

Contents

1	Introduction	1
1.1	Positioning of the PNF Concept in the Modern Holistic Treatment ...	2
1.2	PNF: Definition, Philosophy, Neurophysiological Basics	11
1.3	Test Your Knowledge: Question	13
	References	13
2	PNF Basic Principles and Procedures for Facilitation	17
2.1	Optimal Resistance.....	20
2.2	Irradiation and Reinforcement.....	22
2.3	Tactile Stimulus (Manual Contact)	23
2.4	Body Position and Body Mechanics	25
2.5	Verbal Stimulation (Commands)	26
2.6	Visual Stimulus.....	27
2.7	Traction and Approximation	28
2.8	Stretch	29
2.9	Timing.....	30
2.10	Patterns	30
2.11	Test Your Knowledge: Questions.....	32
	References	33
3	PNF Techniques	37
3.1	Introduction.....	38
3.2	Rhythmic Initiation.....	39
3.3	Combination of Isotonics	40
3.4	Reversal of Antagonists	41
3.5	Repeated Stretch (Repeated Contractions)	47
3.6	Contract–Relax.....	50
3.7	Hold–Relax	52
3.8	Replication	54
3.9	PNF Techniques and Their Goals	55
3.10	Test Your Knowledge: Questions.....	55
	References	55
4	Patient Assessment and Treatment	59
4.1	Introduction.....	60
4.2	Assessment.....	60
4.3	Hypothesis	62
4.4	Tests for Causal Impairments and Activity Limitations Adjust to the Treatment.....	62
4.5	Treatment Goals	62
4.6	Treatment Planning and Treatment Design.....	63
4.7	Re-Test for Causal Impairments and Activity Limitations	65
4.8	Treatment Examples	66
4.9	Indications and Contraindications	67
4.10	Test Your Knowledge: Questions.....	67
	References	67

5	Patterns of Facilitation	73
5.1	Introduction	74
5.2	PNF Patterns	74
5.3	Test Your Knowledge: Questions.....	76
	References	78
6	The Scapula and Pelvis	79
6.1	Introduction	80
6.2	Applications	80
6.3	Basic Procedures	80
6.4	Scapular Diagonals	82
6.5	Pelvic Diagonals.....	89
6.6	Symmetrical, Reciprocal, and Asymmetrical Exercises	96
6.7	Test Your Knowledge: Questions.....	99
	References	99
7	The Upper Extremity	101
7.1	Introduction	103
7.2	Basic procedures	103
7.3	Flexion–abduction–external rotation (Fig. 7.2)	105
7.4	Extension–Adduction–Internal Rotation (Fig. 7.5)	112
7.5	Flexion–Adduction–External Rotation (Fig. 7.8)	118
7.6	Extension–Abduction–Internal Rotation (Fig. 7.11).....	124
7.7	Thrust and Withdrawal Combinations	131
7.8	Bilateral Arm Patterns.....	133
7.9	Changing the Patient’s Position	135
7.10	Therapeutic Applications of Arm Patterns	139
7.11	Test your Knowledge: Questions.....	139
	References	139
8	The Lower Extremity	141
8.1	Introduction	143
8.2	Basic Procedures	143
8.3	Flexion–Abduction–Internal Rotation (Fig. 8.2)	145
8.4	Extension–Adduction–External Rotation (Fig. 8.5).....	151
8.5	Flexion–Adduction–External Rotation (Fig. 8.8)	157
8.6	Extension–Abduction–Internal Rotation (Fig. 8.11).....	162
8.7	Bilateral Leg Patterns	168
8.8	Changing the Patient’s Position	168
8.9	Therapeutic Indications for Leg Patterns	172
8.10	Test Your Knowledge: Questions.....	179
	References	179
9	The Neck	181
9.1	Introduction	182
9.2	Basic Procedures	182
9.3	Indications	187

9.4	Flexion to the Left, Extension to the Right (Fig. 9.1)	187
9.5	Neck for Trunk	189
9.6	Test Your Knowledge: Questions	194
	References	194
10	The Trunk	195
10.1	Introduction	196
10.2	Treatment Procedures	196
10.3	Chopping and Lifting	197
10.4	Bilateral Leg Patterns for the Trunk	203
10.5	Combining Patterns for the Trunk	209
10.6	Test Your Knowledge: Question	213
	References	213
11	Mat Activities	215
11.1	Introduction: Why Do Mat Activities?	216
11.2	Basic Procedures	216
11.3	Techniques	217
11.4	Mat Activities	217
11.5	Patient Cases in Mat Activities	254
11.6	Therapeutic Applications	258
11.7	Test Your Knowledge: Question	259
	References	259
12	Gait Training	261
12.1	Introduction: The Importance of Walking	262
12.2	Basics of Normal Gait	262
12.3	Gait Analysis: Observation and Manual Evaluation	266
12.4	The Theory of Gait Training	267
12.5	The Procedures of Gait Training	268
12.6	Practical Gait Training	270
12.7	Patient Cases in Gait Training	292
12.8	Test Your Knowledge: Questions	298
	References	298
13	Vital Functions	301
13.1	Introduction	302
13.2	Stimulation and Facilitation	302
13.3	Facial Muscles	302
13.4	Tongue Movements	312
13.5	Swallowing	314
13.6	Speech Disorders	314
13.7	Breathing	315
13.8	Test Your Knowledge: Questions	318
	References	318

14	Activities of Daily Living	321
14.1	Introduction	322
14.2	Transfers	323
14.3	Dressing and Undressing	325
14.4	Test Your Knowledge: Question	328
	References	328
15	Test Your Knowledge: Questions and Answers	331
	Supplementary Information	
	Glossary	338
	Index	341