SAMPLE ONLY. NOT FOR DISTRIBUTION.

v

vi

vii

1

3

Contents

Preface Content Reviewers for the American College of Physicians Acknowledgments Chapter 1. The Knee Ligament Injuries **Meniscus** Tears 13 Arthritis 18 Problems of the Patella-Femoral Joint 30 Other Knee Conditions You will Encounter 36 **Chapter 2. The Shoulder** 43 Subacromial Space Impingement 49 **Glenohumeral Joint Instability** (Shoulder Dislocation) 67 **Glenohumeral Joint Arthritis** 70 Conditions that Affect the AC Joint 78 Ac Joint Instability (Shoulder Separation) 78 Ac Joint Arthritis 81 Labral Tears 84 Chapter 3. The Hip 87 Hip Arthritis 88 Greater Trochanteric Bursitis 93 Lumbar Spine Pathology 97 The Zebras ... Less-Common Causes of Hip Pain 98 Avascular Necrosis 98 Labral Tears and Femoral Acetabular Impingement 100 Summary 106 **Hip Fractures** 106 Chapter 4. The Hand, Wrist, and Elbow 115 **Carpal Tunnel Syndrome** 116 **Ulnar Nerve Entrapment** (Cubital Tunnel Syndrome) 123 Trigger Finger 126 Thumb Pain 129 **DeQuervain Syndrome** 129

Arthritis at the Base of the Thumb (AKA basal joint arthritis, 1st CMC arthritis, trapeziometacarpal joint arthritis) Skier's Thumb and Gamekeeper's Thumb (failure of the ulnar collateral ligament of	131
the thumb) Lateral (and Medial) Epicondylitis	135
(AKA tennis and golfer's elbow) Olecranon Bursitis	137 142
Chapter 5. The Foot and Ankle	145
Plantar Fasciitis	150
Achilles Tendonitis	158
Hammertoes, Bunions, and Corns	160
Posterior Tibial Tendon Dysfunction	
(adult-acquired flatfoot deformity)	163
Ankle Injuries: Sprains and Fractures	166
Ankle Fractures	169
Chapter 6. Low Back Pain	175
Anatomy	176
Low Back Pain (Without Radiculopathy) Low Back Pain <i>With</i> Radiculopathy:	179
Lumbar Disk Herniations and Extrusions Low Back Pain <i>With</i> Radiculopathy:	185
Spinal Stenosis	188
Critical Conditions of the Lumbar Spine	191
Chronic Back Pain	192
Chapter 7. Orthopedic Emergencies	193
Extremity Amputations	194
Injuries That Result in an Unstable Spine	194
Post-Traumatic Compartment Syndrome	195
Extremity Fractures and Dislocations	200
Vascular Injuries	203
Septic Arthritis	205
Open Fractures	206
Dislocations	207

SAMPLE ONLY. NOT FOR DISTRIBUTION.

Chapter 8. Fracture Management	209	Knee: Pes Tendon/Bursa Injection
Nomenclature	210	Shoulder: Subacromial Space Injection
Intra-articular/Extra-articular	211	Shoulder: Acromioclavicular (AC)
Displaced/Nondisplaced	212	Joint Injection
Comminution	214	Shoulder: Glenohumeral Joint Injection
Open/Closed	214	Hip: Greater Trochanteric Bursa Injection
Fracture-Dislocation	214	Hip: Intra-Articular Hip Joint Injection
Location	215	Hand: Carpal Tunnel Injection
Special Fracture Names Worth Knowing	218	Hand: Trigger Finger Injection
Special Cases: Fractures That Require		Hand: 1st Carpal-Metacarpal Joint
Less Attention	222	(1st CMC Joint) Injection
Rib Fractures	222	Hand: De Quervain Syndrome Injection
Clavicle Fractures	222	Elbow: Medial and Lateral Epicondylitis
Radial Head/Neck Fractures	223	Injection
Toe Fractures	224	Foot: Morton's Neuroma Injection
Proximal Humerus Fractures	225	Foot: Plantar Fascia Injection
Pubic Ramus Fractures	225	Ankle: Ankle Joint Injection
Special Cases: Fractures That Require		Spine: Caudal Epidural Steroid Injection
More Attention	226	
Spine Fractures	229	Index
Chapter 9. Injection Techniques	231	
Corticosteroids	232	
Knee: Intra-Articular Injection Technique	236	

SAMPLE ONLY. NOT FOR DISTRIBUTION.

Preface

While the health care delivery system in the United States is the subject of much criticism and debate, the medical education system in this country is unquestionably among the best in the world. The physicians, physician assistants, and nurse practitioners it produces each year constitute an elite group of health care providers with the knowledge and experience to handle even the most challenging injuries and illnesses. Despite its numerous strengths, one weakness in America's current medical education system is its lack of an adequate orthopedic curriculum for medical students and residents destined for careers in primary care. Many internal medicine residents, for example, feel more comfortable managing a critically ill patient in the intensive care unit than an ankle sprain, and they will see many more ankle sprains, rotator cuff tears, and cases of hip bursitis than they will intensive care unit patients in their practice. In fact, musculoskeletal complaints account for up to a third of the reasons why patients seek evaluation by their primary care providers.

It is this gap in the average medical resident's education that the faculty at the University of Colorado medical center and I sought to fill when we created an outpatient orthopedic rotation for internal medicine residents 20 years ago. The program was well received and very successful. My job was easy: teach orthopedics (perhaps the simplest and most basic of all medical specialties) to some of the brightest minds in health care. Soon, this program and others like it caught the attention of the American College of Physicians (ACP). I began receiving requests to present parts of the curriculum to practicing internists at the regional and, later, national ACP educational meetings. Primary care providers at all stages of their practice careers seemed hungry for this information. In the years since its inception, I have had the opportunity to teach this orthopedic curriculum hundreds of times. Each time, the residents and practicing primary care physicians I work with teach me how to make the presentations better. They help me understand what it is they want to learn and what teaching techniques work best for them.

Practical Office Orthopedics is an effort to put that curriculum together in written form. It is intended to provide the reader with a practical, efficient, and organized approach to outpatient orthopedics and to demystify the practice of musculoskeletal care.

The format of the book is meant to accomplish two very different objectives at the same time. The main text is written to allow quick and easy access to the basic facts. The sidebars in the book emphasize the "backstories" behind some of the conditions presented. The sidebars are written to make the book a more interesting read and, more importantly, to make it easier for the reader to remember the material. As a teacher (and a perpetual student), I am a strong believer in the old axiom: "Hear and I forget. Understand, and I remember." I am also a strong believer in the value of illustrations, so the book is packed with photographs, x-rays, and drawings to help explain the concepts discussed in the text. If this book does its job, reading it should provide you with a practical, easy-to-use approach to the orthopedics you will encounter in a primary care setting.

Ted Parks, MD

Content Reviewers for the American College of Physicians

The following reviewers are gratefully acknowledged:

Suzanne Elizabeth Ames, MD

Associate Professor Program Director, Orthopedic Residency Program University of Vermont College of Medicine Burlington, Vermont

Angela M. Bell, MD, FACP

Internist; Sports Medicine Specialist Private Practice Chicago, Illinois

Robert K. Cato, MD, FACP

Chief, Division of General Medicine Medical Director, Penn Center for Primary Care Professor of Clinical Medicine Penn Presbyterian Medical Center Philadelphia, Pennsylvania

Lisa Miura, MD, FACP

Assistant Professor Oregon Health and Science University School of Medicine General Internal Medicine VA Portland Health Care System Portland, Oregon

Balu Natarajan, MD

Private Practice Chicago Primary Care Sports Medicine Chicago, Illinois

C. Christopher Smith, MD, FACP

Associate Professor of Medicine Harvard Medical School Beth Israel Deaconess Medical Center Boston, Massachusetts

M.E. Beth Smith, DO

Associate Professor of Medicine Health Promotion and Sports Medicine Oregon Health and Science University Portland, Oregon