minutes reading
could save your life!

TP 2228-32E

Beware of the valley trap

- Study your charts ahead of time. Make sure you're in the right valley
- Get to a safe traversing altitude before entering a valley
- Know whether the valley climbs and what altitude you'll need to clear the pass or ridge at the end. Never fly up a valley that you haven't already flown down
- Don't fly in the middle of a valley. Fly on one side and make sure a safe turning radius is available. **Always have an escape route open**

Stay alert for the "false horizon illusion"

- Expect illusions whenever you're surrounded by slopes and the horizon is hidden. The "natural horizon" is the base of the mountains about six miles from your aircraft, not the top of the opposite mountain
- Monitor attitude indicator, airspeed and your visual references

① A few hours of training with an instructor who is familiar with mountain flying could improve your safety and confidence.

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