Contents

SECTION I FUNDAMENTALS

1 The Body as a Whole, 1

Anatomy and Physiology and Characteristics of Life, 5 Organization of the Body's Structure, 8 Biological Plausibility, Clinical Plausibility, and Evidence-Informed Practice, 21 Authors' Note, 24

2 Mechanisms of Health and Disease, 28

Homeostasis, 30 Feedback Loops, 33 Biological Rhythms, 34 Mechanisms of Disease: Pathology, 36 Pain, 43 Defining Pain, 43 Pain Sensations, 46 Mechanisms of Health and Well-Being, 56 The Life Cycle, 62

3 Terminology: Scientific, Medical, Social, and Cultural Communication, 71

Language of Science and Medicine, 73 Word Elements Used in Medical Terms, 74 General Structural Plan of the Body, 78 The Body Map, 78 Kinesiology, 80 Quality of Life Terminology, 90 Cross-Cultural Terminology, 93 Clinical Reasoning and Charting, 101 Evolve, 105

SECTION II SYSTEMS OF CONTROL

4 Nervous System Basics and the Central Nervous System, 109

Nervous System Basics: Overview of the Nervous System, 111 Nerve Cell Structure, 112 Nerve Cell Functions, 116 The Central Nervous System, 123 Pathological Conditions, 137

5 Peripheral Nervous System, 148

Basics of the Peripheral Nervous System, 149 Reflex Mechanisms, 156 Autonomic Nervous System, 161 Five Basic Senses, 166 Pathological Conditions of the Peripheral Nervous System, 172

6 Endocrine System, 182

Overview of Endocrine Glands and Tissues, 183 Endocrine Glands, Tissues, and Their Hormones, 187 Pathological Conditions, 195

SECTION IIIKINESIOLOGY AND BIOMECHANICS

7 Skeletal System, 205

Skeletal System Basics, 206
Bones, 207
Bony Landmarks, 211
Divisions of the Skeleton, 212
Individual Bony Framework by Region, 215
Pathological Conditions, 235

8 Joints, 244

Joint Overview, 245 Joint Motion, 257 Identification and Palpation of Specific Joints, 267 Integrating Joint Movement into Massage, 283 Pathological Conditions of Joints, 287 Joint Surgery and Procedure Options, 291

9 Muscles, 298

Terminology,300
Muscle Structure and Function, 301
Fascia and the Myofascial Structure and Function, 312
Individual Muscles, 320
Pathological Conditions, 477
Write Your Own Test Questions, 487

10 Biomechanics Basics, 488

Biomechanics, 489 Kinetic Chain, 502 Assessment Based on Biomechanics, 507 Pathological Conditions, 548

SECTION IVREMAINING BODY SYSTEMS

11 Integumentary, Cardiovascular, Lymphatic, and Immune Systems, 581

Integumentary System, 583 Cardiovascular System, 594 The Lymphatic System, 616 Immune System, 623

12 Respiratory, Digestive, Urinary, and Reproductive Systems, 638

Respiratory System, 639 Digestive System, 648 Urinary System and Fluid Electrolyte Balances, 665 Reproductive System, 672 Explore, 685

APPENDICES

Appendix A Muscle Quick Reference Guide, 690

Appendix B Diseases/Conditions and Indications/Contraindications for Massage Therapy, 703

Appendix C Therapeutic Massage: Clinical Reasoning Model for Problem Solving and Justification, 726

Glossary, 729

Bibliography, 740