Skiing and snowboarding injury prevention

Lynne J Warda, Natalie L Yanchar; Canadian Paediatric Society, Injury Prevention Committee

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ABSTRACT

Skiing and snowboarding are popular recreational and competitive sport activities for children and youth. Injuries associated with both activities are frequent and can be serious. There is new evidence documenting the benefit of wearing helmets while skiing and snowboarding, as well as data refuting suggestions that helmet use may increase the risk of neck injury. There is also evidence to support using wrist guards while snowboarding. There is poor uptake of effective preventive measures such as protective equipment use and related policy. Physicians should have the information required to counsel children, youth and families regarding safer snow sport participation, including helmet use, wearing wrist guards for snowboarding, training and supervision, the importance of proper equipment fitting and binding adjustment, sun safety and avoiding substance use while on the slopes.

Key Words: Helmet; Injury; Skiing; Snowboarding; Wrist guard

RECOMMENDATIONS

The Canadian Paediatric Society recommends the following:

- Physicians should provide office-based anticipatory guidance, counselling families to:
 - Wear proper protective ski equipment, including a certified helmet, goggles, plus wrist guards for snowboarding;
 - Receive formal instruction, followed by a graduated exposure to more challenging terrain and conditions under the supervision of an experienced participant;
 - Become familiar with and adhere to the Alpine Responsibility Code;
 - Ensure a safe environment, including adequate supervision, terrain/runs and equipment appropriate to the child or youth's age and ability;
 - Ensure proper fit and adjustment of equipment, particularly bindings; and
 - Understand the high risk of severe injury that comes with alcohol and/or drug use on the slopes.
- Governments should develop policy/legislation making helmet use mandatory by all ages while skiing and snowboarding, with concurrent messaging to educate the public and resort operators about the indisputable importance of helmets in saving lives and preventing head injuries.
- Ski areas/resorts/snowparks should develop and enforce safety policies that:
 - Make helmet use mandatory;
 - Improve helmet access at local ski facilities;
 - Establish industry standards for ski shops and resorts on binding adjustment;
 - Promote and enforce the Alpine Responsibility Code;
 - Ensure safe design and prevention-oriented maintenance programs for ski facilities; and
 - Promote safety awareness and education programs for participants, with consistent messaging and signage.
- Schools should develop policies mandating proper equipment use, formal instruction, and appropriate supervision for school-related trips, clubs and competitions.
- Research should be supported to address:
 - Interventions to increase helmet and wrist guard use;
 - Effective snow sport helmets and related design development and standards;
 - Improved binding design (eg, multidirectional release), standards and optimal adjustment;
 - The roles of preseason conditioning and training;
 - The risk and profile of injuries at ski area terrain parks;
 - The evaluation of existing interventions, such as promoting the Alpine Responsibility Code and 'Keep your Lid On,' to determine their effectiveness and improve uptake; and
 - Ongoing surveillance of snow sports participation data for children, of emergency department, hospitalization, and mortality data for skiers and snowboarders, of protective equipment use, and of injuries due to ski/snowboard environments, such as falls in terrain parks and injuries related to ski lifts.

NOTE: For parent information, visit www.caringforkids.cps.ca.

Correspondence: Canadian Paediatric Society, 2305 St Laurent Boulevard, Ottawa, Ontario K1G 4J8. E-mail info@cps.ca

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Principal authors: *Lynne J Warda MD (Past Chair, CPS Injury Prevention Committee); Natalie L Yanchar MD*

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