

Contents

Foreword vi

Preface ix

Acknowledgments xii

Contributors xiii

PART I OVERVIEW 1

1. Input (Bio), Output (Psycho), and Upstream (Social) Factors in Disabling Back Pain 3
—Craig Liebenson, Joshua Wideman, Tim Latham, and James E. Eubanks
2. Quality Assurance: The Scope of the Spine Problem and Modern Attempts to Manage It 55
—Tim L. Raven, Lise R. Lothe, and Craig Liebenson
3. Putting the Biopsychosocial Model Into Practice 72
—Craig Liebenson and Ryan Van Matre

PART II BASIC SCIENCE 101

4. Active Care: An Evidence-Informed Approach to Self-Care for Patients with Spine Pain 103
—Craig Liebenson and James E. Eubanks
5. The Role of the Behavioral–Environmental Context: Bridging the Tensions Between Biomechanics, Pain Science, and Function 133
—Craig Liebenson

PART III PATIENT ASSESSMENT 195

6. Diagnostic Triage 197
—Neil Craton
7. Assessment of Psychosocial Risk Factors of Chronicity—“Yellow Flags” 221
—Craig Liebenson, Steven Yeomans, and Richard Nicol
8. Outcome Assessment 242
—Steven Yeomans, Craig Liebenson, and Richard Nicol
9. Pain Mechanism Classification System Overview and Focus on the Motor/Autonomic Mechanism 287
—Annie O'Connor and Melissa C. Kolski
10. Quantification of Physical Performance Ability 303
—Steven Yeomans, Craig Liebenson, and Richard Nicol
11. Evaluation of Muscular Imbalance 339
—Clare Frank, Craig Liebenson, and Michaela Veverková
12. Movement Assessment: Screening, Performance, and Injury Prevention 360
—Ian McKeown and Craig Liebenson

PART IV SUSTAINABLE RECOVERY 375

13. Educating People About Pain 377
—Mark J. Catley, Hayley Leake, David S. Butler, and G. Lorimer Moseley

14. Self-Care: Providing Reassurance and Reactivation Advice for the Spine Pain Patient 388
—Craig Liebenson, Todd Hargrove, Jesse Awenus, and Eric Bowman

15. Making the Shift From Treating Dysfunction to Treating Sensitivity in Rehabilitation 433
—Greg Lehman

16. A Cognitive Behavioral Therapy Program for Spinal Pain 446
—Steven J. Linton

17. The McKenzie Method of Mechanical Diagnosis and Therapy for the Classification and Rehabilitation of Spinal Problems 455
—Thomas J. Lotus and Richard Rosedale

PART V HIGH-VALUE RECOVERY OPTIONS FOR RETURN TO PARTICIPATION 479

18. Self-Correcting Drills for the Hip Hinge 481
—Andrea U-Shi Chang
19. Periodization of a Torso “Stabilization” Training Program in Rehabilitation and Performance Optimization 494
—Benjamin Lee, Craig Liebenson, and Natalie Sidorkewicz
20. Cueing to Enhance Motor Learning and Transferability to Activities 551
—Nicklaas Winkelman
21. Sensory Motor Stimulation 564
—Vladimír Janda, Marie Vávrová, Alena Herbenová, and Michaela Veverková
22. Neuromobilization Techniques: Evaluation and Treatment of Adverse Neurodynamic Tension and the Container 581
—Michael C. Geraci, Jr, Martin Lambert, and Jennifer Bogulski

PART VI BUILDING ROBUSTNESS FOR RETURN TO SPORT AND ACTIVITY 599

23. Programming From Rehabilitation to Performance 601
—David Joyce
24. Dynamic Variable Resistance Training 609
—Josh Henkin
25. Rotational Sports and the Spine 619
—Max Prokopy, Michael A. Rintala, Joshua Wideman, and Brett Winchester
26. Sparing the Spine in Barbell Training 642
—Michael Hartle
27. Sparing the Spine in High-Intensity Training 653
—David Whitty

**PART VII MULTIMODAL OPTIONS
FOR RECOVERY 665**

28. **Manipulation of Key Joints 667**
—*George DeFranca and Brett Winchester*
29. **Manual Resistance Techniques 686**
—*Craig Liebenson and Curtis Thor Rigney*
30. **A New Approach to Postural Function 729**
—*Jiri Cumpelik*
31. **Dynamic Neuromuscular Stabilization 757**
—*Alena Kobesova, Richard A. Ulm, Martina Jezkova,
and Pavel Kolar*
32. **Pilates Therapy: Exercises for Spinal Stability 776**
—*Penelope Latey*
33. **Pelvic Floor: Integration Versus Isolation 790**
—*Julie W. Wiebe*
34. **Clinical Hypnosis and Mindfulness-Based
Interventions in the Treatment of Spinal Pain 807**
—*Lindsey C. McKernan, Rogelio A. Coronado, and
David R. Vago*
35. **Yoga Exercises Respecting Dynamic Neuromuscular
Stability Principles in Senior Populations 823**
—*Martina Jezkova, Alena Kobesova, Christine Lavelle,
and Clive Farrelly*
36. **Nutrition Considerations for Inflammation, Pain,
and Rehabilitation 840**
—*David R. Seaman*

**PART VIII FIRST PRINCIPLES OF MOVEMENT:
A SYSTEMATIC APPROACH 855**

37. **Integrated Approach to Regional Disorders 857**
—*Craig Liebenson and Jason Brown*
38. **The Resilience Model 886**
—*Craig Liebenson, Tim Latham, and Laura Latham*
39. **A Clinical Framework Utilizing a Precision
Approach 971**
—*Craig Liebenson, Laura Latham, Jae June Rhee,
Gerissen Tang, Ryan Chow, and Chad Buohl*

PART IX INTERDISCIPLINARY MANAGEMENT 1171

40. **Role of the Interventionist: Nonsurgical
Management of the Spine Pain Patient 1173**
—*Joel M. Press and Mary E. Caldwell*
41. **Lumbopelvic Pain in Pregnancy 1195**
—*Heidi Prather and Jeremy Hartman*
42. **The Role and Safety of Activity in the Elderly 1204**
—*Craig Liebenson and Laura Latham*
43. **Spine Surgery 1233**
—*Robert G. Watkins, IV and Robert G. Watkins, III*

INDEX 1248