

Contents

Preface	v
List of Principal Contributors	xi

Part I Basic Sciences, Etiology, Pathomechanics, and Imaging

1 Anatomy of Tendons	3
<i>Moira O'Brien</i>	
2 Mechanical Properties of Tendons	14
<i>Constantinos N. Maganaris and Marco V. Narici</i>	
3 Growth and Development of Tendons	22
<i>Laurence E. Dahners</i>	
4 Aging and Degeneration of Tendons	25
<i>Pekka Kannus, Mika Paavola, and Lászlo Józsa</i>	
5 Epidemiology of Tendon Problems in Sport	32
<i>Mika Paavola, Pekka Kannus, and Markku Järvinen</i>	
6 Neurogenic, Mast Cell, and Gender Variables in Tendon Biology: Potential Role in Chronic Tendinopathy	40
<i>David A. Hart, Cyril B. Frank, Alison Kydd, Tyler Ivie, Paul Sciore, and Carol Reno</i>	
7 Imaging of Tendon Ailments	49
<i>Tudor H. Hughes</i>	

Part II Anatomical Sites and Presentation

8 Injury of the Musculotendinous Junction	63
<i>Jude C. Sullivan and Thomas M. Best</i>	
9 Insertional Tendinopathy in Sports	70
<i>Per Renström and Thomas Hach</i>	
10 Tendon Avulsions in Children and Adolescents	86
<i>Sakari Orava and Urho Kujala</i>	

11	Tendinopathy in the Workplace	90
	<i>Leo M. Rozmaryn</i>	
12	Rotator Cuff Tendinopathy	101
	<i>Andrew Carr and Paul Harvie</i>	
13	Rotator Cuff Disorders	119
	<i>Theodore A. Blaine and Louis U. Bigliani</i>	
14	Tendinopathies Around the Elbow	128
	<i>Alan J. Johnstone and Nicola Maffulli</i>	
15	Hand and Wrist Tendinopathies	137
	<i>Graham Elder and Edward J. Harvey</i>	
16	Groin Tendon Injuries	150
	<i>Per Renström</i>	
17	Knee and Thigh Overuse Tendinopathy	158
	<i>Barry P. Boden</i>	
18	Patellar Tendinopathy and Patellar Tendon Rupture	166
	<i>Karim M. Khan, Jill L. Cook, and Nicola Maffulli</i>	
19	Hindfoot Tendinopathies in Athletes	178
	<i>Francesco Benazzo, Mario Mosconi, and Nicola Maffulli</i>	
20	Achilles Tendon Rupture	187
	<i>Deiary Kader, Mario Mosconi, Francesco Benazzo, and Nicola Maffulli</i>	
21	Achilles Tendinopathy	201
	<i>Deiary Kader, Nicola Maffulli, Wayne B. Leadbetter, and Per Renström</i>	

Part III Management of Tendon Injuries

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

Part IV New Developments

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

28	The Use of Growth Factors in the Management of Tendinopathies	298
	<i>Louis C. Almekinders and Albert J. Banes</i>	
29	Optimization of Tendon Healing	304
	<i>Nicola Maffulli and Hans D. Moller</i>	
30	Gene Therapy in Tendon Ailments	307
	<i>Vladimir Martinek, Johnny Huard, and Freddie H. Fu</i>	
31	Tendon Regeneration Using Mesenchymal Stem Cells	313
	<i>Stephen Gordon, Mark Pittenger, Kevin McIntosh, Susan Peter, Michael Archambault, and Randell Young</i>	
	Index	321