

Contents

Chapter 1	FUNDAMENTALS OF MANUAL MUSCLE TESTING	1
<hr/>		
Chapter 2	TECHNIQUES OF MANUAL MUSCLE TESTING: UPPER EXTREMITY	11
<hr/>		
Scapular Elevation	12	
Scapular Adduction	16	
Scapular Adduction—Alternative Test	20	
Scapular Adduction and Depression	23	
Scapular Adduction and Downward Rotation	27	
Scapular Adduction and Downward Rotation—Alternative Test	31	
Scapular Abduction and Upward Rotation: Option I	34	
Scapular Abduction and Upward Rotation: Option II	39	
Shoulder Flexion	42	
Shoulder Flexion—Alternative Test	46	
Shoulder Flexion and Adduction	49	
Shoulder Extension	51	
Shoulder Abduction	57	
Shoulder Horizontal Abduction	61	
Shoulder Horizontal Adduction	65	
Shoulder Horizontal Adduction—Alternative Test I	69	
Shoulder Horizontal Adduction—Alternative Test II	72	
Shoulder Medial Rotation	75	
Shoulder Lateral Rotation	82	
Elbow Flexion: Biceps Brachii	87	
Elbow Flexion: Brachialis	92	

Elbow Flexion: Brachioradialis **96**
Elbow Extension **100**
Forearm Supination **105**
Forearm Pronation **110**
Wrist Flexion and Radial Deviation **115**
Wrist Flexion and Ulnar Deviation **120**
Wrist Extension and Radial Deviation **124**
Wrist Extension and Ulnar Deviation **128**
Finger Flexion (MCP) **132**
Finger Flexion (PIP) **137**
Finger Flexion (DIP) **140**
Finger Extension **144**
Finger Abduction **150**
Finger Adduction **154**
Thumb Flexion (MCP) **158**
Thumb Flexion (IP) **162**
Thumb Extension (MCP) **165**
Thumb Extension (IP) **169**
Thumb Abduction **172**
Thumb Adduction **176**
Opposition of Thumb and Fifth Digit **180**

**Chapter 3 TECHNIQUES OF MANUAL MUSCLE TESTING:
HEAD, NECK, AND TRUNK**

185

Neck Flexion **186**
Anterolateral Neck Flexion **191**
Neck Extension **194**
Trunk Flexion **199**
Trunk Flexion—Alternative Test: Leg Lowering **204**
Trunk Rotation **208**
Trunk Extension **213**
Pelvic Elevation **218**
Muscles of Mastication **221**
Muscles of Facial Expression **225**

Chapter 4 TECHNIQUES OF MANUAL MUSCLE TESTING: LOWER EXTREMITY

234

Hip Flexion **235**
Hip Flexion, Abduction, and Lateral Rotation **240**
Hip Extension **244**
Hip Extension—Alternative Test I **248**
Hip Extension—Alternative Test II **250**
Hip Abduction **253**

Hip Abduction with Flexion: Option I	258
Hip Abduction with Flexion: Option II	262
Hip Adduction	265
Hip Medial Rotation	270
Hip Lateral Rotation	277
Knee Extension	282
Knee Flexion	287
Ankle Plantar Flexion: Weight-Bearing Test	293
Ankle Plantar Flexion: Nonweight-Bearing Test	301
Ankle Dorsiflexion and Subtalar Inversion	305
Subtalar Inversion	310
Subtalar Eversion	314
Metatarsophalangeal Flexion	319
Interphalangeal Flexion of the Toes	323
Metatarsophalangeal Extension	327
Interphalangeal Extension of the Great Toe	332

Chapter 5 TECHNIQUES OF PEDIATRIC MUSCLE TESTING

337

Venita Lovelace-Chandler, PhD, PT, PCS

Neck Extension	340
Neck Flexion (Forward)	343
Neck Flexion (Lateral)	345
Trunk Flexion	347
Trunk Extension	350
Trunk Extension and Flexion	352
Trunk Rotation	354
Shoulder Flexion	357
Elbow Extension	359
Hip and Knee Flexion	363
Hip and Knee Extension	368

Chapter 6 HANDHELD DYNAMOMETRY FOR MUSCLE TESTING

377

Gary L. Soderberg, PhD, PT, FAPTA

Scapular Elevation	390
Scapular Adduction	391
Shoulder Flexion	392
Shoulder Extension	393
Shoulder Abduction	394
Shoulder Horizontal Abduction	395
Shoulder Horizontal Adduction	396
Shoulder Medial Rotation	397
Shoulder Lateral Rotation	398

Elbow Flexion **399**
Elbow Extension **402**
Wrist Flexion **403**
Wrist Extension **404**
Hip Flexion **405**
Hip Extension **406**
Hip Abduction **407**
Hip Adduction **408**
Hip Medial Rotation **409**
Hip Lateral Rotation **410**
Knee Extension **411**
Knee Flexion **412**
Ankle Plantar Flexion **413**
Ankle Dorsiflexion **414**
Subtalar Inversion **415**
Subtalar Eversion **416**

Chapter 7 TECHNIQUES OF THE SENSORY EXAMINATION 421

Chapter 8 TECHNIQUES OF THE REMAINDER OF THE NEUROLOGIC EXAMINATION: COORDINATION, MENTAL STATUS, CRANIAL NERVES, AND SUPERFICIAL REFLEXES 447

Cerebral Function **449**
Cerebellar Function **455**
Cranial Nerve Function: Olfactory Nerve **464**
Cranial Nerve Function: Optic Nerve **466**
Cranial Nerve Function: Oculomotor, Trochlear, Abducens Nerves **471**
Cranial Nerve Function: Trigeminal Nerve **473**
Cranial Nerve Function: Facial Nerve **479**
Cranial Nerve Function: Vestibulocochlear Nerve **483**
Cranial Nerve Function: Glossopharyngeal Nerve **488**
Cranial Nerve Function: Vagus Nerve **489**
Cranial Nerve Function: Accessory Nerve **491**
Cranial Nerve Function: Hypoglossal Nerve **493**
Cutaneous Reflexes **494**

Chapter 9 OBSERVATIONAL GAIT ANALYSIS AS A SCREENING TOOL 497

Index 515