

## Avalanches

An avalanche is a sudden, fast flow of snow down a slope. The snow can reach speeds up to 80 miles per hour. This force is dangerous and can be deadly.

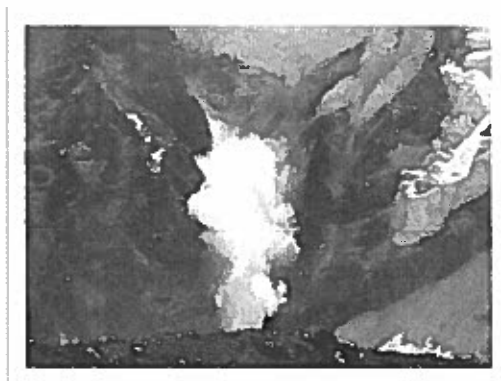
Avalanches often occur naturally on hills and mountains. When someone is injured, however, most often the avalanche was triggered by a human.

With the popularity of backcountry snowboarding, skiing, snowmobiling, and other sports, avalanche accidents are on the rise. When the conditions are unstable, all it takes is a seemingly small trigger to set off an avalanche. Sometimes the trigger is as simple as the weight of a single person causing stress on a weak layer of snow.

The reason the snow suddenly flows down a slope depends on many things. One of the main factors is temperature. When the temperature is very cold, the snow is more stable. When the temperature heats up, the snow is more likely to slide off the slope. Another factor is how much snow falls. A large amount of snow in a short period of time can create unstable conditions, especially in the first 24 hours. The wind direction, terrain, rainfall, and the steepness of the slope are some other factors. Avalanches occur more frequently if the slope is between 30 and 45 degrees. The snow on steeper slopes tends to slough off in smaller amounts. This prevents a large amount of snow from building up.

Sometimes, however, avalanches are unpredictable. In April of 2015, an earthquake struck Nepal. The earthquake triggered an avalanche on Mt. Everest that struck the south Base Camp. At least 19 people were killed and dozens injured. That avalanche occurred just one year after another unpredictable Everest avalanche killed 16 people. They were working to put ladders and ropes on the Khumbu Icefall, a tricky part of the climb, when a huge chunk of ice broke free above them.

Many people survive avalanches. Backcountry skiers, hikers, and climbers can wear beacons so if they are caught in an avalanche, rescuers can find them. Ninety-three percent of avalanche victims survive if they are dug out within 15 minutes. Most importantly, people can limit their risk and safely enjoy snowy terrain by paying attention to the weather and snow conditions and by staying in monitored areas.



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Name \_\_\_\_\_

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Which topics are covered in this article? Put an X in front of the correct answers.

- \_\_\_\_\_ How avalanches can be triggered
- \_\_\_\_\_ Conditions that can cause avalanches
- \_\_\_\_\_ The fastest growing backcountry sports
- \_\_\_\_\_ Which mountains are the most dangerous
- \_\_\_\_\_ Why no one should go out in snowy conditions

True or False

1. In most avalanches where there are injuries, the trigger is unknown. \_\_\_\_\_
2. As the temperature gets warmer, snow is more likely to slide off a slope. \_\_\_\_\_
3. When a lot of snow falls at once, conditions can become unstable. \_\_\_\_\_
4. The avalanches on Mt. Everest in 2014 and 2015 were predictable. \_\_\_\_\_
5. If someone is caught in an avalanche, they have a high chance of survival if they are dug out quickly. \_\_\_\_\_

How does the steepness of a slope affect the risk of avalanches? \_\_\_\_\_

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### Vocabulary

Match the word to its definition

- |                     |   |
|---------------------|---|
| _____ slope         | a. something that causes something else to happen     |
| _____ trigger       | b. likely to move or fall; not fixed                  |
| _____ backcountry   | c. a piece of land with reference to natural features |
| _____ unstable      | d. to be shed or cast off                             |
| _____ terrain       | e. ground that slants upward or downward              |
| _____ slough        | f. watched closely; checked frequently                |
| _____ unpredictable | g. not always behaving in an expected way             |
| _____ monitored     | h. a remote area far from a town or population        |

