
Prevention and Rehabilitation of Hamstring Injuries

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Editors

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Foreword by Michael Kjær

 Springer

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To everyone who wants a more thorough understanding of hamstring injuries—beyond the usual “you’ll be back in three weeks” approach.

Foreword

The present book is a monumental effort in order to cover all aspects of hamstring injuries taking it all the way from the basic understanding of its nature and pathogenesis, over the risk factors, diagnosis and treatment, and to the potential preventive measures in order to limit the incidence of this very common sports injury that limits both elite athletes and recreational sports-active individuals in their attempt to carry out their regular exercise.

The strength of the book is not only its comprehensive nature where more than 30 of the most front-line international experts in different aspects of the field have contributed, but also the depth of each chapter where up-to-date knowledge is presented (more than 1100 references in total in the book) and excellent figures and tables are provided and guide the reader through the different aspects of hamstring injuries.

What is worth mentioning is the fact that many previous books have had a very selective approach either towards basic biology or towards the clinical approach, and thus have not always provided a full well-balanced view of the field. This book covers both basic and clinical aspects in a very qualified way. This results in a truly translational textbook, where the different aspects of the injury and its handling are appreciated.

To bring the chapters together, the three editors have made sure that each of them are coauthors on most chapters so a natural “flow” between the different parts of the book is ensured. The approach that this book has to hamstring injuries should be a guideline not only for handling of hamstring injuries but also for other sports medicine approaches to regional injuries and it is the hope that both clinicians and basic researchers will find it attractive and thus stimulate interaction between the different disciplines needed to provide a comprehensive understanding of sports injuries. This does not imply that the book should be read from one end to the other. However, regardless of which research or clinical angle you come from, the book provides up-to-date knowledge in the field with which you are comfortable. It should also inspire you to read adjacent chapters and maybe, for you, “out-of-the-box” aspects

of hamstring injuries to obtain a full understanding of the complexity of the injury and its clinical handling in a scientifically sound way.

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Conflicts of Interest

Dr. David Opar is listed as a co-inventor on a patent filed for a field testing device of eccentric hamstring strength (PCT/AU2012/001041.2012), as well as being a minority shareholder in the company responsible for commercialising the device. Dr. Opar is also the Chair of the company's Research Committee.

Associate Professor Anthony Shield is listed as a co-inventor on a patent filed for a field testing device of eccentric hamstring strength (PCT/AU2012/001041.2012), as well as being a minority shareholder in the company responsible for commercialising the device.

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All authors have been chosen due to their expert knowledge and important scientific contributions to the field of hamstring injury prevention and rehabilitation. All editors and authors in this book have waived getting any fee for their contributions to this book. Instead of a fee, all editors and authors have received one copy each of the book for which they have collectively provided all the content.

About the Book

This innovative book presents the latest insights into hamstring injuries, a common problem in elite and recreational sport, with a unique focus on prevention and rehabilitation. The research within this area has evolved rapidly over the past 10 years and this text offers a comprehensive overview of the recent and most relevant advances. It fills a gap in the literature, since other books focus on muscle injuries in general and their surgical treatment. Structured around the current evidence in the field, this book includes sections on functional anatomy and biomechanics; basic muscle physiology in relation to injury and repair; assessment of risk factors; and factors associated with hamstring strains. It also discusses considerations in relation to examination and assessments of acute and long-standing injuries, hamstring injury prevention, including pre-season and in-season interventions, as well as management strategies and rehabilitation protocols. The final chapter is devoted to additional interventions when conservative rehabilitation and injury prevention fail. All 13 chapters build on each other in a logical order, but each chapter can also be read in isolation. Written by renowned experts in the field, this book will be of great interest to sports physiotherapists, sports physicians, physical trainers, coaches and athletes.

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About the Editors

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David Opar is a Senior Lecturer in the Discipline of Exercise Science at Australian Catholic University (Melbourne Campus). Having completed a Bachelor degree (with Honours) in Human Movement at RMIT University in 2008, Dr. Opar commenced a PhD on hamstring injuries at Queensland University of Technology under the supervision of Associate Professor Anthony Shield in 2010. Dr. Opar was conferred his PhD in December 2013. Since then, Dr. Opar has published over 40 peer-reviewed articles, most of which are focused on hamstring injury. Dr. Opar’s research covers many areas in hamstring injury, from risk factor analysis and intervention strategies through to optimising rehabilitation and return to play strategies. Dr. Opar was the co-inventor of the NordBord device, which is a tool utilised around the world to measure eccentric hamstring strength in the field.

Anthony Shield is an Associate Professor of Exercise Science at the Queensland University of Technology in Brisbane, Australia. He completed his PhD at Southern Cross University in 2003. Associate Professor Shield has written more than 50 peer-reviewed publications, of which more than 30 are on the topic of hamstrings. He and his group have introduced the concept that neuromuscular inhibition may be a contributing factor to hamstring injury recurrence and have investigated the role of eccentric strength and hamstring muscle architecture on injury risk.