

Table of contents

| | | | |
|---|------|---|----|
| Frontmatter | I | Section 1: Principles of casting | 1 |
| Foreword Thomas Rüedi | V | 1 Introduction Klaus Dresing, Peter Trafton | 3 |
| Acknowledgements Klaus Dresing, Peter Trafton | VI | 2 History of casting—from the beginning to the present day E Walter Buchinger | 9 |
| Preface Klaus Dresing, Peter Trafton | VII | 3 Principles of casting Klaus Dresing, Franz Seibert, Jos Engelen | 19 |
| Contributors | VIII | 4 Thrombosis prophylaxis Jan Philipp Schüttrumpf | 55 |
| Abbreviations | XI | 5 Logistics and resources in the cast room Klaus Dresing, Jos Engelen | 63 |
| Table of contents | XII | 6 Properties of cast materials Klaus Dresing, Jos Engelen | 75 |
| Appendix | 631 | 7 Socioeconomic considerations Klaus Dresing, Jim Harrison | 91 |
| Instructions for patients | 633 | 8 Outcomes after nonoperative fracture treatment—what information can be gained from evidence-based medicine? Beate Hanson, Klaus Dresing | 97 |

Section 2: Guidelines for nonoperative treatment and perioperative protection **103**

9.1 Fractures, dislocations, and subluxations of the upper extremity **105**
Richard Kdolsky, Clemens Dumont

9.2 Fractures, dislocations, and subluxations of the lower extremity **135**
Rami Mosheif, Juan Manuel Concha

9.3 Nonoperative treatment of spinal fractures **159**
Florian Gebhard, Peter Richter, Bastian Scheiderer

9.4 Pediatric fractures **171**
Thomas Neubauer

10 Soft-tissue damage and defects **185**
Clemens Dumont

11.1 Ligament and tendon injuries **193**
Kamel Affi

11.2 Nerve injuries **229**
Endre Varga

12 Indications for nonoperative treatment of infections **239**
Matej Cimerman

13 Overload injuries **247**
Miles Francis T Dela Rosa

Section 3: Techniques—casts, splints, and support bandages **255**

14.1 Overview of cast, splint, orthosis, and bandage techniques **257**
Klaus Dresing, Jos Engelen

14.2 Overview of cast, splint, orthosis, and bandage techniques—demonstration format and icons **297**
Klaus Dresing, Jos Engelen

| 15 Upper extremity | 305 | 16 Lower extremity | 461 |
|--|------------|--|------------|
| Klaus Dresing, Jos Engelen | | Klaus Dresing, Jos Engelen | |
| 15.1 Long arm splint using plaster of Paris | 307 | 16.1 One-and-a-half leg hip spica cast using plaster of Paris | 463 |
| 15.2 Long arm splint using synthetic | 313 | 16.2 Single leg hip spica cast using synthetic, combicast technique | 471 |
| 15.3 Long arm cast using plaster of Paris | 319 | 16.3 Cylinder long leg cast using synthetic, combicast technique | 477 |
| 15.4 Long arm cast using synthetic, combicast technique | 325 | 16.4 Hinged knee brace | 483 |
| 15.5 Sarmiento humeral brace using synthetic, combicast technique | 331 | 16.5 Dorsal long leg splint using plaster of Paris | 489 |
| 15.6 Dorsopalmar (radial) short arm splint using plaster of Paris | 337 | 16.6 Long leg cast using plaster of Paris | 495 |
| 15.7 Dorsopalmar (radial) short arm splint using synthetic | 343 | 16.7 Long leg cast using synthetic, combicast technique | 501 |
| 15.8 Palmar short arm splint using plaster of Paris | 349 | 16.8 Sarmiento (patella tendon bearing) cast using plaster of Paris | 507 |
| 15.9 Palmar short arm splint using synthetic | 355 | 16.9 Sarmiento tibial brace using synthetic, combicast technique | 513 |
| 15.10 Dorsal short arm splint using synthetic | 361 | 16.10 Dorsal short leg splint using plaster of Paris | 519 |
| 15.11 Short arm cast using plaster of Paris | 367 | 16.11 Dorsal short leg splint using synthetic | 525 |
| 15.12 Short arm cast using synthetic, combicast technique | 373 | 16.12 Short leg cast using rigid synthetic | 531 |
| 15.13 Thumb spica splint using plaster of Paris | 379 | 16.13 Short leg cast using synthetic, combicast technique | 537 |
| 15.14 Thumb spica splint using synthetic | 385 | 16.14 Antirotation short leg cast using synthetic, combicast technique | 543 |
| 15.15 Short arm cast using plaster of Paris with traction and reduction | 391 | 16.15 Removable ankle splint using synthetic, combicast technique | 549 |
| 15.16 Short arm scaphoid cast using synthetic, combicast technique | 399 | 16.16 Fifth metatarsal cast using synthetic, combicast technique | 555 |
| 15.17 Dorsopalmar (ulnar gutter) short arm splint including two or more fingers using plaster of Paris | 405 | 16.17 Removable fifth metatarsal cast using synthetic, combicast technique | 561 |
| 15.18 Dorsopalmar (ulnar gutter) short arm splint including two or more fingers using synthetic | 411 | 16.18 Foot cast using synthetic, combicast technique | 567 |
| 15.19 Palmar short arm splint including the fingers using plaster of Paris | 415 | 16.19 Removable foot cast using synthetic, combicast technique | 573 |
| 15.20 Short arm cast including two or more fingers using synthetic, combicast technique | 421 | 16.20 First toe orthosis using synthetic, combicast technique | 579 |
| 15.21 Kleinert dynamic splint using plaster of Paris | 427 | | |
| 15.22 Kleinert dynamic splint using synthetic, combicast technique | 433 | | |
| 15.23 Metacarpal glove using synthetic, combicast technique | 439 | | |
| 15.24 Removable thumb orthosis using synthetic | 445 | | |
| 15.25 Removable finger splint using synthetic | 451 | | |
| 15.26 Mallet finger splint using synthetic | 457 | | |

| | | | | | |
|-----------|--|------------|-----------|----------------------------|------------|
| 17 | Spine | 585 | 18 | Support bandages | 605 |
| | Klaus Dresing, Jos Engelen | | | Klaus Dresing, Jos Engelen | |
| 17.1 | Corset using plaster of Paris | 587 | 18.1 | Collar and cuff bandage | 607 |
| 17.2 | Corset using synthetic, combicast technique | 593 | 18.2 | Clavicle bandage | 611 |
| 17.3 | Removable corset using synthetic, combicast technique | 599 | 18.3 | Gilchrist bandage | 615 |
| | | | 18.4 | Wrist bandage | 619 |
| | | | 18.5 | Elbow bandage | 623 |
| | | | 18.6 | Ankle and foot bandage | 627 |