

PART I Fundamentals and General Considerations

- 1 Phylogeny, 2**
Alex A. Malone and Susan G. Larson
- 2 Anatomy of the Elbow Joint, 9**
Bernard F. Morrey, Manuel Llusá-Pérez, and José R. Ballesteros-Betancourt
- 3 Biomechanics of the Elbow, 33**
Kai-Nan An and Bernard F. Morrey
- 4 History and Physical Examination of the Elbow, 47**
Mark E. Morrey and Bernard F. Morrey
- 5 Functional Evaluation of the Elbow, 66**
Bernard F. Morrey
- 6 Radiography of the Elbow, 75**
Nicholas G. Rhodes and Daniel E. Wessell
- 7 Computed Tomography of the Elbow, 87**
Hillary W. Garner
- 8 Magnetic Resonance Imaging of the Elbow, 93**
Joseph M. Bestic
- 9 Ultrasound Imaging of the Elbow, 101**
Michael R. Moynagh
- 10 Extensile Surgical Exposures: Humerus, 110**
Mark E. Morrey, Manuel Llusá-Pérez, and José R. Ballesteros-Betancourt
- 11 Surgical Exposures of the Elbow, 126**
Bernard F. Morrey
- 12 Surgical Exposures of the Forearm, 151**
José R. Ballesteros-Betancourt, Manuel Llusá-Pérez, and Joaquín Sánchez-Sotelo
- 13 General and Regional Anesthesia and Postoperative Pain Control, 157**
Sandra L. Kopp, Terese T. Horlocker, and Robert L. Lennon
- 14 Principles of Elbow Rehabilitation, 164**
Adam M. Pourcho and Jay Smith
- 15 Continuous Passive Motion, 171**
Bernard F. Morrey
- 16 Splints and Bracing of the Elbow, 173**
Bernard F. Morrey
- 17 Examination Under Anesthesia, 178**
Bernard F. Morrey

PART II Elbow Arthroscopy

- 18 General Principles of Elbow Arthroscopy, 181**
Michael J. O'Brien and Felix H. Savoie III
- 19 Arthroscopic Management of Lateral Epicondylitis, 189**
Champ L. Baker, Jr., and Champ L. Baker III
- 20 Arthroscopic Management of Elbow Plica and Loose Bodies, 194**
Omkar H. Dave, Larry D. Field, and E. Rhett Hobgood
- 21 Arthroscopy for Arthritis of the Elbow, 200**
Felix H. Savoie III and Michael J. O'Brien
- 22 Arthroscopic Management of Osteochondritis Dissecans of the Capitellum, 207**
Robert Nelson Mead, E. Rhett Hobgood, and Felix H. Savoie III
- 23 Complications of Elbow Arthroscopy, 215**
Felix H. Savoie III and Bernard F. Morrey

- 24 Advanced and Future Trends in Elbow Arthroscopy, 219**
Felix H. Savoie III and Michael J. O'Brien

PART III The Child and Adolescent Elbow

- 25 The Pediatric Elbow: Anatomy and Radiographic Assessment, 229**
Eric W. Edmonds and Matthew T. Stepanovich
- 26 Congenital Abnormalities of the Elbow, 237**
Carley Vuillermin
- 27 Supracondylar Fractures of the Elbow in Children, 253**
Anthony A. Stans
- 28 Complications of Supracondylar Fractures of the Elbow, 272**
Amy L. McIntosh
- 29 Physeal Fractures of the Elbow, 286**
Hamlet A. Peterson
- 30 Proximal Radius Fractures in Children, 306**
Karan Dua and Joshua M. Abzug
- 31 Olecranon and Monteggia Fractures in Children, 315**
Dan A. Zlotolow
- 32 Pediatric Elbow Dislocations, 327**
Kevin J. Little and Roger Cornwall
- 33 Osteochondritis Dissecans, 341**
William J. Shaughnessy
- 34 Elbow Stiffness in Children and Adolescents, 349**
Lisa Lattanza and Samantha Lee Piper

PART IV Acute Trauma

- 35 Simple Elbow Dislocation, 357**
Jonathan D. Barlow and Joaquín Sánchez-Sotelo
- 36 Complex Elbow Instability: General Principles, 364**
Alberto G. Schneeberger and Bernard F. Morrey
- 37 Radial Head Fracture: General Considerations, Conservative Treatment, and Radial Head Resection, 375**
Samuel Antuña, Eloy Dario Tabeayo Alvarez, Raul Barco, and Bernard F. Morrey
- 38 Radial Head Fracture: Open Reduction and Internal Fixation, 388**
Roger P. van Riet and Bernard F. Morrey
- 39 Prosthetic Radial Head Replacement, 395**
Bernard F. Morrey
- 40 Radial Head Fracture: Management of Complications After Treatment, 403**
Joaquín Sánchez-Sotelo
- 41 Essex-Lopresti Injuries, 410**
Bassem T. Elhassan and Andrew T. Assenmacher
- 42 Olecranon Fractures and Monteggia Fractures, 417**
Julie E. Adams and Scott P. Steinmann
- 43 Coronoid Fractures, 428**
Robert U. Hartzler and Bernard F. Morrey
- 44 Low Transcondylar Fractures of the Distal Humerus, 440**
Juan P. Simone

- 45 Distal Humerus Fractures: Fractures of the Columns With Articular Involvement, 450**
Joaquin Sanchez-Sotelo
- 46 Distal Humerus Fractures: Isolated Fracture of the Capitellum, 458**
Jo Suenghwan and Bernard F. Morrey
- 47 Distal Humerus Fractures: Shear Fractures of the Humeral Articular Surface, 466**
Neal Chen and David Ring
- 48 Hinged External Fixators of the Elbow, 471**
Bernard F. Morrey

PART V Complications of Trauma and Elbow Stiffness

- 49 Persistent Elbow Instability, 482**
Rick Papandrea and Jeffrey C. King
- 50 Nonunion and Malunion of Distal Humerus Fractures, 501**
Joaquin Sanchez-Sotelo
- 51 Nonunion of the Olecranon and Proximal Ulna, 510**
Panayiotis J. Papagelopoulos and Bernard F. Morrey
- 52 Chronic Unreduced Elbow Dislocation, 521**
Bernard F. Morrey
- 53 Elbow Stiffness: Basic Science and Overview, 529**
Charalambos P. Charalambous and Mark E. Morrey
- 54 Extrinsic Contracture: Lateral and Medial Column Procedures, 537**
Pierre Mansat and Mark E. Morrey
- 55 Elbow Stiffness: Arthroscopic Contracture Release, 547**
Joaquin Sanchez-Sotelo
- 56 Elbow Stiffness: Rehabilitation After Surgical Contracture Release, 552**
Joaquin Sanchez-Sotelo
- 57 Heterotopic Ossification, 557**
Antonio M. Foruria and Joaquin Sanchez-Sotelo
- 58 Healing and Wound Problems, 568**
Thomas Lawrence and In-Ho Jeon

PART VI Sports and Soft Tissue Injuries

- 59 Lateral Epicondylitis/Tendinosis, 574**
Robert Nirschl
- 60 Percutaneous Ultrasound Tenotomy Treatment of Epicondylitis, 582**
Bernard F. Morrey
- 61 Medial Epicondylitis/Tendinosis, 588**
Robert Nirschl
- 62 Managing Surgical Failure in Tennis Elbow, 595**
Bernard F. Morrey
- 63 Elbow Tendinopathies: Acute Distal Biceps Tendon Ruptures, 602**
George S. Athwal
- 64 Elbow Tendinopathies: Chronic Biceps Ruptures, 615**
Mark E. Morrey
- 65 Elbow Tendinopathies: Triceps Tendon Rupture and Snapping, 621**
John W. Hinchey, Roger P. van Riet, and Bernard F. Morrey
- 66 The Thrower's Elbow, 630**
Justin L. Hodgins, Christopher S. Ahmad, and John E. Conway

- 67 Articular Injuries in the Athlete, 637**
Joshua S. Dines, Christopher L. Camp, and Neal S. ElAttrache
- 68 Medial Collateral Ligament Reconstruction: MCL Insufficiency, 651**
Neal S. ElAttrache, Justin L. Hodgins, and Christopher S. Ahmad
- 69 Ulnar Collateral Ligament Reconstruction: Complications and Salvage, 663**
Jarrod R. Smith, Jeremy Bruce, and James R. Andrews
- 70 Medial Collateral Ligament Reconstruction, 668**
Bernard F. Morrey
- 71 Lateral Collateral Ligament Insufficiency, 670**
Joaquin Sanchez-Sotelo
- 72 Nerve Entrapment Syndromes, 679**
Robert J. Spinner
- 73 Atypical Pain Presentation in the Elbow, 702**
Jacqueline S. Weisbein
- 74 Bursitis, 705**
Bernard F. Morrey and Mark E. Morrey

PART VII Pathologic Conditions of the Elbow

- 75 Posttraumatic Elbow Osteoarthritis, 714**
Benjamin W. Sears and Joaquin Sanchez-Sotelo
- 76 Primary Osteoarthritis of the Elbow, 722**
Bernard F. Morrey
- 77 Rheumatoid Arthritis, 731**
Harvinder S. Luthra
- 78 Seronegative Inflammatory Arthritis, 742**
Erin M. Scanlon and Thomas G. Mason
- 79 Hematologic Arthritis, 747**
Philipp N. Streubel and Joaquin Sanchez-Sotelo
- 80 Septic Arthritis, 756**
Shahryar Ahmadi and Joaquin Sanchez-Sotelo
- 81 Neoplasms of the Elbow, 760**
Olga D. Savvidou, Panayiotis J. Papagelopoulos, Carrie Y. Inwards, and Bernard F. Morrey
- 82 Neuropathic Arthropathy, 779**
Young W. Kwon and Bernard F. Morrey
- 83 Elbow Pathology From Metabolic Disease, 788**
Bernard F. Morrey
- 84 Loose Bodies and Ossification Centers About the Elbow, 795**
Bernard F. Morrey

PART VIII Joint Replacement Arthroplasty

SECTION A Fundamentals

- 85 Elbow Arthroplasty: Historical Perspective, 807**
Bernard F. Morrey
- 86 Biomechanics of Joint Reconstruction, 819**
Kai-Nan An, Andrew R. Thoreson, and Bernard F. Morrey
- 87 Radiocapitellar Prosthetic Arthroplasty for Isolated Radiocapitellar Arthritis, 826**
Roger P. van Riet
- 88 Distal Humeral Hemiarthroplasty, 834**
Jeffery S. Hughes
- 89 Unlinked and Convertible Arthroplasty: Design, Concept, and Technique, 842**
Graham J.W. King

- 90 Linked Elbow Arthroplasty: Rationale, Design Concept, and Surgical Technique, 855**
Bernard F. Morrey

SECTION B Technique and Outcome by Indication and Diagnosis

- 91 Elbow Arthroplasty in Inflammatory Arthritis, 870**
Joaquin Sanchez-Sotelo
- 92 Distal Humeral Fractures, 878**
Srinath Kamineni
- 93 Total Elbow Arthroplasty for Distal Humerus Nonunion, 888**
Akin Cil
- 94 Posttraumatic Arthritis, 894**
Thomas W. (Quin) Throckmorton
- 95 Total Elbow Arthroplasty for Primary Osteoarthritis, 902**
Bernard F. Morrey and Mark E. Morrey
- 96 Failed Interposition Arthroplasty of the Elbow, 907**
Bernard F. Morrey and Mark E. Morrey
- 97 Dysfunctional Instability, 912**
Adam J. Seidl and Matthew L. Ramsey
- 98 The Fused Elbow, 920**
Bernard F. Morrey

PART IX Complications and Salvage of Failed Arthroplasty

- 99 Complications of Elbow Replacement Arthroplasty, 926**
Bernard F. Morrey and Ilya Voloshin
- 100 Diagnosis of Deep Infection After Elbow Arthroplasty, 937**
Jeremy S. Somerson and Joaquin Sanchez-Sotelo
- 101 Treatment of the Infected Total Elbow Arthroplasty, 942**
Emilie Cheung, Ken Yamaguchi, and Bernard F. Morrey
- 102 Triceps Insufficiency Following Total Elbow Arthroplasty, 951**
Thomas R. Duquin, Andrea Celli, and Bernard F. Morrey
- 103 Periprosthetic Elbow Fractures, 955**
Antonio M. Foruria and Joaquin Sanchez-Sotelo
- 104 Isolated Polyethylene Wear and Elbow Replacement, 967**
Brian P. Lee, Joyce S.B. Koh, and Bernard F. Morrey

- 105 Instability After Unlinked Total Elbow Arthroplasty, 972**
Graham J.W. King and Shawn W. O'Driscoll
- 106 Revision of Nonseptic Failed Total Elbow Arthroplasty With Osseous Integrity, 978**
Bernard F. Morrey
- 107 Revision Total Elbow Arthroplasty With Strut Augmentation, 990**
Joaquin Sanchez-Sotelo
- 108 Revision of Failed Total Elbow Arthroplasty With Osseous Deficiency: Impaction Grafting, 995**
Bernard F. Morrey
- 109 Revision of Failed Total Elbow Arthroplasty With Osseous Deficiency: Humeral Replacement and Allograft Prosthetic Composite Reconstruction, 1001**
Bernard F. Morrey and Mark E. Morrey

PART X Nonprosthetic Alternatives and Salvage Procedures

- 110 Synovectomy of the Elbow, 1010**
Akin Cil and Bernard F. Morrey
- 111 Ulnohumeral Arthroplasty, 1018**
Bernard F. Morrey
- 112 Osteochondral Allograft Reconstruction, 1028**
Bernard F. Morrey and Mark E. Morrey
- 113 Anconeus Interposition Arthroplasty, 1035**
Alberto G. Schneeberger, Yaser M. Baghdadi, Joaquin Sanchez-Sotelo, and Bernard F. Morrey
- 114 Interposition Arthroplasty of the Elbow, 1043**
Bernard F. Morrey
- 115 Elbow Arthrodesis, 1054**
Anil K. Dutta and Travis C. Burns
- 116 Soft Tissue Coverage of the Elbow, 1062**
Nho V. Tran, Brian T. Carlsen, and Steven L. Moran
- 117 Flaccid Dysfunction, 1078**
Mikko Larsen, Allen T. Bishop, and Alexander Y. Shin
- 118 Spastic Dysfunction of the Elbow, 1099**
Ann E. Van Heest
- 119 Elbow Resection Arthroplasty, 1109**
Joaquin Sanchez-Sotelo
- 120 Elbow Disarticulation Amputation, 1116**
Karen L. Andrews, Brian T. Carlsen, and Thomas C. Shives

Index, 1122