

Lynn S. Bickley

Includes  
Online e-book  
Access Code  
Inside

B A T E S '

*Guide to*  
Physical  
Examination

AND HISTORY TAKING

NINTH EDITION



LIPPINCOTT WILLIAMS & WILKINS



# Contents

List of Tables	xvii
Introduction	xxiii

## UNIT I

### Foundations of Physical Examination and History Taking 1

## CHAPTER 1

### Overview of Physical Examination and History Taking 3

#### ■ THE HEALTH HISTORY 4

##### STRUCTURE AND PURPOSES 4

- The Comprehensive vs. Focused Health History* 4
- Subjective vs. Objective Data* 5

##### THE COMPREHENSIVE ADULT HEALTH HISTORY 6

- Initial Information* 6
- Chief Complaint(s)* 6
- Present Illness* 6
- Past History* 7
- Family History* 8
- Personal and Social History* 8
- Review of Systems* 8

#### ■ THE PHYSICAL EXAMINATION 11

##### APPROACH AND OVERVIEW 11

##### THE COMPREHENSIVE ADULT PHYSICAL EXAMINATION 11

- General Survey* 11
- Vital Signs* 12
- Skin* 12
- Head, Eyes, Ears, Nose, Throat (HEENT)* 12
- Neck* 12
- Back* 12
- Posterior Thorax and Lungs* 12
- Breast, Axillae, and Epitrochlear Nodes* 12
- Anterior Thorax and Lungs* 13
- Cardiovascular System* 13
- Abdomen* 13
- Lower Extremities* 13
- Nervous System* 14
- Additional Examinations* 14

#### ■ RECORDING YOUR FINDINGS 15

##### Bibliography 21

## CHAPTER 2

### Interviewing and the Health History 23

#### GETTING READY: THE APPROACH TO THE INTERVIEW 26

- Taking Time for Self-Reflection* 26
- Reviewing the Chart* 26
- Setting Goals for the Interview* 27
- Reviewing Your Clinical Behavior and Appearance* 27
- Adjusting the Environment* 28
- Taking Notes* 28

#### LEARNING ABOUT THE PATIENT: THE SEQUENCE OF THE INTERVIEW 28

- Greeting the Patient and Establishing Rapport* 29
- Inviting the Patient's Story* 30
- Establishing an Agenda* 31
- Expanding and Clarifying the Patient's Story* 31
- Generating and Testing Diagnostic Hypotheses* 32
- Creating a Shared Understanding of the Problem* 33
- Negotiating a Plan* 34
- Planning for Follow-Up and Closing* 34

#### BUILDING A THERAPEUTIC RELATIONSHIP: THE TECHNIQUES OF SKILLED INTERVIEWING 35

- Building the Relationship* 35
- Active Listening* 36
- Guided Questioning: Options for Expanding and Clarifying the Patient's Story* 36
- Nonverbal Communication* 38
- Empathic Responses* 38
- Validation* 39
- Reassurance* 39
- Partnering* 40
- Summarization* 40
- Transitions* 40
- Empowering the Patient* 40

#### ADAPTING YOUR INTERVIEW TO SPECIFIC SITUATIONS 41

- The Silent Patient* 41
- The Confusing Patient* 41
- The Patient With Altered Capacity* 42
- The Talkative Patient* 43
- The Crying Patient* 44
- The Angry or Disruptive Patient* 44
- The Interview Across a Language Barrier* 44

*The Patient With Low Literacy* 45  
*The Patient With Impaired Hearing* 46  
*The Patient With Impaired Vision* 46  
*The Patient With Limited Intelligence* 46  
*The Patient With Personal Problems* 47

#### **SENSITIVE TOPICS THAT CALL FOR SPECIFIC APPROACHES 47**

*The Sexual History* 48  
*The Mental Health History* 49  
*Alcohol and Illicit Drugs* 50  
*Family Violence* 51  
*Death and the Dying Patient* 52

#### **SOCIETAL ASPECTS OF INTERVIEWING 53**

*Achieving Cultural Competence* 53  
*Sexuality in the Clinician-Patient Relationship* 57

#### **ETHICS AND PROFESSIONALISM 57**

**Bibliography 61**

### **CHAPTER 3**

#### **Clinical Reasoning, Assessment, and Plan 65**

##### **ASSESSMENT AND PLAN: THE PROCESS OF CLINICAL REASONING 66**

##### **THE CASE OF MRS. N: ASSESSMENT AND PLAN 70**

##### **APPROACHING THE CHALLENGES**

##### **OF CLINICAL DATA 72**

*Clustering Data into Single versus  
Multiple Problems* 73  
*Sifting Through an Extensive Array of Data* 73  
*Assessing the Quality of the Data* 74  
*Displaying Clinical Data* 74

##### **BUILDING YOUR CASE: INTEGRATING CLINICAL REASONING AND ASSESSMENT OF CLINICAL DATA 79**

##### **ORGANIZING THE PATIENT RECORD 81**

*Generating the Problem List* 84  
*Writing the Progress Note* 85

##### **CLINICAL ASSESSMENT: THE JOURNEY TO EXCELLENCE 85**

**Bibliography 86**

### **UNIT II**

#### **Regional Examinations 87**

### **CHAPTER 4**

#### **Beginning the Physical Examination: General Survey and Vital Signs 89**

##### **ANATOMY AND PHYSIOLOGY 89**

*Calculating the BMI* 90

*Interpreting and Acting on the BMI* 92  
*Assessing Dietary Intake* 92

##### **THE HEALTH HISTORY 93**

*Changes in Weight* 93  
*Fatigue and Weakness* 94  
*Fever, Chills, and Night Sweats* 95

##### **HEALTH PROMOTION AND COUNSELING 95**

*Optimal Weight and Nutrition* 95  
*Exercise* 96  
*Blood Pressure and Diet* 96

##### **TECHNIQUES OF EXAMINATION 97**

##### **BEGINNING THE EXAMINATION:**

##### **SETTING THE STAGE 97**

*Reflect on Your Approach to the Patient* 97  
*Adjust the Lighting and the Environment* 98  
*Determine the Scope of the Examination:  
Comprehensive or Focused?* 99  
*Choose the Sequence of the Examination* 100  
*Observe the Correct Examining  
Position and Handedness* 101  
*Make the Patient Comfortable* 102

##### **THE GENERAL SURVEY 103**

*Apparent State of Health* 103  
*Level of Consciousness* 103  
*Signs of Distress* 103  
*Height and Build* 104  
*Weight* 104  
*Skin Color and Obvious Lesions* 104  
*Dress, Grooming, and Personal Hygiene* 104  
*Facial Expression* 105  
*Odors of the Body and Breath* 105  
*Posture, Gait, and Motor Activity* 105

##### **THE VITAL SIGNS 105**

##### **BLOOD PRESSURE 106**

##### **HEART RATE AND RHYTHM 111**

##### **RESPIRATORY RATE AND RHYTHM 112**

##### **TEMPERATURE 112**

##### **RECORDING YOUR FINDINGS 113**

**Bibliography 114**

### **CHAPTER 5**

#### **The Skin, Hair, and Nails 121**

##### **ANATOMY AND PHYSIOLOGY 121**

*Skin* 121  
*Hair* 122  
*Nails* 122  
*Sebaceous Glands and Sweat Glands* 122

##### **THE HEALTH HISTORY 123**

## ■ HEALTH PROMOTION AND COUNSELING 124

---

## ■ TECHNIQUES OF EXAMINATION 126

---

- SKIN 126
- SKIN LESIONS IN CONTEXT 127
- HAIR 128
- NAILS 128
- SPECIAL TECHNIQUES 128
  - Instructions for the Skin*
  - Self-Examination* 128

## ■ RECORDING YOUR FINDINGS 130

---

Bibliography 130

## CHAPTER 6

### The Head and Neck 153

## ■ ANATOMY AND PHYSIOLOGY 153

---

- THE HEAD 153
- THE EYE 154
- THE EAR 160
- THE NOSE AND PARANASAL SINUSES 162
- THE MOUTH AND PHARYNX 165
- THE NECK 168

## ■ THE HEALTH HISTORY 170

---

- THE HEAD 171
- THE EYES 171
- THE EARS 172
- THE NOSE AND SINUSES 173
- THE MOUTH, THROAT, AND NECK 174

## ■ HEALTH PROMOTION AND COUNSELING 175

---

## ■ TECHNIQUES OF EXAMINATION 177

---

### THE HEAD 177

- The Hair* 177
- The Scalp* 177
- The Skull* 177
- The Face* 177
- The Skin* 177

### THE EYES 177

- Visual Acuity* 177
- Visual Fields by Confrontation* 178
- Position and Alignment of the Eyes* 180
- Eyebrows* 180
- Eyelids* 180
- Lacrimal Apparatus* 180
- Conjunctiva and Sclera* 180
- Cornea and Lens* 181
- Iris* 181
- Pupils* 181
- Extraocular Muscles* 182
- Ophthalmoscopic Examination* 184

## THE EARS 189

- The Auricle* 189
- Ear Canal and Drum* 189
- Auditory Acuity* 190
- Air and Bone Conduction* 190

## THE NOSE AND PARANASAL SINUSES 192

## THE MOUTH AND PHARYNX 193

- The Lips* 193
- The Oral Mucosa* 193
- The Gums and Teeth* 194
- The Roof of the Mouth* 194
- The Tongue and the Floor of the Mouth* 194
- The Pharynx* 195

## THE NECK 196

- The Lymph Nodes* 196
- The Trachea and the Thyroid Gland* 198
- The Carotid Arteries and Jugular Veins* 200

## SPECIAL TECHNIQUES 200

- For Assessing Protruding Eyes (Proptosis or Exophthalmos)* 200
- For Nasolacrimal Duct Obstruction* 201
- For Inspection of the Upper Palpebral Conjunctiva* 201
- Swinging Flashlight Test* 202
- Transillumination of the Sinuses* 202

## ■ RECORDING YOUR FINDINGS 203

---

Bibliography 204

## CHAPTER 7

### The Thorax and Lungs 241

## ■ ANATOMY AND PHYSIOLOGY 241

---

- Locating Findings on the Chest* 242
- Lungs, Fissures, and Lobes* 245
- Locations on the Chest* 246
- The Trachea and Major Bronchi* 246
- The Pleurae* 246
- Breathing* 247

## ■ THE HEALTH HISTORY 248

---

## ■ HEALTH PROMOTION AND COUNSELING 250

---

## ■ TECHNIQUES OF EXAMINATION 252

---

### INITIAL SURVEY OF RESPIRATION AND THE THORAX 252

### EXAMINATION OF THE POSTERIOR CHEST 253

### EXAMINATION OF THE ANTERIOR CHEST 261

### SPECIAL TECHNIQUES 265

- Clinical Assessment of Pulmonary Function* 265
- Forced Expiratory Time* 265
- Identification of a Fractured Rib* 265

## ■ RECORDING YOUR FINDINGS 266

---

Bibliography 266

## **CHAPTER 8**

### **The Cardiovascular System 279**

#### **■ ANATOMY AND PHYSIOLOGY 279**

- SURFACE PROJECTIONS OF THE HEART AND GREAT VESSELS 279
- CARDIAC CHAMBERS, VALVES AND CIRCULATION 281
- EVENTS IN THE CARDIAC CYCLE 282
- THE SPLITTING OF HEART SOUNDS 284
- HEART MURMURS 285
- RELATION OF AUSCULTATORY FINDINGS TO THE CHEST WALL 286
- THE CONDUCTION SYSTEM 287
- THE HEART AS A PUMP 288
- ARTERIAL PULSES AND BLOOD PRESSURE 289
- JUGULAR VENOUS PRESSURE (JVP) 290
- JUGULAR VENOUS PULSATIONS 292
- CHANGES OVER THE LIFE SPAN 292

#### **■ THE HEALTH HISTORY 293**

#### **■ HEALTH PROMOTION AND COUNSELING 295**

#### **■ TECHNIQUES OF EXAMINATION 302**

##### **JUGULAR VENOUS PRESSURE AND PULSATIONS 302**

*Jugular Venous Pressure (JVP)* 302

*Jugular Venous Pulsations* 304

##### **THE CAROTID PULSE 305**

*Thrills and Bruits* 306

*The Brachial Artery* 306

##### **THE HEART 307**

##### **INSPECTION AND PALPATION 308**

*Overview* 308

*Left Ventricular Area—The Apical Impulse or Point of Maximal Impulse (PMI)* 309

*S<sub>3</sub> and S<sub>4</sub>* 311

*Right Ventricular Area—The Left Sternal Border in the 3rd, 4th, and 5th Interspaces* 311

*Pulmonic Area—The Left 2nd Interspace* 313

*Aortic Area—The Right 2nd Interspace* 313

##### **PERCUSSION 313**

##### **AUSCULTATION 313**

*Overview* 313

*Listening for Heart Sounds* 315

*Attributes of Heart Murmurs* 316

##### **INTEGRATING CARDIOVASCULAR ASSESSMENT 319**

##### **SPECIAL TECHNIQUES 319**

*Aids to Identify Systolic Murmurs* 319

*Pulsus Alternans* 320

*Paradoxical Pulse* 320

#### **■ RECORDING YOUR FINDINGS 321**

#### **Bibliography 321**

## **CHAPTER 9**

### **The Breasts and Axillae 337**

#### **■ ANATOMY AND PHYSIOLOGY 337**

THE FEMALE BREAST 337

THE MALE BREAST 339

LYMPHATICS 339

#### **■ THE HEALTH HISTORY 340**

#### **■ HEALTH PROMOTION AND COUNSELING 341**

#### **■ TECHNIQUES OF EXAMINATION 345**

THE FEMALE BREAST 345

THE MALE BREAST 350

THE AXILLAE 350

SPECIAL TECHNIQUES 352

*Assessment of Spontaneous Nipple Discharge* 352

*Examination of the Mastectomy Patient* 352

*Instructions for the Breast Self-Examination* 352

#### **■ RECORDING YOUR FINDINGS 354**

#### **Bibliography 354**

## **CHAPTER 10**

### **The Abdomen 359**

#### **■ ANATOMY AND PHYSIOLOGY 359**

#### **■ THE HEALTH HISTORY 362**

THE GASTROINTESTINAL TRACT 362

THE URINARY TRACT 368

#### **■ HEALTH PROMOTION AND COUNSELING 370**

#### **■ TECHNIQUES OF EXAMINATION 374**

THE ABDOMEN 374

THE LIVER 379

THE SPLEEN 382

THE KIDNEYS 385

THE BLADDER 386

THE AORTA 386

SPECIAL TECHNIQUES 387

ASSESSING POSSIBLE ASCITES 387

*Identifying an Organ or a Mass in an Ascitic Abdomen* 389

ASSESSING POSSIBLE APPENDICITIS 389

ASSESSING POSSIBLE ACUTE CHOLECYSTITIS 390

ASSESSING VENTRAL HERNIAS 390

MASS IN THE ABDOMINAL WALL 391

#### **■ RECORDING YOUR FINDINGS 391**

#### **Bibliography 392**

## CHAPTER 11

### Male Genitalia and Hernias 411

#### ■ ANATOMY AND PHYSIOLOGY 411

#### ■ THE HEALTH HISTORY 413

#### ■ HEALTH PROMOTION AND COUNSELING 415

#### ■ TECHNIQUES OF EXAMINATION 416

THE PENIS 416

THE SCROTUM AND ITS CONTENTS 417

HERNIAS 419

SPECIAL TECHNIQUES 420

THE TESTICULAR SELF-EXAMINATION 420

#### ■ RECORDING YOUR FINDINGS 421

Bibliography 421

## CHAPTER 12

### Female Genitalia 429

#### ■ ANATOMY AND PHYSIOLOGY 429

#### ■ THE HEALTH HISTORY 432

#### ■ HEALTH PROMOTION AND COUNSELING 435

#### ■ TECHNIQUES OF EXAMINATION 438

*Choosing Equipment* 439

*Positioning the Patient* 440

EXTERNAL EXAMINATION 440

INTERNAL EXAMINATION 441

HERNIAS 448

SPECIAL TECHNIQUES 448

#### ■ RECORDING YOUR FINDINGS 448

Bibliography 449

## CHAPTER 13

### The Anus, Rectum, and Prostate 459

#### ■ ANATOMY AND PHYSIOLOGY 459

#### ■ THE HEALTH HISTORY 461

#### ■ HEALTH PROMOTION AND COUNSELING 462

#### ■ TECHNIQUES OF EXAMINATION 464

MALE 464

FEMALE 467

#### ■ RECORDING YOUR FINDINGS 468

Bibliography 468

## CHAPTER 14

### The Peripheral Vascular System 473

#### ■ ANATOMY AND PHYSIOLOGY 473

ARTERIES 473

VEINS 474

THE LYMPHATIC SYSTEM AND LYMPH NODES 476

FLUID EXCHANGE AND THE CAPILLARY BED 477

#### ■ THE HEALTH HISTORY 478

#### ■ HEALTH PROMOTION AND COUNSELING 479

#### ■ TECHNIQUES OF EXAMINATION 481

ARMS 481

LEGS 482

SPECIAL TECHNIQUES 488

*Evaluating the Arterial Supply to the Hand* 488

*Postural Color Changes of Chronic Arterial*

*Insufficiency* 489

*Mapping Varicose Veins* 490

*Evaluating the Competency of Venous Valves* 490

#### ■ RECORDING YOUR FINDINGS 491

Bibliography 491

## CHAPTER 15

### The Musculoskeletal System 497

#### ■ ASSESSING THE MUSCULOSKELETAL SYSTEM 497

STRUCTURE AND FUNCTION OF JOINTS 498

TYPES OF JOINTS 499

STRUCTURE OF SYNOVIAL JOINTS 500

*Bursae* 501

#### ■ THE HEALTH HISTORY 501

#### ■ HEALTH PROMOTION AND COUNSELING 504

#### ■ EXAMINATION OF SPECIFIC JOINTS: ANATOMY AND PHYSIOLOGY AND TECHNIQUES OF EXAMINATION 507

TEMPOROMANDIBULAR JOINT 509

THE SHOULDER 511

THE ELBOW 520

THE WRIST AND HANDS 522

THE SPINE 529

THE HIP 537

THE KNEE 543

THE ANKLE AND FOOT 552

SPECIAL TECHNIQUES 555

*For Carpal Tunnel Syndrome* 555

*For Low Back Pain With Radiation Into the Leg* 556

Measuring the Length of Legs 557  
Describing Limited Motion of a Joint 557

---

■ RECORDING YOUR FINDINGS 558

---

Bibliography 558

**CHAPTER 16**

The Nervous System: Mental Status  
and Behavior 573

---

■ OVERVIEW 573

---

■ THE HEALTH HISTORY 575

---

■ HEALTH PROMOTION AND COUNSELING 576

---

■ TECHNIQUES OF EXAMINATION 578

---

APPEARANCE AND BEHAVIOR 579

SPEECH AND LANGUAGE 580

MOOD 581

THOUGHT AND PERCEPTIONS 581

COGNITIVE FUNCTIONS 584

HIGHER COGNITIVE FUNCTIONS 586

SPECIAL TECHNIQUES 588

*Mini-Mental State Examination (MMSE)* 588

---

■ RECORDING YOUR FINDINGS 588

---

Bibliography 589

**CHAPTER 17**

The Nervous System: Cranial Nerves,  
Motor System, Sensory System,  
and Reflexes 595

---

■ ANATOMY AND PHYSIOLOGY 595

---

CENTRAL NERVOUS SYSTEM 596

THE BRAIN 596

THE SPINAL CORD 597

PERIPHERAL NERVOUS SYSTEM 598

THE CRANIAL NERVES 598

THE PERIPHERAL NERVES 598

SPINAL REFLEXES: THE DEEP TENDON RESPONSE 600

MOTOR PATHWAYS 601

SENSORY PATHWAYS 603

---

■ THE HEALTH HISTORY 607

---

■ HEALTH PROMOTION AND COUNSELING 609

---

■ TECHNIQUES OF EXAMINATION 610

---

THE CRANIAL NERVES 611

THE MOTOR SYSTEM 616

THE SENSORY SYSTEM 629

DEEP TENDON REFLEXES 633

SPECIAL TECHNIQUES 640

*Asterixis* 640

*Winging of the Scapula* 640

*Meningeal Signs* 641

*Anal Reflex* 641

*The Stuporous or Comatose Patient* 641

---

■ RECORDING YOUR FINDINGS 646

---

Bibliography 647

**UNIT III**

Life Span Examinations 669

**CHAPTER 18**

Assessing Children: Infancy Through  
Adolescence 671

---

■ CHILD DEVELOPMENT 672

---

KEY PRINCIPLES 672

INFANCY: THE FIRST YEAR OF LIFE 674

CHILDHOOD: 1 THROUGH 10 YEARS 675

ADOLESCENCE: 11 THROUGH 20 YEARS 679

---

■ HEALTH PROMOTION AND COUNSELING 681

---

■ APPROACH TO EXAMINATION OF NEWBORNS  
AND INFANTS 685

---

SEQUENCE OF EXAMINATION 685

ASSESSING THE NEWBORN 686

ASSESSING THE INFANT 692

---

■ TECHNIQUES OF EXAMINATION  
FOR NEWBORNS AND INFANTS 695

---

■ APPROACH TO EXAMINATION OF CHILDREN 738

---

ASSESSING EARLY CHILDHOOD 739

ASSESSING MIDDLE CHILDHOOD 742

---

■ TECHNIQUES OF EXAMINATION  
FOR CHILDREN 745

---

■ APPROACH TO EXAMINATION  
OF ADOLESCENTS 774

---

■ TECHNIQUES OF EXAMINATION FOR  
ADOLESCENTS 776

---

■ RECORDING YOUR FINDINGS 789

---

Bibliography 792

## **CHAPTER 19**

### **The Pregnant Woman 817**

#### **■ ANATOMY AND PHYSIOLOGY 817**

---

#### **■ THE HEALTH HISTORY 822**

---

#### **■ HEALTH PROMOTION AND COUNSELING 823**

---

#### **■ TECHNIQUES OF EXAMINATION 826**

---

GENERAL INSPECTION 827

VITAL SIGNS, HEIGHT, AND WEIGHT 827

HEAD AND NECK 828

THORAX AND LUNGS 828

HEART 829

BREASTS 829

ABDOMEN 829

GENITALIA, ANUS, AND RECTUM 831

EXTREMITIES 833

SPECIAL TECHNIQUES 833

MODIFIED LEOPOLD'S MANEUVERS 833

CONCLUDING THE VISIT 836

#### **■ RECORDING YOUR FINDINGS 837**

---

Bibliography 837

## **CHAPTER 20**

### **The Older Adult 839**

#### **■ ANATOMY AND PHYSIOLOGY 840**

---

#### **■ THE HEALTH HISTORY 848**

---

##### **APPROACH TO THE PATIENT 848**

*Adjusting the Office Environment 848*

*Shaping the Content and Pace of the Visit 848*

*Eliciting Symptoms in the Older Adult 849*

*Addressing Cultural Dimensions of Aging 850*

##### **SPECIAL AREAS OF CONCERN WHEN ASSESSING COMMON OR CONCERNING SYMPTOMS 851**

*Activities of Daily Living 852*

*Medications 852*

*Nutrition 853*

*Acute and Chronic Pain 853*

*Smoking and Alcohol 854*

*Advance Directives and Palliative Care 854*

#### **■ HEALTH PROMOTION AND COUNSELING 855**

---

#### **■ TECHNIQUES OF EXAMINATION 857**

---

##### **ASSESSING FUNCTIONAL STATUS:**

**THE "SIXTH VITAL SIGN" 857**

**PHYSICAL EXAMINATION OF THE OLDER ADULT 861**

#### **■ RECORDING YOUR FINDINGS 869**

---

Bibliography 870

Index 875