## **Contents**

## **Upper Limb**

**General Overview** 

1

1.1 1.2	Anatomy 4 Important Topographical Anatomical Relations in the Region of the Brachial Plexus 7
1.3	Motor and Sensory Supply of the Upper Limb 9
2	Interscalene Techniques of Brachial Plexus Block 10
2.1	Anatomy 10
2.2	General Overview 12
2.3	Meier Technique 14
2.4	Dorsal Technique (Pippa Technique) 21
2.5	Sensory and Motor Effects of the Interscalene Block 23
2.6	Indications and Contraindications for the Interscalene Block 24
2.7	Supraclavicular Nerve Block (Cervical Plexus) 24
2.8	Complications, Side Effects, Method-Specific Problems 26
3	Infraclavicular Techniques of Brachial Plexus Block 30
3.1	Anatomical Basis 30
3.2	Vertical Infraclavicular Block (VIB) according to Kilka, Geiger, and Mehrkens (Kilka et al. 1995) 33
3.3	Raj Technique, Modified by Borgeat 42
3.4	Sensory and Motor Effects 46
3.5	Indications and Contraindications 46
3.6	Complications, Side Effects, Method-Specific Problems 47
4	Suprascapular Nerve Block 48
4.1	Anatomical Basis 48
4.2	Meier Technique 50
4.3	Sensory and Motor Effects 53
4.4	Indications and Contraindications 53
4.5	Complications, Side Effects, Method-Specific Problems 54
5	Axillary Block 55
5.1	Anatomical Basis 55
5.2	Perivascular "Single-Injection" Technique 58
5.3	Sensory and Motor Effects 62
5.4	Indications and Contraindications 64
5.5	Complications, Side Effects, Method-Specific Problems 64
5.6	Multistimulation Technique, "Mid-Humeral Approach" According to Dupré (Dupré 1994) 65
6	Selective Block of Individual Nerves in the Upper Arm, at the Elbow and Wrist 71
6.1	Radial Nerve Block (Middle of Upper Arm) 71
6.2	Blocks at the Elbow 73



Blocks at the Wrist (Hand Block) 80

6.3

## **Lower Limb**

/	General Overview 88
7.1	Lumbosacral Plexus 88
7.2	Sensory Innervation of the Leg 92
8	Psoas Compartment Block 94
8.1	Anatomical Overview 94
8.2	Technique of Psoas Compartment Block 96
8.3	Sensory and Motor Effects 104
8.4	Indications and Contraindications 104
8.5	Complications, Side Effects, Method-Specific Problems 104
8.6	Remarks on the Technique 108
8.7	Summary 110
9	Inguinal Paravascular Lumbar Plexus Anesthesia ("3-in-1 Technique" according to Winnie,
	Femoral Nerve Block) 111
9.1	Anatomical Overview 111
9.2	Femoral Nerve Block ("3-in-1 Technique") 114
9.3	Sensory and Motor Effects 121
9.4	Indications and Contraindications 121
9.5	Complications, Side Effects, Method-Specific Problems 121
9.6	Remarks on the Technique 122
10	Proximal Sciatic Nerve Block 126
10.1	Anatomical Overview 126
10.2	Anterior Proximal Sciatic Nerve Block (with Patient in Supine Position) 129
10.3	Dorso-Dorsal (Proximal) Sciatic Nerve Block (according to Raj) (in supine position) 142
10.4	Proximal Lateral Sciatic Nerve Block (with Patient in Supine Position) 145
10.5	Proximal Sciatic Nerve Block (with Patient Lying on Side) 147
10.6	Parasacral Sciatic Nerve Block (Mansour Technique) 156
11	Blocks at the Knee 159
11.1	Anatomical Overview 159
11.2	Classical Popliteal Block, Dorsal Approach 159
11.3	Distal Block of the Sciatic Nerve 160
12	Peripheral Block (Conduction Block) of Individual Nerves of the Lower Limb 175
12.1	Lateral Cutaneous Nerve of the Thigh 175
12.2	Infiltration of the Iliac Crest 180
12.3	Obturator Nerve Block 182
12.4	Saphenous Nerve Block 190
12.5	Fibular Nerve Block 198

13.1 13.2 13.3 13.4 13.5 13.6 13.7 13.8 13.9	Anatomical Overview 203 Saphenous Nerve, Sural Nerve and Superficial Fibular Nerve Block 208 Deep Fibular Nerve Block 210 Tibial Nerve Block 212 Indications, Contraindications, Complications, Side Effects 212 Remarks on Ankle Block 212 Summary 213 Blocks at the Toes 213	
General Considerations for Peripheral Nerve Blocks of the Limbs		
14	Special Features of Peripheral Nerve Blocks 218	
14.1 14.2	Advantages of Peripheral Nerve Blocks 218 Problems of Peripheral Nerve Blocks 218	
15	Complications and General Contraindications of Peripheral Blocks 220	
15.1 15.2	Complications of Peripheral Nerve Blocks 220 General Contraindications to Peripheral Nerve Blocks (Table 15.1) 222	
16	General Principles for Performing Peripheral Blocks 224	
16.1 16.2 16.3 16.4 16.5 16.6	Hygiene Requirements for Performing Peripheral Nerve Blocks 224  General Principles of Informed Consent, Positioning and Monitoring 224  Technical Aids for Performing Peripheral Nerve Blocks 226  General Principles for Placement of Regional Anesthesia 235  Analgesia/Sedation for Regional Anesthesia/Peripheral Nerve Block 236  General Principles for Administration of Local Anesthetics in Peripheral Nerve Block 237	
17	Continuous Peripheral Nerve Blocks 239	
	Index 247	

Peripheral Nerve Blocks at the Ankle 203

13