Tendon Injuries

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Editors

# **Tendon Injuries**

Basic Science and Clinical Medicine

With 187 Illustrations, 21 in Full Color



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### Preface

Standard textbooks of anatomy, physiology, pathology, orthopedic surgery, and sports medicine provide little information on tendons. Tendon ailments are increasingly prevalent in orthopedic surgery and sports medicine, and in occupational and family medicine as well.

This book provides a comprehensive presentation on human tendons for a wide range of readers, from students and teachers of physical education, biomechanics, medicine, and physical therapy to specialists such as orthopaedic surgeons, pathologists, and physicians specializing in sports medicine. We describe the current principles of diagnosis, treatment, and rehabilitation of tendon injuries and disorders. Although we acknowledge that these principles are constantly changing, this book gives readers the tools presently available to the scientific and biomedical community to tackle tendon problems. This book has been conceived to be used as a comprehensive source for physicians, surgeons, physical therapists, chiropractors, sports coaches, athletes, fitness enthusiasts, and students in a variety of disciplines.

The book is definitely a medical book, but with appeal to professionals outside the medical field.

The editors have collectively more than 70 years of experience in orthopaedic sports medicine, and have dedicated much of their research efforts to studying the pathophysiology of tendon problems. We believe that, as a team, our knowledge and experience will give help and guidance in the management of tendon problems.

In recent years—at least in the West—the demand for heavy physical work has markedly decreased. Conversely, leisure-time sports activities have become more popular, frequent, and intense. Repetitive work, excessive weight, poor fitness, and the lack of regular exercise and of variation in physical loading have all contributed to the increased incidence of degenerative changes in the musculoskeletal system. Tendon problems are seen frequently in nonathletes. Modern athletes also suffer from tendon ailments. The biological limits that musculoskeletal tissues can withstand are exceeded, with overuse and acute injuries, especially in tendons.

This book provides principles of diagnosis, treatment, and rehabilitation for various tendon problems. We envisage the book to be heavily used by physicians, surgeons, physical therapists, athletic trainers, and other professionals treating patients with tendon problems.

We would not have been able to write this book without the help of our coauthors from all over the world. To them, our thanks and appreciation.

Nicola Maffulli, MD, MS, PhD, FRCS(Orth) Per Renström, MD, PhD Wayne B. Leadbetter, MD

### Contents

	face	v xi
Pa	rt I Basic Sciences, Etiology, Pathomechanics, and Imaging	
1	Anatomy of Tendons	3
2	Mechanical Properties of Tendons Constantinos N. Maganaris and Marco V. Narici	14
3	Growth and Development of Tendons	22
4	Aging and Degeneration of Tendons Pekka Kannus, Mika Paavola, and Lászlo Józsa	25
5	Epidemiology of Tendon Problems in Sport	32
6	Neurogenic, Mast Cell, and Gender Variables in Tendon Biology: Potential Role in Chronic Tendinopathy David A. Hart, Cyril B. Frank, Alison Kydd, Tyler Ivie, Paul Sciore, and Carol Reno	40
7	Imaging of Tendon AilmentsTudor H. Hughes	49
Pa	rt II Anatomical Sites and Presentation	
8	Injury of the Musculotendinous Junction	63

9	Insertional Tendinopathy in Sports	70
10	Tendon Avulsions in Children and Adolescents	86

11	Tendinopathy in the Workplace	90
12	Rotator Cuff Tendinopathy	101
13	Rotator Cuff Disorders Theodore A. Blaine and Louis U. Bigliani	119
14	Tendinopathies Around the Elbow	128
15	Hand and Wrist Tendinopathies Graham Elder and Edward J. Harvey	137
16	Groin Tendon Injuries	150
17	Knee and Thigh Overuse Tendinopathy	158
18	Patellar Tendinopathy and Patellar Tendon Rupture	166
19	Hindfoot Tendinopathies in Athletes Francesco Benazzo, Mario Mosconi, and Nicola Maffulli	178
20	Achilles Tendon Rupture Deiary Kader, Mario Mosconi, Francesco Benazzo, and Nicola Maffulli	187
21	Achilles Tendinopathy Deiary Kader, Nicola Maffulli, Wayne B. Leadbetter, and Per Renström	201

### Part III Management of Tendon Injuries

Part IV New Developments		
25	Surgery for Chronic Overuse Tendon Problems in Athletes Nicola Maffulli, Per Renström, and Wayne B. Leadbetter	267
24	Rehabilitation After Tendon Injuries	242
23	The Effect of Therapeutic Modalities on Tendinopathy Jason D. Leadbetter	233
22	Anti-Inflammatory Therapy in Tendinopathy: The Role of Nonsteroidal Drugs and Corticosteroid Injections <i>Wayne B. Leadbetter</i>	211

26	Research Methodology and Animal Modeling in Tendinopathy Joanne M. Archambault and Albert J. Banes	279
27	Tendon Innervation and Neuronal Response After InjuryPaul W. Ackermann, Daniel K-I. Bring, and Per Renström	287

#### viii

28	The Use of Growth Factors in the Management of Tendinopathies Louis C. Almekinders and Albert J. Banes	298
29	Optimization of Tendon Healing Nicola Maffulli and Hans D. Moller	304
30	Gene Therapy in Tendon Ailments	307
31	Tendon Regeneration Using Mesenchymal Stem Cells Stephen Gordon, Mark Pittenger, Kevin McIntosh, Susan Peter, Michael Archambault, and Randell Young	313
Ind	ex	321

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## Part I Basic Sciences, Etiology, Pathomechanics, and Imaging