

Contents

1 General

- 1.1 What do the »straight-trainers« do with crooked children? – or: What is pediatric orthopaedics? 2
- 1.2 Orthoses, prostheses, theories and inventive individuals – a historical review 16
- 1.3 Changing patterns of pediatric orthopaedic diseases – Developments, trends 22

2 Basic principles

- 2.1 Diagnosis 28
 - 2.1.1 General examination technique 28
 - 2.1.2 Neurological examination 31
R. Brunner
 - 2.1.3 Gait analysis 32
R. Brunner
 - 2.1.4 Imaging diagnostics 35
 - 2.1.5 School medical examination 38
- 2.2 Development of the musculoskeletal system 41
 - 2.2.1 Growth 41
 - 2.2.2 Physical development 44
 - 2.2.3 The loading capacity of the musculoskeletal system 48

3 Diseases and injuries by site

- 3.1 Spine, trunk 57
 - 3.1.1 Examination of the back 57
 - 3.1.2 Radiography of the spine 63
 - 3.1.3 Can the »nut croissant« be straightened out by admonitions? – or: To what extent is a bent back acceptable? – Postural problems in adolescents ... 66
 - 3.1.4 Idiopathic scolioses 72
 - 3.1.5 Scheuermann's disease 95

- 3.1.6 Spondylolysis and spondylolisthesis 101
- 3.1.7 Congenital malformations of the spine 108
- 3.1.8 Congenital muscular torticollis 117
- 3.1.9 Thoracic deformities 120
- 3.1.10 Neuromuscular spinal deformities 124
F. Hefti and R. Brunner
- 3.1.11 Spinal deformities in systemic diseases 134
- 3.1.12 Spinal injuries 143
- 3.1.13 Inflammatory conditions of the spine 147
- 3.1.14 Tumors of the spine 151
- 3.1.15 Why do backs that are as straight as candles frequently cause severe pain? – or: the differential diagnosis of back pain 157
- 3.1.16 Summary of indications for imaging investigations for the spine 162
- 3.1.17 Indications for physical therapy for back problems 162
- 3.2 Pelvis, hips and thighs 164
 - 3.2.1 Examination of hips 164
 - 3.2.2 Radiographic techniques 168
 - 3.2.3 Biomechanics of the hip 169
 - 3.2.4 Developmental dysplasia and congenital dislocation of the hip 177
 - 3.2.5 Legg-Calvé-Perthes disease 201
 - 3.2.6 Slipped capital femoral epiphysis 216
 - 3.2.7 Congenital malformations of the pelvis, hip and thigh 225
 - 3.2.8 Neuromuscular hip disorders 235
R. Brunner
 - 3.2.9 Fractures of the pelvis, hip and thigh 249
C. Hasler
 - 3.2.10 Transient synovitis of the hip 258
 - 3.2.11 Infections of the hip and the femur 261
 - 3.2.12 Rheumatoid arthritis of the hip 265
 - 3.2.13 Tumors of the pelvis, proximal femur and femoral shaft 267
 - 3.2.14 Differential diagnosis of hip pain 276
 - 3.2.15 Differential diagnosis of restricted hip movement 277
 - 3.2.16 Indications for imaging procedures for the hip 278
 - 3.2.17 Indications for physical therapy in hip disorders 278
- 3.3 Knee and lower leg 279
 - 3.3.1 Examination of the knees 279
 - 3.3.2 Radiographic techniques 284
 - 3.3.3 Knee pain today – sports invalid tomorrow? – Pain syndromes of the knee and lower leg 285

4 Systematic aspects of musculoskeletal disorders

4.6	Hereditary diseases	645
4.6.1	Of beggars and artists and clues in the quest for appropriate classification – Introduction	645
4.6.2	Skeletal dysplasias	653
4.6.3	Dysostoses (localized hereditary skeletal deformities)	686
4.6.4	Chromosomal abnormalities	688
4.6.5	Syndromes with neuromuscular abnormalities	691
	<i>R. Brunner</i>	
4.6.6	Various syndromes with orthopaedic relevance	697
4.7	Neuro-orthopaedics	711
4.7.1	Basic aspects of neuromuscular diseases	711
	<i>R. Brunner</i>	
4.7.2	Braces	722
	<i>R. Brunner</i>	
4.7.3	Cerebral lesions	734
	<i>R. Brunner</i>	
4.7.4	Spinal cord lesions	738
	<i>R. Brunner</i>	
4.7.5	Nerve lesions outside the central nervous system	746
	<i>R. Brunner</i>	
4.7.6	Muscle disorders	747
	<i>R. Brunner</i>	
	Subject Index	755



<http://www.springer.com/978-3-540-69963-7>

Pediatric Orthopedics in Practice

Hefti, F.

2007, XI, 781 p., Hardcover

ISBN: 978-3-540-69963-7