

These maps of Mount Everest will not only serve as the base of many future scientific studies by geologists, glaciologists, geodesists, hydrologists, etc., but they will serve as factual proof and models of what can be accomplished over remote, desolate and barren areas of the world.

More importantly, the maps reflect what Washburn was able to accomplish utilizing a truly International team (United States, Switzerland, Nepal, People's Republic of China, Great Britain, West Germany, Sweden, Yugoslavia, Japan) of outstanding scientific and technical talent. Washburn stated early on "our new map would depend heavily on the diligent work of the heroes of the past, strengthened and expanded by the most sophisticated modern science." Washburn's dogged persistence, determination, and leadership have made maps of Mount Everest that will stand the test of time.

OWEN W. WILLIAMS

Winter Sports Medicine. Murray J. Casey, Carl Foster, and Edward G. Hixson. F.A. Davis, Philadelphia, 1989. 425 pages, illustrated. \$65.00.

This is an excellent and needed addition to the growing library of sports medicine and will be of great value to doctors, trainers and athletes involved with competitive winter sports. To my knowledge it is the first comprehensive collection of information about virtually all winter sports.

The 47 chapters are distributed in seven sections: general topics, medical problems, and injuries which are common to all winter sports, followed by special chapters on the various types of competitive skating and skiing. Except for four brief chapters on mountaineering and winter camping, the book is directed at world-class competition. Training, nutrition, physiology, biomechanics and illness and injuries peculiar to each of the ten winter sports are considered in detail—sometimes exhaustingly so. One quarter of the book discusses preparation of the athlete and his caretakers, including nutrition, over-training, and the hazards of doping. Another quarter covers all the illnesses and general injuries to which the competitor may fall victim. Finally mountaineering, altitude problems and trekking are allotted 30 pages.

Most of the chapters are clear, complete and authoritative; a few are inadequate. Only brief mention is made of snow-blindness and "fever blisters" both common and troublesome though minor. The importance of adequate fluid and electrolyte replacement for those pushing themselves to the limit in very dry cold air appears only in the chapter on nutrition. Mountaineering is given little space, and winter camping is dealt with in a few paragraphs in an excellent chapter on trekking and camping abroad. Almost nothing is said about motivation—the spur that drives the world-class athlete to super-human effort. Despite a few shortcomings, this is an exceptionally useful and helpful book for those who feel compelled to compete in the cold.

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