

# **Skiing Injuries Background**

Upper Extremity  
Lower Extremity  
Nordic Skiing  
Snowboarding

## **Background**

### 1. Epidemiology

- 2.5 injuries per 1000 ski days
  - May be as high as 4-5 per 1000 ski days
- 44% decrease from 1972 to 1994
  - No significant change since mid-80's
- Women and children higher risk
  - 130,000 per year if age >16

### 2. Prevention

- Enroll in conditioning program before skiing
  - Focus on strength/endurance of legs and back
- Equipment compatible for skier size and skill level
- Equipment adjusted professionally
- Routine binding test before each ski session
- Ski under control
- Stop before fatigue
- No evidence that traditional ski instruction helps

### 3. Additional information

- Sports Injury Clinic
  - <http://www.sportsinjuryclinic.net/cybertherapist/bysport/skiing-injuries.htm>

## **References**

1. Hunter, Robert. "Skiing Injuries." *The American Journal of Sports Medicine*. 27 (1999): 381-389.
2. Ackery A, Hagel BE, Prvvidez C, Tator CH. "An international review of head and spinal cord injuries in alpine skiing and snowboarding." *Injury Prevention*. 13 (2007): 368-375.
3. Kocher, MS, Feagin, JA. "Shoulder injuries during alpine skiing." *American Journal of Sports Medicine*. 24(5) 2007: 665-669.
4. Koehle, MS, Lloyd-Smith, R, Taunton, JE. "Alpine ski injuries and their prevention." *Sports Medicine*. 32(12) (2002): 785-793.
5. Griffin, Letha Yurko. *Essential of Musculoskeletal Care*. Third. Rosemont: American Academy of Orthopaedic Surgeons, 2005.
6. Thompson, Jon. *Netter's Concise Atlas of Orthopaedic Anatomy*. Philadelphia: Saunders, 2002.
7. Meyers, MC, Laurent, CM, Higgins, RW, Skelly, WA. "Downhill ski injuries in children and adolescents." *Sports Medicine*. 36(6) (2007): 485-499.
8. Goulet, Claude, Regnier, Guy, Grimar, Guy, Valois, Pierre, Villeneuve, Paul. "Risk Factors Associated with Alpine Skiing Injuries in Children." *The American Journal of Sports Medicine*. 27 (1999): 644-650.
9. Abu-Laban, R. B. (1991). Snowboarding injuries: an alaysis and comparison with alpine skiing injuries. *Canadian Medical Association Journal* , 145-149.

10. Idzikowski, J. R. (2000). Upper Extremity Snowboarding Injuries: Ten Year Results from the Colorado Snowboard Injury Survey. *The American Journal of Sports Medicine* , 825-832.
11. McDonah, M. R. (2000). Trauma Risks and Prevention Strategies for Snowboarders. *Journal of the American Academy of Nurse Practitioners* , 517-521.
12. Young, C. C. (1999). Snowboarding Injuries. *American Family Physician* , 131-136.
13. Butcher, J. B. (1998). Comparison of Injuries in Classic and Skating Nordic Ski Techniques. *Clinical Journal of Sports Medicine* , 88-91.
14. Renstrom, P. J. (1989). Cross-Country skiing injuries and biomechanics. *Sports Medicine* , 346-370.
15. Smith M, M. G. (1996). Injuries in cross-country skiing: a critical appraisal of the literature. *Spots Medicne* , 239-250.
16. Morris, J. H. (1999). Injuries in cross-county skiing. *Postgraduate Medicine* , 89-101.
17. Bindner, S. G. (1999). The downside of sowboarding: common injuries in novices and those seeking 'hospital air". *Postgraduate Medicine* , 83-88.

**Author: Renee Bjorklund, MD, *Penn State Hershey Medical Center, PA***

**Editor: Carol Scott, MD, *University of Nevada Reno FPRP***