

Avalanche Victim Demographics...

by Bruce Tremper, Director of the [Utah Avalanche Forecast Center](#) System



"Who gets killed in avalanches?"

Since the 1950's avalanche victims have been almost exclusively recreationists. The demographics of recreationists, however, have changed significantly through the years. And as usual, each time a new recreational group comes along, they have to learn about avalanches the hard way:

50's and 60's...

First, it was ski areas. When their customers were killed in avalanches they had to find ways to control the avalanches with explosives. Nowadays ski areas and highway personnel do such a stellar job of avalanche forecasting and control that less than one percent of avalanche fatalities involve general public on open runs at ski areas or on highways. The avalanche teams knock the avalanches down each morning with explosives before the public arrives. Because of this, almost all avalanche deaths occur in the backcountry, or areas outside the boundaries of ski areas.

70's and 80's...

Starting in the late '60's and early '70's backcountry skiers, out-of-bounds lift skiers and climbers began to account for most of the fatalities. To combat this trend, dozens of avalanche schools have sprung up all over the country and the Forest Service has funded regional public backcountry avalanche bulletins which accurately describe the avalanche conditions for people traveling into backcountry avalanche terrain. These programs have been phenomenally popular and successful.

The late 90's...

The new kids on the block are snowmobilers and snowboarders. In the last half of the 90's the numbers have risen at an alarming rate, especially snowmobilers, to the point where snowmobilers account for nearly twice the death toll as the next recreation group. And no wonder. With recent quantum improvements in power, weight and traction, snowmobiles can go virtually any place a skier can go and they can cover 100 times the amount of terrain a skier can in a day. High performance stock machines allow virtually anyone to access dangerous avalanche terrain regardless of their physical conditioning or avalanche training.

Moreover, very few snowmobilers have even the most basic avalanche training, mostly because until recently, for the most part they didn't need any. The machines of the 1980's were only rarely capable of accessing steep avalanche terrain right after or during a storm when most avalanches occur. They used to have to wait until a few days after the storm when the snow had hardened, by which time the avalanche conditions had stabilized. But suddenly the modern machines can negotiate nearly any kind of snow condition, no matter how deep, no matter how steep. And snowmobilers suddenly find themselves dying in avalanches at an alarming rate.

Some cultural barriers also exist between snowmobilers and established avalanche communities. Since avalanche knowledge and technology has traditionally been developed by European skiers and climbers, snowmobile dealers find themselves scrambling to obtain avalanche rescue beacons and shovels manufactured mostly in Europe by people who have never even seen a snowmobile, which are not allowed in the Alps except for judicious use at ski resorts by workers.

Avalanche educators also have to re-design their courses to accommodate snowmobilers and snowboarders. As of this writing, we have seen a huge response from both communities. They have begun to take avalanche classes and most snowmobile and snowboard dealers in the mountainous areas of North America now sell avalanche rescue equipment.

"Is there a typical avalanche victim?"

The typical avalanche victim is a recreationist, male, between the ages of 18 and 35, white, educated and very skilled at their sport, but their avalanche skills almost invariably lag behind the skills in their sport by a wide margin. They are almost always killed in the backcountry and they, or someone in their party, almost always trigger the avalanche that kills them.

**Avalanche fatality percentages by group
(from 1993-98):**

Snowmobiler	35%
Climber	23%
Backcountry skier	15%
Snowboarder	10%
Miscellaneous Recreation	8%
Residents	2%
Worker	2%
Patrollers	1.7%
Motorist	.85%

They also tend to be:

- Male (99 percent)
- Between the ages of 18 and 35
- White, intelligent and educated
- Very skilled at their sport
- Skill in their sport outpaces their avalanche skills by a wide margin