

# Contents

<i>List of Contributors</i>	xvii
<i>Foreword</i>	xix
<i>Preface</i>	xxi
<i>Acknowledgements</i>	xxiii
<i>Introduction: The First Approach</i>	xxv
<b>Chapter 1    Interviewing and History Taking</b>	<b>1</b>
<i>Carol Lynn Cox</i>	
General Procedures	1
Introduction	1
Approaching the Patient	2
Usual Sequence of Events	2
Usual Sequence of History	4
History of Present Illness	4
Supplementary History	5
Functional Enquiry	5
General Questions (These May Be Considered as Part of Your Review of Systems.)	5
Cardiovascular and Respiratory System	5
Gastrointestinal System	6
Genitourinary System	7
Nervous System	8
Mental Health	8
The Eye	9
Locomotor System	10
Thyroid Disease	10
Past History	11
General Questions	11
Family History	11
General Questions	12
Personal and Social History	12
General Questions	12
The Patient's Ideas, Concerns, and Expectations	13
Strategy	13
References	13
<b>Chapter 2    General Health Assessment</b>	<b>15</b>
<i>Carol Lynn Cox</i>	
Introduction	15
General Inspection	16
Hands	18
Skin	19



Inspection of Skin	19
Inspection of Lesions	19
Palpation of Lesions	20
Enquire About the Time Course of Any Lesion	20
Common Diseases	20
Mouth	22
Eyes	23
Examine the Fundi	23
Examine for Palpable Lymph Nodes	26
Lumps	27
Heart	27
Routine Examination	27
Breasts	27
Routine Examination	27
Full Breast Examination	28
Respiratory	28
Routine Examination	28
Thyroid	29
Other Endocrine Diseases	30
Acromegaly	30
Hypopituitarism	30
Addison's Disease	30
Cushing's Syndrome	30
Diabetes	30
Abdominal	31
Routine Examination	31
Musculoskeletal	32
General Habitus	32
Inspection	33
Palpation	33
Movement	33
Summary of Signs of Common Illnesses	34
References	35

### **Chapter 3 Examination of the Skin, Hair, and Nails 37**

*Siobhan Hicks*

Introduction	37
Anatomy and Physiology	37
The Skin	37
The Hair	38
The Nails	39
Subjective History Taking	40
Objective Examination	43
Red Flag Presentations in Primary Care	47
Drug Eruptions	50
Common Presentations in Primary Care	53
Management of Eczema	56
Conclusion	63
References	63



<b>Chapter 4</b>	<b>Examination of the Cardiovascular System</b>	<b>67</b>
	<i>Carol Lynn Cox and Carrie E. Boyd</i>	
	Introduction	67
	Anatomy and Physiology	67
	General Examination	68
	Palpate the Radial Pulse	70
	Take the BP	72
	Jugular Venous Pulse (Frequently Called Pressure)	74
	Mussel's Sign	76
	The Precordium	77
	Auscultation	80
	Normal Heart Sounds	83
	Added Sounds	83
	Clicks and Snaps	84
	Splitting of Second Heart Sound ( $S_2 = a_2p_2$ )	84
	Knock and Rub	84
	Murmurs	85
	Summary of Timing of Murmurs	88
	Signs of Left and Right Ventricular Failure	88
	Left Heart Failure	88
	Right Heart Failure	89
	Functional Result	89
	Summary of Common Illnesses	89
	Mitral Stenosis	89
	Mitral Incompetence	90
	Mitral Valve Prolapse	90
	Aortic Stenosis	91
	Aortic Incompetence	91
	Tricuspid Incompetence	91
	Austin Flint Murmur	91
	Graham Steell Murmur	91
	Atrial Septal Defect	91
	Ventricular Septal Defect	91
	Patent Ductus Arteriosus	91
	Metal Prosthetic Valves	92
	Tissue Prosthetic Valves	92
	Pericardial Rub	92
	Infectious Endocarditis (Diagnosis Made from Blood Cultures)	92
	Rheumatic Fever	92
	Clues to Diagnosis from Facial Appearance	92
	Clues to Diagnosis from General Appearance	92
	Peripheral Arteries	93
	Peripheral Vascular Disease	95
	Aortic Aneurysm	96
	Varicose Veins	96
	System-Oriented Examination	98
	'Examine the Cardiovascular System'	98
	Reference Guide: Intracardiac Values and Pressures	99
	References	101



<b>Chapter 5</b>	<b>Examination of the Respiratory System</b>	<b>103</b>
	<i>Carol Lynn Cox and Jessica Ham</i>	
	Introduction	103
	Anatomy and Physiology	103
	General Examination	104
	Physical Assessment of the Chest	109
	Inspection of the Chest	109
	Palpation	110
	Percussion	111
	Auscultation	113
	Vocal Fremitus/Resonance	116
	Sputum	117
	Functional Result	118
	Summary of Common Illnesses	118
	Asthma	118
	Pneumonia	119
	Bronchitis	119
	Bronchiectasis	119
	Obstructive Airways Disease (Chronic)	119
	Allergic Alveolitis	119
	System-Oriented Examination	120
	'Examination of the Respiratory System'	120
	References	121
<b>Chapter 6</b>	<b>Examination of the Abdominal System</b>	<b>123</b>
	<i>Anthony McGrath</i>	
	Introduction	123
	Anatomy and Physiology	123
	The Gastrointestinal Tract	123
	The Pancreas	125
	The Liver	126
	The Gall Bladder	126
	The Duodenum, Jejunum, Ileum, and Caecum	
	(Small Intestine)	126
	The Duodenum	127
	The Jejunum	127
	The Ileum	127
	The Caecum	127
	The Large Intestine (Colon)	128
	Ascending Colon	128
	Transverse Colon	128
	Descending Colon	128
	Sigmoid Colon	128
	Rectum	129
	Anal Canal	129
	General Examination	129
	Abdominal Pain	129
	Inspection	131



Auscultation	136
Arterial Bruits	136
Palpation	137
Liver and Gall Bladder	138
Spleen	139
Groin	140
Hernia	140
Kidneys and Bladder	140
Aorta	141
Percussion	141
Examination of Genitals	142
Digital Rectum Examination	142
Per Vaginam Examination	143
Summary of Common Illnesses	143
Cirrhosis	143
Portal Hypertension	143
Hepatic Encephalopathy	143
'Dehydration' (Water and Salt Loss)	143
Intestinal Obstruction	143
Pyloric Stenosis	144
Appendicitis	144
Peritonitis	144
Jaundice and Palpable Gall Bladder	144
Enlarged Spleen	144
References	147
<b>Chapter 7 Examination of the Male Genitalia</b>	<b>149</b>
<i>Michael Babcock, Carol Lynn Cox, and Anthony McGrath</i>	
Introduction	149
General Examination	150
Important Symptoms to Consider	150
Erectile Function	150
Possible Sexually Transmitted Infection	151
Examination of the Male Genitalia	151
Inspection	151
Abnormalities of the Penis	152
Abnormalities of the Scrotum	152
Look for Signs of Syphilis – Primary, Secondary, and Tertiary	153
Look for Signs of Gonorrhoea	153
Look for Signs of Herpes	153
Look for Signs of HPV Infection	153
Look for Signs of Chlamydia	154
Palpation	154
Groin	154
Hernia	154
Penis	154
Scrotum	155
Prostate Gland	155
References	157



<b>Chapter 8</b>	<b>Examination of the Female Breast</b>	<b>159</b>
	<i>Victoria Lack</i>	
	General Examination	159
	Introduction	159
	Review of Anatomy	159
	Inspection	160
	Palpation	161
	Key Findings	161
	Referral Guidelines for Breast Cancer	163
	Breast Awareness and Screening	163
	The Male Breast	163
	Breast Lumps	163
	References	165
<b>Chapter 9</b>	<b>Examination of the Female Reproductive System</b>	<b>167</b>
	<i>Victoria Lack</i>	
	General Examination	167
	Review of Anatomy	168
	The Uterus	168
	The Uterine Adnexa	168
	The Vagina	169
	The Vulva	170
	Preparation	170
	Inspection of the External Genitalia	170
	Speculum Examination	171
	Taking a Cervical Sample for Cytology	172
	Taking Swabs	173
	Bimanual Examination	173
	Palpate the Uterus	173
	Documentation	174
	Female Genital Mutilation (FGM)	174
	Overview of Common Presentations	175
	Menorrhagia	176
	Amenorrhea	176
	Vulval Signs and Symptoms	176
	Cancer of the Vulva/Vagina	177
	Vaginal Discharge	177
	Genital Prolapse	178
	Pelvic Pain and Dyspareunia	178
	Pelvic Inflammatory Disease (PID)	179
	Endometriosis	179
	Fibroids (Uterine Leiomyoma)	179
	Ovarian Cancer	180
	Pelvic Masses	180
	References	183
<b>Chapter 10</b>	<b>Examination of the Nervous System</b>	<b>185</b>
	<i>Michael Babcock and Graham M. Boswell</i>	
	General Examination	185
	Introduction	185



General Examination	189
Motor and Sensory Function	190
Mental Function	191
General Observation	191
Consciousness Level	191
Glasgow Coma Scale (GCS) (Appendix F)	191
Confusion	192
Language/Speech	192
Other Defects Occurring in Absence Motor or Sensory Dysfunction	193
Cognitive Function	194
Skull and Spine	195
Cranial Nerves (I – XII)	195
I Olfactory Nerve	195
II Optic Nerve	196
II Optic Nerve and III Oculomotor Nerve	200
III Oculomotor Nerve	201
IV Trochlear Nerve	201
VI Abducens Nerve	201
V Trigeminal Nerve	205
VII Facial Nerve	208
VIII Vestibuloauditory Nerve	210
IX Glossopharyngeal	212
X Vagus Nerve	213
XI Spinal Accessory Nerve	213
XII Hypoglossal Nerve	214
Limbs and Trunk	215
General Inspection	215
Arms	215
Lower Limbs	222
Inspection	222
Coordination	222
Tone	223
Muscle Power	223
Tendon Reflexes	224
Plantar Reflexes	227
Vibration Sense	228
Position Sense – Proprioception	229
Pain, Touch, and Temperature	230
Dorsal Column Loss of Sensation	234
Cortical Loss of Sensation	234
Signs of Meningeal Irritation	234
Straight-Leg-Raising for Sciatica	234
Summary of Common Illnesses	234
Lower Motor Neuron Lesion	234
Upper Motor Neuron Lesion	236
Cerebellar Dysfunction	236
Extrapyramidal Dysfunction – Parkinson's Disease	236
Multiple Sclerosis	236
System-Oriented Examination	237
References	240



**Chapter 11 Examination of the Eye****241***Helen Gibbons*

## General Examination

241

## Introduction

241

## Anatomy and Physiology of the Eye

241

## History Taking in the Ophthalmic Assessment

244

## Presenting Complaint

245

## Duration of Symptoms

245

## Past Ocular History

245

## Family Ocular History

246

## General Medical Health

246

## Questions Relevant to Child's History Taking

246

## Examination

247

## Visual Acuity Assessment

247

## Snellen Chart

247

## Procedure

248

## The Sheridan–Gardiner Method

248

## LogMAR Vision Testing

248

## Near Vision Testing

248

## Colour Vision Assessment

249

## Contrast Sensitivity Testing

249

## Testing Amsler Grid

249

## Testing Eye Movements

249

## Recording Visual Fields

249

## Confrontational Field Testing

249

## Perimetry Visual Field Testing

250

## Testing the Child's Vision

250

## Nonverbal Children

250

## Verbal Children

250

## The Cardiff Acuity Test

250

## Kay Pictures

250

## Visual Electrophysiology Testing

251

## Ocular Examination of the Adult

251

## Ocular Examination of the Child

252

## Use of a Slit Lamp

253

## The Use of a 90 Dioptre Lens with a Slit Lamp to View the Retina

254

## Measurement of Intraocular Pressure (IOP)

255

## Palpation of the Globe

256

## Use of an Ophthalmoscope

256

## Pupil Assessment for Relative Afferent Pupillary Defect (RAPD)

260

## Documentation

260

## References

265

**Chapter 12 Mental Health Assessment****267***Patrick Callaghan*

## Introduction

267

## Motivational Interviewing (MI)

267

## Assessment of Mental Health Status

269

## Possibilities and Pitfalls in Risk Assessment

270



General Rules in Assessing Mental Health Status	276
Appearance and Behaviour (Observation)	276
Mood (Part Observation, Part Enquiry)	276
Speech (Observation)	277
Form of Thought (Form and Content – Largely Inferred from Speech)	277
Thought Content ('Odd Ideas', Thoughts, Beliefs, Delusions)	277
Perception (Hallucinations and Illusions – Usually Apparent from History)	278
Sensorium and Cognition (Observations Supplemented by Specific Enquiry)	278
Insight (Understanding of Condition)	278
General History and Examination	278
Challenging Behaviour	279
Anger and Hostility	279
Harm and Aggression	279
Self-Injury Behaviour	279
Sexual Disinhibition	279
Summary of Common Mental Disorders	279
Depression	279
Anxiety	280
Anorexia Nervosa	280
Bulimia Nervosa	280
Schizophrenia	280
Bipolar Disorder – Mania	280
Bipolar Disorder – Depression	280
Conclusions	283
Acknowledgements	284
References	284
<b>Chapter 13 Examination of the Musculoskeletal System</b>	<b>287</b>
<i>Daniel Apau, Michael Babcock, and Nicola L. Whiteing</i>	
General Examination	287
Introduction	287
Anatomy and Physiology	287
Assessment/Examination	289
Frequent Musculoskeletal Complaints	290
Sprains and Strains	290
Osteoarthritis	290
Rheumatoid Arthritis	291
Osteoporosis	291
Fractures	291
Key Principles of Musculoskeletal Assessment	291
Practical Considerations	292
Assessment Consideration	292
Legal Consideration	293
Inspection	293
Palpation	293
Range of movement (ROM)	294



Limb Measurement	294
Bones	295
Joints	295
Muscles	295
GALS Screen	296
General Survey	296
Regional Examination	297
Muscle Strength Tests	321
Terms of Location	324
Terms Used to Describe ROM	324
References	331
<b>Chapter 14 Assessment of the Child</b>	<b>333</b>
<i>Carol Lynn Cox</i>	
General Examination	333
Introduction	334
Approaching the Patient	334
General Considerations	334
Usual Sequence of Events	336
Approach to the Assessment of the Child	336
Differences in Anatomy and Physiology	338
Developmental Considerations Affecting the Physical Assessment	341
Developmental Approach to the Physical Assessment	342
Physical Examination of the Infant and Toddler	345
Physical Examination of the Child	355
Physical Examination of the Young Person	371
References	374
<b>Chapter 15 Assessment of Disability Including Care of the Older Adult</b>	<b>375</b>
<i>Carol Lynn Cox and Brandy Lunsford</i>	
General Examination	375
Introduction	375
Assessment of Impairment	376
Cognitive Function	377
Affect and Drive	377
Assessment of Hearing	377
Assessment of Disability	378
Activities of Daily Living (ADL)	378
Instrumental Activities of Daily Living (IADL)	379
Communication	379
Analysing Disabilities and Handicaps and Setting Objectives	379
Identifying Causes for Disabilities	380
References	381
<b>Chapter 16 Imaging Techniques, Clinical Investigations, and Interpretation</b>	<b>383</b>
<i>Jennifer Edie</i>	
General Procedures	383
Introduction	383



Diagnostic Imaging	383
Ultrasound	384
Plain Film Radiography	385
Fluoroscopy	389
Angiography	389
Computed Tomography	390
Magnetic Resonance Imaging	391
Interventional Radiology	393
Nuclear Medicine	393
Endoscopy	395
Gastroscopy	395
Proctoscopy	395
Sigmoidoscopy	395
Colonoscopy	395
Bronchoscopy	395
Laparoscopy	396
Cystoscopy	396
Colposcopy	396
Needle Biopsy	396
Core Biopsy	396
Fine-Needle Aspiration	396
Cardiac Investigations	396
Electrocardiogram	396
Chest Radiograph	396
Exercise Electrocardiography (Stress Testing)	396
Echocardiography	398
Nuclear Medicine	400
Cardiac Angiography (Cardiac Catheterisation)	401
Computed Tomography	403
Magnetic Resonance Imaging	403
Twenty-Four-Hour ECG Tape Recording	404
Twenty-Four-Hour Blood Pressure Recording	404
Respiratory Investigations	404
pH and Arterial Blood Gases	404
Peak Flow	406
Spirometry	407
Skin Testing for Allergens	407
Carbon Monoxide Transfer Factor	407
Chest Radiograph	407
Ventilation/Perfusion Scan	407
Computed Tomography	407
Bronchoscopy	408
Gastrointestinal Investigations	408
Abdominal Radiograph	408
Abdominal Ultrasound	408
Upper Gastrointestinal Endoscopy	408
Barium Swallow, Meal, Enema	409
Hydrogen Breath Tests	409
Computed Tomography	410
Renal Investigations	410
Urine Testing	410



Urine Microscopy	410
Creatinine Clearance	410
Abdominal Radiograph	410
Abdominal Ultrasound	410
Intravenous Urogram	411
Computed Tomography	411
Nuclear Medicine	411
Neurological Investigations	411
Electroencephalogram	411
Lumbar Puncture	412
Ultrasound	412
Angiography	412
Computed Tomography	412
Magnetic Resonance Imaging	412
Nuclear Medicine	412
Myelogram	413
Lumbar Radiculogram	413
Further Reading	413
<b>Chapter 17 Basic Examination, Notes, and Diagnostic Principles</b>	<b>415</b>
<i>Carol Lynn Cox and Brandy Lunsford</i>	
Basic Examination	415
Introduction	415
Example of Notes	418
Summary	419
Problem List and Diagnoses	419
Diagnoses	421
Progress Notes	421
Serial Investigations	422
Operation Notes	422
Postoperative Notes	422
Discharge Note from Hospital	422
References	423
<b>Chapter 18 Presenting Cases and Communication</b>	<b>425</b>
<i>Carol Lynn Cox and Brandy Lunsford</i>	
Presentations to Healthcare Professionals and Patients	425
Introduction	425
Presentation of a Case to a Meeting	426
Presentation of a New Case on a Ward/Unit Round	427
Brief Follow-Up Presentation	428
Aides-Mémoire	428
Diagnostic Labels	430
People – Including Patients	430
Diabetes Case	431
References	431
Appendices	433
Index	441