

Contents

Part I Basic and Applied Sciences

- 1 Physical Characteristics of the Handball Player** 3
Ronnie Lidor and Gal Ziv
- 2 On-Court Physical Demands and Physiological Aspects in Elite Team Handball** 15
Lars Bojsen Michalsik
- 3 Endocrinological Aspects in Handball** 35
Alon Eliakim and Dan Nemet
- 4 The Shoulder Profile in Team Handball** 47
Georg Fieseler, Kevin G. Laudner, Souhail Hermassi,
and Rene Schwesig
- 5 Biomechanical Aspects in Handball: Lower Limb** 61
Mette K. Zebis and Jesper Bencke
- 6 Throwing Biomechanics: Aspects of Throwing Performance and Shoulder Injury Risk** 69
Jesper Bencke, Roland van den Tillaar, Merete Møller,
and Herbert Wagner
- 7 Nutrition and Hydration for Handball** 81
Jorge Molina-López and Elena Planells

Part II The Handball Medical Perimeter/Medical Preparation and Aspects

- 8 Assembling a Medical Team: The Medical Needs of a Handball Team** 105
Celeste Geertsema, Nebojsa Popovic, Paul Dijkstra,
Lior Laver, and Markus Walden
- 9 The Role of Pre-Participation Assessment (PPA) and Screening in Handball** 115
Stephen Targett, Tone Bere, and Roald Bahr
- 10 Medical Coverage of Major Competitions in Handball** 125
Katharina Grimm, Nebojsa Popovic, and Pieter D'Hooghe

Part III Handball Injuries

11 Handball Injuries: Epidemiology and Injury Characterization: Part 1	141
Lior Laver, Patrick Luig, Leonard Achenbach, Grethe Myklebust, and Jon Karlsson	
12 Handball Injuries: Epidemiology and Injury Characterization: Part 2	155
Lior Laver, Patrick Luig, Leonard Achenbach, Grethe Myklebust, and Jon Karlsson	
13 Head and Neck Injuries in Handball	167
Markus Wurm and Lior Laver	
14 Shoulder Injuries in Handball	177
Philippe Landreau, Matthias A. Zumstein, Przemyslaw Lubiatowski, and Lior Laver	
15 Shoulder Instability in Handball Players	197
Lior Laver, Przemyslaw Lubiatowski, Matthias A. Zumstein, and Philippe Landreau	
16 Elbow Injury in Handball: Overuse Injuries	217
Nebojsa Popovic	
17 Wrist and Hand Injuries in Handball	227
Lionel Pesquer and Grégoire Chick	
18 Hip, Groin, and Abdominal Injuries in Handball	243
Per Hölmich, Lasse Ishøi, Markus Wurm, Omer Mei-Dan, and Lior Laver	
19 Knee Injuries in Handball	261
Philippe Landreau, Lior Laver, and Romain Seil	
20 Management of ACL Injuries in Handball	279
Romain Seil, Eric Hamrin Senorski, Philippe Landreau, Lars Engebretsen, Jacques Menetrey, and Kristian Samuelsson	
21 Management of PCL Injuries in Handball	295
Markus Waldén and Lior Laver	
22 General Aspects of Sports in Adolescents with a Special Focus on Knee Injuries in the Adolescent Handball Player	307
Romain Seil, Lars Engebretsen, Jacques Menetrey, and Philippe Landreau	
23 Management of Cartilage Injuries in Handball	325
Renato Andrade, Rogério Pereira, Ricardo Bastos, Cátia Saavedra, Hélder Pereira, Lior Laver, Philippe Landreau, and João Espregueira-Mendes	

24	Foot and Ankle Problems in Handball	341
	Pieter D’Hooghe, Jean-Francois Kaux, Bojan Bukva, Nasef Abdellatif, Helder Pereira, Mike Carmont, and Jon Karlsson	
25	Management of Chronic Ankle Instability in the Handball Player	355
	Pietro Spennacchio, Mike Carmont, Pieter D’Hooghe, Jon Karlsson, Manuel J. Pellegrini, and Hélder Pereira	
26	Management of Cartilage Injuries of the Foot and Ankle in Handball	365
	Mike Carmont, Martin Hägglund, Helder Pereira, Pieter D’Hooghe, Manuel J. Pellegrini, and Jon Karlsson	
27	Back Injuries and Management of Low Back Pain in Handball	375
	Rui Rocha	
28	Osteoarthritis in Handball Players	387
	András Tállay, Romain Seil, and Lior Laver	

Part IV Prevention, Rehabilitation and Preparation

29	Injury Prevention in Handball.	403
	Grethe Myklebust, Mette K. Zebis, and Stig H. Andersson	
30	Implementing Handball Injury Prevention Exercise Programs: A Practical Guideline.	413
	Merete Møller, Eva Ageberg, Jesper Bencke, Mette K. Zebis, and Grethe Myklebust	
31	Rehabilitation of Upper Extremity Injuries in the Handball Player	433
	Ann Cools, Rod Whiteley, and Piotr Krzysztof Kaczmarek	
32	Shoulder Assessment in Handball Players	461
	Martin Asker, Rod Whitley, and Ann Cools	
33	Rehabilitation of ACL Injury in the Handball Player.	481
	Clare Ardern, Hege Grindem, Joanna Kvist, Markus Waldén, and Martin Hägglund	
34	A Biomechanical Perspective on Rehabilitation of ACL Injuries in Handball	493
	I. Setuain, J. Bencke, J. Alfaro-Adrián, and M. Izquierdo	
35	Rehabilitation of Acute Soft Tissue Injuries of the Foot and Ankle in the Handball Player	505
	Martin Hägglund, Helder Pereira, Mike Carmont, Jon Karlsson, and Pieter D’Hooghe	

36	Physical Training in Team Handball	521
	Antonio Dello Iacono, Claude Karcher, and Lars Bojsen Michalsik	
37	Stretch-Shortening Cycle Exercises in Young Elite Handball Players: Empirical Findings for Performance Improvement, Injury Prevention, and Practical Recommendations	537
	Urs Granacher, Ruben Goebel, David G. Behm, and Dirk Büsch	

Part V Special Considerations

38	The Female Handball Player	553
	Mette Hansen, Line Barner Dalgaard, Mette K. Zebis, Lasse Gliemann, Anna Melin, and Monica Klungland Torstveit	
39	The Young Handball Player	571
	Leonard Achenbach	
40	Training Load Issues in Young Handball Players	583
	Martin Asker and Merete Møller	
41	Perceptual Expertise in Handball	597
	Jörg Schorer, Josefine Panten, Judith Neugebauer, and Florian Löffing	
42	Doping in Handball	615
	Kai Fehske and Christoph Lukas	

Part VI Psychological Aspects in Handball

43	Psychiatric and Psychological Considerations in Handball Sports Medicine	621
	Katy Seil-Moreels	
44	Decision-Making in Modern Handball	627
	Peter Weigel	
45	Psychological aspects in Handball Injuries	639
	Johanna Weber and Manfred Wegner	