

# Contents

## 1 Fundamentals

<b>Manual Muscle Testing</b>	2
Prerequisites for Accurate Results of Muscle Testing	2
Evaluating Muscle Strength	4
Documenting Muscle Function	5
Diagnosis at Neurological Level	17
Examples of Central Nervous System Disturbances	32
Examples of Peripheral Damage	34
Muscle Synergy	36
Grading for Manual Muscle Testing	39

## 2 Quick Tests for Evaluating Overall Muscle Function

Matthias Postural Competence Test for Children between 6 and 16 Years of Age	43
Toe and Heel Walking Test	45
Standing on One Leg	46
Squat	47
Push-up	48
Step Test	50
Side Plank	51

## 3 Head and Face

<b>Muscles of the Head</b>	54
Muscles of Mastication	54
Muscles of Facial Expression	57
<b>Clinical Conditions—Examples from Practice</b>	74
Facial Nerve Palsy (Seventh Cranial Nerve)	74
Abducens Nerve Palsy (Sixth Cranial Nerve)	75
Trochlear Nerve Palsy (Fourth Cranial Nerve)	75
Oculomotor Nerve Palsy (Third Cranial Nerve)	75

**4 Spine****Muscles and Manual Muscle Testing of the Spine 78**

Extension of the Cervical, Thoracic, and Lumbar Spine	78
Flexion of the Cervical Spine	92
Flexion of the Trunk	98
Rotation of the Trunk	102
Lateral Bending of the Trunk	106

**Clinical Conditions—Examples from Practice 112**

Muscle Imbalance of the Trunk	112
-------------------------------	-----

**Muscles and Manual Muscle Testing of the Upper Extremity 118****5 Upper Extremity**

Scapula	118
Shoulder Joint	134
Elbow	158
Wrist	174
Thumb Joints	190
Finger Joints	220

**Clinical Conditions—Examples from Practice 246**

Winged Scapula due to Peripheral Nerve Damage	246
Winged Scapula in Patients with Muscular Weakness	249
Erb Palsy	250
Klumpke Paralysis	251
Suprascapular Nerve Palsy (C4-C6)	252
Axillary Nerve Palsy (C4-C6)	253
Musculocutaneous Nerve Palsy (C5-C6)	254
Radial Nerve Palsy (C5-C8)	255
Ulnar Nerve Palsy (C8-T1)	256
Median Nerve Palsy (C5-T1)	257

**6 Lower Extremity****Muscles and Manual Muscle Testing of the Lower Extremity 260**

Hip Joint	260
Knee Joint	288
Ankle Joint	296
Toe Joints	312

**Clinical Conditions—Examples from Practice 328**

Weakness of the Hip Extensors	328
Shortening of the Hip Flexors	330
Shortening of the Hip Abductors and Adductors	332
Weakness of the Hip Abductors	332
Weakness of the Quadriceps Femoris Muscle	335
Weakness of the Hamstring Muscles	337
Shortening of the Triceps Surae Muscle	338
Weakness of the Ankle Dorsiflexors	339

**Test Questions 342****Answers to Test Questions 345****7 Questions****Bibliography 351****Index 356**