

Contents

Preface.....	vii
List of Contributors.....	ix
Dedication	xix

Part 1: Important background concepts in sports, 1

1. Muscle form and function	1
<i>Jamie McPhee, Tommy Lundberg</i>	
2. Muscle adaptations and fatigue.....	7
<i>Tommy Lundberg, Jamie McPhee</i>	
3. The physiology of disuse, immobilization, and low-load environments.....	15
<i>Nicholas C. Clark, Mark Glaister, Lyndsey M. Cannon, Nic Perrem</i>	
4. Strength and conditioning: scientific aspects including principles of rehabilitation	25
<i>Paul Jones, Paul Comfort</i>	
5. Biomechanics of sports injuries, their management and clinical considerations	47
<i>Jim Richards, Carrie Docherty, Brent Arnold, Kim Hébert-Losier, Charlotte Häger, Bruno Mazuquin, Puneet Monga</i>	
6. Electrophysical agents: physiology and evidence	63
<i>Tim Watson</i>	
7. Cryotherapy: physiology and new approaches	79
<i>James Selfe, Cari Thorpe, Karen May, Jill Alexander</i>	
8. Physiology of sporting and athletic recovery	97
<i>Tony Tompos</i>	
9. Making sense of pain in sports physiotherapy: applying the Pain and Movement Reasoning Model	107
<i>Des O'Shaughnessy, Lester E. Jones</i>	

10. The physiology of manual therapy.....	121
<i>Christopher J. McCarthy, Elaine Lonnemann, Jackie Hindle, Ruth MacDonald, Ioannis Paneris</i>	
11. The physiology of acupuncture analgesia	129
<i>Jonathan Hobbs</i>	
12. Physiological determinants of endurance performance: maximal oxygen uptake (VO_{2max}). Testing, training and practical application.....	137
<i>Paul Sindall</i>	
13. Ultrasound imaging in groin injuries.....	161
<i>Amanda Parry</i>	

Part 2: Clinical application, 171

SECTION 2.1: Regional problems

14. Conservative management of groin injuries: acute and chronic.....	171
<i>James Moore, Michael Giakoumis</i>	
15. The surgical management of sporting groin injuries.....	185
<i>Simon Marsh</i>	
16. The sporting hip	195
<i>James Moore</i>	
17. Lumbopelvic dysfunction in the sporting population: the 'what', the 'why' and the 'how'	207
<i>Neil Sullivan</i>	
18. Performance rehabilitation for hamstring injuries - a multimodal systems approach ...	217
<i>Johnny Wilson, Paulina Czubacka, Neil Greig</i>	
19. The management of gastrocnemius and soleus muscle tears in professional footballers	235
<i>Paul Godfrey, Mike Beere, James Rowland</i>	
20. Knee injuries in professional football.....	251
<i>Jon Fearn, Paco Biosca, Dimitris Kalogiannidis, Jason Palmer</i>	

<p>21. The sporting ankle: lateral ankle sprain, the most commonly incurred lower limb musculoskeletal injury 261 <i>Eamonn Delahunt</i></p> <p>22. The rehabilitation of the rugby shoulder: a proposed approach to management..... 271 <i>Keith Thornhill, Marc Beggs</i></p> <p>23. Assessment of the sporting shoulder.....293 <i>Marcus Bateman</i></p> <p>24. The sporting elbow.....303 <i>Daniel Williams, Shivan Jassim, Ali Noorani</i></p> <p>25. Hand and wrist injuries: a focus on boxing 315 <i>Ian Gatt</i></p> <p>26. The cervical spine: risk assessment and rehabilitation.....333 <i>Alan J. Taylor, Roger Kerry</i></p> <p>27. Management of head injuries349 <i>Etienne Laverse, Akbar de Medici, Richard Sylvester, Simon Kemp, Ademola Adejuwon</i></p> <p>28. A high-performance approach to optimizing a major league soccer preseason359 <i>David McKay</i></p> <p>29. An introduction to working in an elite football academy369 <i>Diane Ryding</i></p> <p>30. Growing bones: anatomy and fractures.....379 <i>Diane Ryding</i></p> <p>31. Growing bones: osteochondroses and serious paediatric conditions.....389 <i>Diane Ryding</i></p> <p>32. Cardiac event in the young athlete.....403 <i>Dean Chatterjee, Nikhil Ahluwalia, Aneil Malhotra</i></p> <p>33. Developing speed qualities in youth athletes411 <i>Johnny Wilson, Michael Sup, Mark Wilson, Marc-André Maillet, Said Mekary</i></p>	<p>34. Conditioning for the battle of momentum: a practical use of GPS technology for conditioning strategies 421 <i>Adam Sheehan</i></p> <p>35. Managing the overhead athlete..... 431 <i>Steve McCaig</i></p> <p>36. Treatment and management of soft tissue injuries445 <i>Graham Smith</i></p> <p>37. The inseason strength programme: a professional rugby perspective – programming through the season453 <i>Aidan O’Connell</i></p> <p>38. Movement analysis: science meets practice465 <i>David M. Clancy</i></p> <p>39. Conditioning efficacy: a road map for optimizing outcomes in performance-based rehabilitation 481 <i>Claire Minshull</i></p> <p>40. The ‘all-around’ athlete: key performance considerations for managing injuries related to the ankle, trunk and tendon in female gymnasts 491 <i>Jason Laird</i></p> <p>41. Introduction to dance medicine 501 <i>Nick Allen</i></p> <p>SECTION 2.2: Practical considerations</p> <p>42. Emergency aid preparation 513 <i>Natalie Shur, Paulina Czubacka, Jim Moxon, Rohi Shah, Tom Hallas, Johnny Wilson</i></p> <p>43. What’s rehabilitation without patient buy in? the importance of psychology in sport injury rehabilitation525 <i>Anna Waters</i></p> <p>Index 537</p>
---	---