

# Resort to Safety

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## Traumatic Brain Injuries and Youth Athletics— What Do Ski Area Operators Need to Know?

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Traumatic brain injuries (“TBIs”) among young athletes have garnered increased attention recently, due in large part to a growing awareness in the medical and athletic communities regarding the prevalence and potentially devastating effects of head injuries in youth sports. This increased knowledge and awareness has resulted in an ever-changing landscape for athletes, coaches, and parents as it relates to the risk of head injuries and the management of that risk. Consequently, in order to minimize the severity and occurrence of head injuries, and the potential exposure for same, athletes, coaches, parents, and even ski areas who operate and/or host racing programs, must consider a number of factors. Following is a brief overview of the current science regarding the potential short-term and long-term effects of traumatic brain injuries, a discussion of the numerous “concussion laws” recently enacted across the country, and recommendations for how ski areas can best minimize and manage the risks associated with head injuries in competitive youth skiing.

Concussions are the most common type of TBI among athletes. Even so-called “mild concussions” are complex brain injuries, the severity of which may not be fully known for hours, even days, after an injury occurs. Repeated mild TBIs occurring over an extended period of time—months, years—can result in cumulative neurological and cognitive deficits, such as the debilitating brain disease, chronic traumatic encephalopathy, which has been identified in the autopsied brains of 22 former National Football League players. Repeated mild TBIs occurring within a short period of time—hours, days, weeks—can be catastrophic or fatal. Second impact syndrome, or SIS, occurs when an athlete returns to play too soon after suffering an initial concussion. The athlete then sustains a second injury before the brain has healed from the first injury. Many times this occurs because the athlete has returned to play before his or her first injury symptoms fully resolve. Coaches, parents and athletes do not realize that some concussions take days, weeks and even months to heal. The second injury may only be a minor blow to the head or even a hit to the chest or back that causes the brain to rebound inside the skull. Because the brain is more susceptible to injury after an initial brain injury, it only takes a minimal force to cause irreversible damage. Second impact syndrome has a high fatality rate in young athletes.

As a result of the potentially devastating effects of TBIs, the medical community, and more recently, the athletic community, provides specific recommendations for how a young athlete suffering a head injury should be evaluated, and when the athlete may return to play. Many athletic organizations and governing bodies require athletes suspected of suffering a head injury to immediately sit out from play for at least the remainder of that day, and to obtain medical clearance before returning to play. Some organizations, including the National Collegiate Athletic Association (NCAA) have taken the additional step of requiring their participating universities to develop concussion management plans which set forth a comprehensive protocol for determining when an athlete is ready to return, including comparisons to pre-season

baseline assessments.

While sports like football and hockey seem to get the most attention when it comes to concussions, the sport of skiing is not isolated from the concussion problem. Instead, people involved with skiing must be aware of the problem and, in

particular, the laws related to the management of concussions in youth athletes. As of this writing, twenty-eight states have enacted youth sports concussion-related laws, including Colorado, Connecticut, Idaho, Massachusetts, New Jersey, New Mexico, New York, Utah, and Washington—all ski states. Another twenty states are considering new concussion

laws or revisions to their existing laws. Most of the enacted laws contain return-to-play provisions requiring athletes with signs or symptoms of concussion to obtain a doctor's authorization before playing again. Some of the statutes also include concussion training requirements for coaches; others require schools to craft and implement guidelines for dealing with concussions and for educating parents and athletes. The scope of each statute varies—some only address athletic programs affiliated with schools, while others pertain to all organized youth sports in a given state. For example, in March 2011, Colorado signed into law one of the most sweeping concussion-related laws in the country, requiring coaches of all youth organized sports to receive free online training in how to identify concussion symptoms in young athletes. The law also requires coaches who suspect a player has sustained a head injury to remove the athlete from play, and the injured athlete must obtain medical clearance before returning to play. This law applies to ski coaches. Although the risk of sustaining a head injury can never be fully eliminated from sports, there are a number of steps that athletes, coaches, and parents can take to reduce the severity and occurrence of TBIs in youth athletics. These steps also serve to protect athletic hosts, like ski areas, from potential exposure to lawsuits. TBIs among young athletes are a serious public health issue that can only be mitigated if education, awareness and preparedness are improved across the board—among coaches, trainers, athletes, parents, and even teachers and classmates.

So, what can a ski area do to protect itself and its young skiers? First, know the laws of the states in which you do business. Although many of the enacted concussion statutes only apply to school affiliated athletics, some statutes, like the Colorado one, apply to all youth athletics in a given state. In addition, even if a state's concussion law does not necessarily apply to you, the ski area, it may apply to the schools who visit your mountain; thus, it may be prudent

to know a statute's application to those schools to be sure that the schools are following the law. For the ski area that is not currently affected by statute, we recommend that you implement the portions of state laws most likely to be enacted in your state, and most likely to affect the health of your young skiers (e.g., "return to ski" provisions and

concussion education programs). Second, establish a protocol for your ski area, which includes training your ski instructors and ski team coaches in concussion symptom recognition, and providing education for parents and youth skiers. Third, keep abreast of the current science regarding protective headgear and make sure your athletes' helmets comply with the latest industry recommendations. Finally, when in doubt about whether a law or recommendation applies to your ski area and to your skiers, err on the side of caution and comply. Any decision a program makes not to implement a widely recommended protocol or return-to-play policy may come back to haunt it.