

# Introduction

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This book presents a wide range of topics relating to skiing safety. Included are subjects involving epidemiology of skiing injuries; skier behavior, ability, and conditioning; specific injuries incurred by skiers and their treatment; mechanical studies related to ski boots and bindings; various biomechanical subjects related to the lower extremity in skiing and thumb injuries; skiing safety; biomedical testing; and ski clothing. The 39 papers published within this text were presented along with 40 others at the Seventh International Symposium on Skiing Trauma and Skiing Safety held in Chamonix, France 10–16 May 1987. The meeting was jointly sponsored for the third time by the International Society of Skiing Safety (ISSS) and ASTM Committee F-27 on Snow Skiing.

ASTM began its work relative to skiing in 1972 with the formation of a subcommittee (F8.14) of ASTM Committee F-8 on Sports Equipment and Facilities. In 1982, Subcommittee F8.14 was given full committee status as F-27. The ISSS was founded in 1974 at a meeting in Riksgränsen, Sweden with the goal of providing a forum for individuals interested in skiing safety to present papers related to alpine and cross country skiing. It has been the purpose of ISSS to bring individuals of all disciplines (including engineers, physicians, ski area operators, ski instructors, ski retailers, ski patrollers, insurance personnel, lawyers, equipment manufacturers, biomechanicians, statisticians, among many others) together every other year to share information on skiing safety. The organizer of the first meeting and president of the ISSS to the present time is Ejnar Eriksson, M.D., of Stockholm, Sweden. Subsequent meetings held every other year since 1977 occurred in the Sierra Nevada of Spain, April 1977; in Queenstown, New Zealand, July 1979; in Bormio, Italy, June 1981; in Keystone, Colorado, U.S.A., May 1983; in Naeba, Japan, April 1985; and most recently in Chamonix, France in May 1987.

The proceedings of all the ISSS meetings have been published in a book format, providing an important source for anyone interested in skiing safety. The first symposium was published by Orthopaedic Clinics of North America, January 1976. The proceedings of the second symposium were entitled *Skiing Safety II* and were published by the University Park Press, Baltimore, Maryland in 1977. The third and fourth volumes of proceedings were published as *Skiing Safety III* and *Skiing Safety IV* by the Technischer Überwachungs-Verein Bayern of Munich, 1982. The fifth and sixth volumes of the proceedings were entitled *Skiing Trauma and Safety* and were published as ASTM Special Technical Publications (STP) 860 and 938 in 1985 and 1987. These latter two volumes and the present STP 1022 present a series of articles that have been subjected to a peer review process and thus add favorably to the earlier volumes published by the ISSS.

The papers presented in this volume provide a broad foundation for current information concerning skiing injuries and their prevention. As a group the ISSS, and more recently, the ISSS and ASTM cosponsored publications provide the investigator of skiing injury problems with the most comprehensive database presently available in the world literature. It remains the goal of both ASTM and ISSS to continue to provide the format for the free exchange of ideas on skiing safety at the upcoming symposium to be held every odd year. The authors of papers presented at that meeting will again be encouraged to submit their manuscript to the peer review process necessary to generate a fourth STP. It is firmly believed that through a continuation of the symposiums and publications of peer-reviewed proceedings the field of knowledge concerning skiing injuries and the means of controlling them can be expanded and result in improvement in skiing safety throughout the world.

Readers of this publication are encouraged to study this material critically, recognizing that

the findings and conclusions presented represent the opinions of the authors and not those of the ASTM, ISSS, or the editors. The readers must be aware that material presented herein is in the form of research papers on topics that are still developing. Hopefully the work presented here will stimulate many other investigators to join those who are already hard at work attempting to reduce the risk of injury to skiers and improve skiing safety. This text and the former ISSS-ASTM volumes are excellent places to start if one wants to understand what is known about skiing and skiing safety.