Traumatic brain injury in skiers

see Traumatic brain injury epidemiology.

The purpose of a study was to compare injury patterns between recreational skiers and snowboarders. Injured skiers (n = 3,961) and snowboarders (n = 2,428) presented to a mountainside medical clinic, 2012/13-2016/17. Variables investigated for analysis included demographics/characteristics, injury event information, and injury information. Skiers were older than snowboarders (34.3 ± 19.3 vs. 23.2 ± 10.5 years, $p < 0.001$); a greater proportion of skiers were female (46.3% vs. 27.8%, $p < 0.001$). Most skiers (84.4%) and snowboarders (84.5%) were helmeted at the time of injury ($p = 0.93$). Snowboarders were most frequently beginners (38.9%), skiers were intermediates (37.8%). Falls to snow (skiers = 72.3%, snowboarders = 84.8%) and collisions with natural objects (skiers = 9.7%, snowboarders = 7.4%) were common injury mechanisms. Common skiing injuries were knee sprains (20.5%) and head trauma (8.9%); common snowboarding injuries were wrist fractures (25.7%), shoulder separations (9.1%), and head trauma (9.0%). Given that injury patterns significantly differ between sports, it is important for clinicians, ski patrollers, and resorts to develop and deliver sport-specific injury prevention interventions to most effectively decrease injury burden [1)]

Skiing injuries account for a significant proportion of all school sport-related injuries in Tyrol. Lower extremity injuries account for the vast majority of all injuries. Overestimation and overtiredness may be responsible for skiing sport injuries. Preventive measures such as a fitness training (e. g., skiing exercises) prior to skiing courses, appropriate breaks and proper protective gear (i. e., helmet and spine protector) may reduce the injury rate in skiing school sport [2)].

Head injury were found at the same frequency (8%) in skiers and snowboarders. The calculated injury rate was about 0.6 injuries per 1000 skier days and has decreased by more than 50% during the past decade.

Modern skiing equipment and optimised slope preparation may be at least partly responsible for the decreased injury risk on ski slopes which is supported by the observation of a reduced falling frequency. Future preventive measures should focus on a reduction of knee injuries in female skiers [3)].

1)
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2)
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3)
Ruedl G, Philippe M, Sommersacher R, Dünnwald T, Kopp M, Burtscher M. [Current Incidence of Accidents on Austrian Ski Slopes.]. Sportverletz Sportschaden. 2014 Sep 17. [Epub ahead of print] German. PubMed PMID: 25229411.