

CONTENTS

| | |
|--|------|
| About the Editors | viii |
| About the Contributors | ix |
| Foreword | xv |
| Preface | xvii |
| | |
| Section 1 Theory | |
| 1 Highlights of fascial anatomy, morphology and function <i>Robert Schleip and Werner Klingler</i> | 3 |
| 2 Surprising facts about fascial physiology and biochemistry <i>Werner Klingler and Alberto Zullo</i> | 17 |
| 3 Sex hormonal effects on tendons and ligaments <i>Mette Hansen</i> | 31 |
| 4 Stress loading and matrix remodeling in tendon and skeletal muscle: Cellular mechano-stimulation and tissue remodeling <i>Michael Kjaer</i> | 45 |
| 5 Mechanical loading and adaptive responses of tendinous tissues <i>Falk Mersmann, Sebastian Bohm and Adamantios Arampatzis</i> | 53 |
| 6 Nutrition and loading to improve fascia function <i>Danielle Steffen and Keith Baar</i> | 63 |
| 7 Hypo- and hypermobility <i>Jan Dammerholt and Nathan Mayberry</i> | 77 |
| 8 Elastic storage and recoil dynamics <i>Robert Schleip and Katja Bartsch</i> | 97 |
| 9 Water and fluid dynamics in fascia <i>Robert Schleip</i> | 107 |
| 10 What is it good for? An evidence-based review of stretching in sport and movement <i>Jan Wilke</i> | 117 |
| 11 Biotensegrity in sport and movement <i>John Sharkey</i> | 129 |
| 12 Myofascial continuity: Towards a new understanding of human anatomy <i>Jan Wilke</i> | 141 |
| 13 Mechanical force transmission across myofascial chains <i>Jan Wilke</i> | 147 |
| 14 Myofascial force transmission to synergistic and antagonistic muscles <i>Can A Yucesoy</i> | 157 |
| 15 Fascia as sensory organ <i>Robert Schleip and Carla Stecco</i> | 169 |

CONTENTS

| | | |
|---------------------------------------|---|-----|
| 16 | Fascia and musculoskeletal injury: An underestimated association? <i>Jan Wilke</i> | 181 |
| 17 | Classification of athletic injuries to muscular tissues <i>Hans-Wilhelm Müller-Wohlfahrt</i> | 191 |
| 18 | Fascia, exercise and oncology <i>Susan Shackett and Thomas Findley</i> | 199 |
| Section 2 Assessment methods | | |
| 19 | Assessment of joint mobility <i>Robert Schleip</i> | 215 |
| 20 | Imaging techniques (ultrasound) <i>Wolfgang Bauermeister and Frieder Krause</i> | 225 |
| 21 | Mechanical assessment <i>Robert Schleip and Katja Bartsch</i> | 235 |
| 22 | Palpation and functional assessment methods for fascia-related dysfunction <i>Leon Chaitow</i> | 245 |
| Section 3 Clinical application | | |
| 23 | Integrating clinical experience and scientific evidence: Roadmap for a healthy dialog between health practitioners and academic researchers <i>Robert Schleip and Jan Wilke</i> | 263 |
| 24 | Fascial Fitness <i>Robert Schleip, Divo G Müller and Bill Parisi</i> | 269 |
| 25 | Basic principles of plyometric training <i>Robert Heiduk</i> | 281 |
| 26 | Eccentric training: The key for a stronger, more resilient athlete? <i>Jan Wilke and Håkan Alfredson</i> | 291 |
| 27 | Foam rolling and roller massage effects and mechanisms <i>David G Behm</i> | 301 |
| 28 | Fascial stretching <i>Ann Frederick, Frieder Krause and Chris Frederick</i> | 315 |
| 29 | Food for the fascia: Molecular and biochemical processes <i>Kurt Moseetter</i> | 327 |
| 30 | Walking: The benefit of being on two legs <i>James Earls</i> | 339 |
| 31 | Functional training methods for the runner's myofascial systems <i>Wilbour Kelsick</i> | 353 |

CONTENTS

| | | |
|-----------|---|-----|
| 32 | Shoes or no shoes during locomotion and exercise: Training potential for fascial structures of the lower extremity <i>Thorsten Sterzing and Torsten Brauner</i> | 371 |
| 33 | Overarm throwing in humans <i>Christian Puta, Thomas Steidten and Martin S Fischer</i> | 385 |
| 34 | The secret role of fascia in the martial arts <i>Sal Petersen</i> | 393 |
| 35 | The world as a playground: Ninja and parkour training <i>Robert Heiduk</i> | 403 |
| 36 | Anatomy Trains in motion <i>Thomas Myers</i> | 411 |
| 37 | Fascial form in yoga <i>Joanne Avison</i> | 425 |
| 38 | Yin yoga as a fascia-oriented practice <i>Paul Grilley</i> | 437 |
| 39 | Fascia-focused Pilates training <i>Elizabeth Larkam</i> | 451 |
| 40 | Three-dimensional fascia-oriented training <i>Stefan Dennenmoser</i> | 491 |
| 41 | Dance <i>Liane Simmel</i> | 503 |
| 42 | Kettlebell training <i>Frieder Krause</i> | 513 |
| 43 | Fascia-oriented strength training in a conventional gym environment <i>Robert Schleip</i> | 521 |
| 44 | Rehabilitation in sport medicine <i>Raúl Martínez Rodríguez and Fernando Galán del Río</i> | 529 |
| 45 | How to train fascia in soccer <i>Klaus Eder and Helmut Hoffmann</i> | 541 |
| 46 | Movement therapy for breast cancer survivors <i>P. J. O'Clair</i> | 553 |
| 47 | Mental imagery, fascia and movement <i>Amit Abraham and Eric Franklin</i> | 569 |
| 48 | Periodized fascia training for speed, power, and injury resilience <i>Bill Parisi and Johnathon Allen</i> | 579 |
| | Permissions | 590 |
| | Index | 593 |