

## Helmets Dramatically Cut Risk of Head Injury in Snowboarders, Skiers

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When skiers and snowboarders wear a helmet, the risk of head injury is cut by 60%, results of a large case-control study showed.

Head injury is common among skiers and snowboarders, with the most dire accidents often resulting in death. Helmet use while skiing or snowboarding is thought to shield the head from injury; however, the degree of protection conferred by helmets is not clear due to a lack of well-controlled studies.

During the 2002 ski season, Dr. Steinar Sulheim from the Norwegian School of Sports Sciences in Oslo and his associates interviewed 3,277 injured skiers and snowboarders and compared them with a random sample of 2,992 noninjured controls at eight Norwegian ski resorts. Data collected included age, sex, injury type, helmet use, and skill level, among other factors (JAMA 2006;295:919-24).

Of the 3,277 injured individuals, 578 (17.6%) sustained head injuries, of which 147 were potentially severe and required further treatment by a physician or hospital.

Beginners, males, youths aged 20 years or younger, and snowboarders all demonstrated a significantly greater risk of sustaining a head injury, compared with noninjured controls. Despite this trend, the use of helmets was found to protect equally well across all high-risk groups, and the odds ratio for head injury dropped to 0.40 with helmet use after adjusting for these factors.

The researchers interviewed an additional 700 noninjured skiers and snowboarders about their risk-taking behaviour while on the slopes and found that risk takers were more likely to use a helmet within all disciplines, age groups, and skill levels. "This means that the true helmet effect may be greater than our estimate and strengthens the conclusion that helmet use is associated with a reduced risk of head injury," the investigators wrote.

Helmet use also correlated with a reduced likelihood of neck injury (odds ratio of 0.68), but this association did not reach statistical significance.

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