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From the Los Angeles Times

Headway on the slopes

More young skiers and snowboarders wear helmets, but others are still cool to the idea.

By Bill Becher

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Denver Haslam was skiing at Colorado's Arapahoe Basin three years ago when he lost control of his skis and flew headfirst into a large pine tree.

The 50 mph crash shattered the college student's right shoulder and rib cage, broke his vertebra and left femur, split his kidney, ruptured his spleen, punctured his lungs and lacerated his pancreas. The ambulance nurse on the ride to Denver's St. Anthony Central Hospital called him a "talking corpse."

Haslam was alive and talking because he was one of a growing number of skiers wearing a helmet, say his doctors.

When singer and politician Sonny Bono and Michael Kennedy, son of Robert F. Kennedy, died eight winters ago from head and neck injuries sustained while skiing, few recreational skiers and snowboarders wore helmets. Last year, one-third of those interviewed on the slopes in a survey by the National Ski Areas Assn. were wearing helmets. More than 600,000 ski and snowboard helmets were sold last season, despite lukewarm support for helmets by the ski industry.

According to the ski areas association, about 39 skiers or snowboarders are killed each year in accidents and 41 suffer serious head injuries or paraplegia. During the 2003-2004 season, the fatality rate was 0.72 per million skier/snowboarder visits and the serious injury rate was 0.65 per million, rates far lower than for sports such as bicycling, according to the association.

Some in the ski industry say that ski areas don't actively promote helmet use for everyone because of fear of litigation when the helmets fail to protect and because they want to avoid suggesting that skiing is not a safe sport.

But ski areas may be reluctant to push helmet use because of previous uncertainty about the risks and benefits.

In 1997, shortly before the deaths of Bono and Kennedy, the American Medical Assn.'s Council on Scientific Affairs published a report that suggested children and adolescents wear helmets but stopped short of recommending all skiers and snowboarders use helmets, citing "insufficient data."

The report relied heavily on research by Jasper Shealy, a professor emeritus at Rochester Institute of Technology, who has raised doubts about the value of ski helmets. Shealy says that while wearing helmets has some benefit, it does not reduce fatalities or the most serious head injuries. He also says helmets might encourage some skiers and snowboarders to act recklessly and could increase neck injuries, especially for children.

Ski helmets are tested at only 12 mph, and most skiers go much faster, Shealy says.

"If you run into a tree at typical skiing speed, on the order of 30 mph, it's going to take more than a helmet to save your life," he says.

Shealy, who has studied ski accidents for three decades, has a lot of credibility in the ski industry. He says he doesn't wear a helmet when he skis unless it's to keep his head warm.

But a number of published and unpublished studies now question these once widely shared views about the value of helmets in snow sports. More recently other researchers have found that wearing a ski helmet can reduce brain injury, without increasing risk-taking behavior or neck injuries.

Haslam was wearing a helmet because his fraternity was involved in a project led by Dr. Stuart Levy, a Denver neurosurgeon and avid skier. Every winter, helicopters and ambulances bring hundreds of injured skiers and snowboarders from ski resorts such as Breckenridge, Copper Mountain and Winter Park to St. Anthony Central Hospital in Denver, where Levy is chief of neurosurgery. Levy says the number of preventable head injuries he saw frustrated him. In 1998, he started working with ski areas and ski rental shops to provide free loaner helmets to skiers and snowboarders.

"We had to take a leap of faith to promote helmets before we had data," says Levy. "Now we do have data that shows they are effective."

Levy, who has reviewed more than 700 cases of skiers and snowboarders with head injuries, presented data at a neurosurgery conference last spring that showed helmet use cut the rate of head injuries by two-thirds and reduced the risk of skier and snowboarder fatalities by 80%. Levy says that while skiing is a relatively safe sport, head injuries are the leading cause of death and critical injury in skiing and snowboarding accidents.

Helmets work better in the real world than lab results suggest, says Levy, pointing out that motorcycle helmets are tested at only 18 mph yet have

been shown to substantially reduce head injuries even at highway speeds.

Brent Hagel, an assistant professor of epidemiology at the University of Calgary, echoes Levy's findings in his study of accidents at 19 Canadian ski areas. Hagel found wearing a helmet reduced the risk of serious head injury for skiers and snowboarders by 56%.

Hagel also found that wearing a helmet doesn't turn you into an Evel Knievel on skis.

The "risk compensation" theory cited by Shealy suggests that people have a level of risk they are willing to accept. According to this hypothesis, people will take more chances when using protective gear — skiing faster, more aggressively or on more difficult runs — to bring them back up to their acceptable level of risk. But Hagel found in his study, published in 2004, that helmet use in skiing and snowboarding did not lead to riskier behavior or increase the risk of severe injury.

Another Canadian researcher, Dr. Andrew Macnab, a professor of pediatrics at the University of British Columbia, has found that young skiers and snowboarders wearing head protection had a decreased risk of head injury and no increase in the risk of cervical spine injuries. Levy has not found an increase in neck injuries in children wearing helmets in Colorado.

As it has in other sports such as rock climbing, cycling, whitewater kayaking and rafting, helmet use seems to have reached a critical mass where it generates its own momentum, regardless of what experts say, as skiers see others wearing helmets and hear about friends saved from injury by a helmet.

Tim White, education director for the ski areas association, says although the industry favors helmet use, skiers need to ski responsibly and realize helmets are not a panacea. "It's not what on their heads, but what's in their heads that counts," he says.

The ski areas association is encouraging parents to consider helmets for children with a "Lids on Kids" program. Several ski areas, including Mammoth Mountain, now require children 12 and younger to wear helmets when taking skiing or snowboarding lessons. This concern for children may be misdirected, another study says, as those 60 and older are the most prone to traumatic brain injuries when skiing.

"It's just politically and socially easier and more acceptable to force safety measures on children than on adults," Levy says.

Denver Haslam, now 26, would like to see helmets mandatory for all those younger than 18 years old. Haslam, who says he is fully recovered from his accident, plans to ski on the third anniversary of his accident this month. He will be wearing a helmet.

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