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## The current state of head and neck injuries in extreme sports

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**Background:** Since their conception during the mid-1970s, international participation in extreme sports has rapidly grown. The recent death of extreme snowmobiler Caleb Moore at 2013 Winter X games has demonstrated the serious risks associated with these sports.

**Purpose:** The purpose of this study was to examine the incidence and prevalence of head and neck injuries (HNI) in extreme sports.

**Study design:** Descriptive epidemiology study.

**Methods:** The 2000-2011 National Electronic Injury Surveillance System (NEISS) was used to acquire data for 7 sports that are included in the winter and summer X games. Data from the NEISS database was collected for each individual sport per year and type of HNI. Cumulative data for overall incidence and injuries over entire 11 year period was calculated. National estimates were based off NEISS weighted calculations using U.S. census data.

**Results:** Over 4 million injuries were reported for extreme sports participants between 2000-2011, of which, 11.3% were HNI. Of all HNI, 83% were head injuries and 17% neck injuries. The four sports with the highest total incidence of reported HNI were skateboarding (129,600), snowboarding (97,527), skiing (83,313), and motocross (78,236). Severe HNI (cervical or skull fracture) had a reported total incidence of 2.5% of extreme sports HNI. Of these, skateboarding had the highest percentage of severe head and neck injuries.

**Conclusion:** The number of serious injuries suffered in extreme sports has increased as participation in the sports continues to grow. A greater awareness of the dangers associated with these sports offer an opportunity for sports medicine and orthopaedic physicians to advocate for safer equipment, improved on site medical care, and further research regarding extreme sports injuries.

## Biography

Vani Sabesan is an Assistant professor with the Department of Orthopedics at the Western Michigan University School of Medicine. She completed her M.D. at Indiana University and residency in Orthopaedic Surgery at Duke University. She is a fellowship trained, ABOS board certified shoulder and elbow specialist. She currently serves as a co-chair of the US Bone and Joint Initiative program and is committed to the improvement of musculoskeletal education in medical schools. Sabesan's contributions to improving outcomes in shoulder arthroplasty are seen in her commitment to innovative clinical and biomechanical research, as well as in her publications in peer reviewed literature.

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