

Piero Volpi  
*Editor*

# Arthroscopy and Sport Injuries

Applications in  
High-level Athletes



 Springer

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Applications in High-level Athletes

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## Preface I

Sport has long been a necessity for a large part of the population. During recent years, traditionally popular activities have been supplemented by the emergence of various new types of sport that have broadened the choice available to participants. Furthermore, the creation of new or the restructuring of existing facilities, gymnasiums, and natural places (jogging trails, ski resorts, golf courses, etc.) is progressively increasing the chances for everyone to become regularly involved in their favorite sport. This increase in opportunities for physical exercise and access to sports has in turn given rise to the need for many more researchers and specialists who have expertise in the classification, etiology, diagnosis and treatment of the diverse traumatic diseases that may arise during sporting activities. Greater attention has been devoted to the study of athletic skills, the development of better training methods, a sound understanding of biomechanics, and knowledge of the rules and materials applicable in each sport. In the medical literature, studies have focused on the epidemiology of trauma, on various aspects of injury prevention, and on the diagnostic, evaluative, therapeutic and rehabilitative options relevant to specific sports populations. The extensive background research in sports traumatology that has been conducted with the professional athlete in mind has also resulted in practical applications for the world of amateur sports and the general patient population. In an era in which sports performance, especially for high-level athletes, is reaching previously unimaginable limits, it is obvious that joints and musculotendinous structures may be subjected to repetitive stress and increasingly damaging insults. A higher incidence of trauma in professional sports is also being fostered by the longevity of sports careers, the intensity of workouts, the frequency of matches and competitive events, and the inadequate recovery periods, often dictated by economic interests.

In this context, over the past 20 years, as numerous arthroscopic techniques have emerged and become established, surgeons have made strenuous efforts to improve the reparative and reconstructive surgical techniques for the most frequent injuries, especially trauma to the meniscus and ligaments and osteocartilaginous lesions. Advancements in surgery and, in equal measure, a better understanding of anatomy and biomechanics have highlighted the importance of aspects such as the optimal choice of surgical technique and usage of surgical materials. The increasing use of biotechnology and biomaterials is also impacting significantly on the field. The pressing needs of the elite athlete, the type of sport, the time point during the season at which the injury occurs, the phase of the athlete's career and the athlete's age are among the parameters that determine the options open to the sport traumatologist.

All of the above aspects are addressed in this book, which describes the current applications of arthroscopy across a very wide range of sports injuries, explaining the mechanisms of injury for each condition and describing the role of arthroscopy in diagnosis and treatment.

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