

## Colorado skiers die on groomed, blue runs after hitting trees

By Karen E. Crummy *The Denver Post* *The Denver Post*

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Experienced male skier. Thirty-seven years old. Wearing a helmet. Loses control on an intermediate, groomed run and hits a tree.

That's the average person who died on Colorado ski slopes in the past five seasons, according to a Denver Post analysis of ski and snowboarding deaths.

The 59 deaths — which do not include deaths from natural causes or riders in the backcountry or out of bounds — resulted from neck and skull fractures, torn aortas and suffocation after falling into tree wells, as well as inbound avalanches and one person being impaled on a tree branch. Skiers accounted for 80 percent of the deaths, and two people died after colliding with other riders. Not one of those who died in the past five seasons appeared to be drunk.

The majority of deaths — 54 percent — occurred on blue, groomed runs, while 31 percent were on expert trails. Keystone saw 11 deaths, followed by Breckenridge with seven and Copper Mountain with six. Vail had five deaths.

Those who died on Colorado slopes ranged from a local doctor to a snowboard instructor to a paraplegic using a sit ski. More than 80 percent were men. The youngest two were 11; the oldest, 73. Just more than 60 percent were out-of-state visitors.

If those who died had anything in common, it was catching an edge or losing control just long enough to crash into a tree on the side of a trail.

"People don't want to hear it, but it's really the luck of the draw. It's an experienced skier and a perfect storm of events or one bad moment of judgment," said Joanne Richardson, the former coroner for Summit County, where four ski areas account for close to 4 million skier visits a season. "In my experience, deaths are rare, but serious injuries are not. The mountains don't want to tell you how many people are injured. I was listening to the scanner last year and just said, 'Wow.' "

600,000 injuries a year

Researchers at Johns Hopkins recently estimated that about 600,000 people nationally are injured each year as a result of skiing and snowboarding. But how many were in Colorado is unknown. Ski areas, which have little federal or state oversight, aren't required to release deaths and injuries to the public. The Post's analysis of deaths came from autopsy reports, resort press releases and local newspaper accounts.

The state health department, using data from the Colorado Hospital Association, found that ski and snowboarding injuries requiring overnight hospitalization steadily decreased between 2006 and 2011. Six to 10 percent of hospitalized skiers had traumatic brain injuries during those six years, compared with 18 to 25 percent of hospitalized snowboarders.

This information, however, is not separated by resort, or even by county, making it impossible for a concerned consumer to compare the safety records of ski areas — in Colorado or nationally. It also keeps [consumers in the dark](#) about what measures to take to protect themselves.

"If resorts are asking you to waive all liability on the back of a ski ticket or in a season pass, they should provide you with information about the risks you are assuming," said Dr. Dan Gregorie, a physician and founder of the [California Ski & Snowboard Safety Organization](#).

That group is pushing a bill before the California legislature requiring resorts to prepare an annual safety plan and to report injuries and deaths to the state.

"The reality is that they don't — and we don't — know the extent of injuries. And the public doesn't push for it because they don't want to believe they're vulnerable," Gregorie said.

Ski areas say they do whatever they can to keep the mountain safe: educating riders to stay in control, using yellow-jacketed employees to reduce speeds in congested areas and putting up "slow" signs.

CEO David Pitcher of Wolf Creek Ski Area, which had four deaths over the past four seasons, said the injury rate on his mountain is between 1.5 and 3 for every 1,000 people. He receives weekly reports on "everything," including where an accident took place, the time, the run and the type of injury.

"We keep track in case we see something, like a trend. If we see that, we may be able to do something about it," he said.

Bob Niccols, an owner of Monarch ski area, which had no deaths in the past four seasons, said he does the same type of tracking.

"We review policies and procedures annually or more often as issues come to light," he said in an e-mail. "Guest safety is always the No. 1 concern."

Vail Resorts, which owns Keystone, Beaver Creek, Breckenridge and Vail, declined to be interviewed and e-mailed a statement saying the company has "led the industry with innovative, award-winning safety programs and initiatives."

Colorado Ski Country USA, the trade group for all the state's ski areas except those owned by Vail, declined to discuss rider safety, as did the remaining 19 resorts.

Why do they die?

While the manner of death is often gruesome, the number of skiing and snowboarding deaths are low considering how many people visit Colorado resorts each year. For instance, last season 19 people died on the slopes — marking Colorado's deadliest season ever — while the state logged 11 million skier visits. Nationally, 54 skiers and snowboarders died at ski areas, which saw a total of 51 million ski visits, according to the National Ski Areas Association.

The lack of data means there is little statistical proof backing theories for why people die skiing. Such issues as grooming too close to the treeline, crowding too many people on a mountain, and too little or too much snow have been cited, but there is no hard evidence. Last season's record fatalities coincided with the weakest snowfall and fewest skier visits since the 1999-2000 season.

Additionally, the increase in the number of people who wear helmets hasn't resulted in fewer fatalities, said Jasper Shealy, a professor emeritus at the Rochester Institute of Technology, who has been tracking ski injuries and deaths at Vermont's Sugarbush Resort for 40 years. Helmets are designed to protect riders at about 12 mph, he said, while a skier or snowboarder who collides with a tree or another rider is typically going 25 to 40 mph.

But that doesn't mean people should stop wearing them.

"Helmets do a great job for less-severe accidents," Shealy said. Overall, Shealy estimates there are about two injuries per 1,000 skier visits in the country — a decrease of 50 percent since the mid-1970s. Snowboarders, who have a lower fatality rate, have about twice the injury rate as skiers, he said.

Skiers tend to slide into things — such as trees — which often account for the higher death rate. But snowboarders catch an edge and abruptly slam into the surface, which is hard on joints and bones.

Dr. Tomas Pevny, an Aspen orthopedic surgeon, says skiers tend to have lower-leg fractures and knee problems, while snowboarders sustain wrist or collarbone fractures and ankle injuries.

Some people are hurt when they collide with other riders, he said, and ski conditions also play a role. Ligament injuries, which often result from twisting, occur when there is more snow. He sees more fractures from riders hitting the snow's hard surface when there is less snow. The majority of patients have what he calls "low energy" injuries.

"Rarely does the person say, 'I was killing the bumps, and I hurt myself,' " he said. "It's usually when they're cruising along, hit a dip or catch an edge."

Many of the injuries, he said, can be prevented by staying in ski shape, working on cardio and balance, and knowing how to fall. And because more injuries occur when it's cloudy, goggles that adjust for different conditions are preferred. Perhaps most important, he said, take care of your gear.

"Get your equipment well-tuned," he said. "We get a lot of fractures when bindings don't release."

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